Quarterly Monitoring Report, First Quarter 2014

76 (Former BP) Service Station No. 11147
690 Ygnacio Valley Road
Walnut Creek, California

San Francisco Bay Regional Water Quality Control Board, Case No. 07-0403

Antea Group Project No. I42611147
April 17, 2014

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76 (Former BP) Service Station No. 11147
690 Ygnacio Valley Rd, Walnut Creek, California
San Francisco Bay Regional Water Quality Control Board

1.0 INTRODUCTION

Antea®Group has prepared this *Quarterly Monitoring Report, First Quarter 2014* for 76 (Former BP) Service Station No. 11147 in Walnut Creek, California (**Figure 1**) to summarize the analytical data obtained from the most recent groundwater monitoring and sampling event completed on February 6, 2014. Please refer to **Figure 2** for the site layout and to **Appendix A** for additional site location information and for the history of the environmental investigations and remedial actions.

1.1 Work Performed in the First Quarter 2014

1. Antea Group submitted the *Quarterly Monitoring Report, Fourth Quarter 2013*, dated January 27, 2014, to the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB).
2. Antea Group's subcontractor Blaine Tech Services, Inc. (Blaine Tech) conducted the first quarter 2014 groundwater monitoring and sampling event on February 6, 2014.

1.2 Work Proposed for the Second Quarter 2014

1. Antea Group will submit the *Quarterly Monitoring Report, First Quarter 2014* (contained herein) to the SFBRWQCB.
2. Antea Group will sample on-site soil vapor wells, including new wells SV-3S/D, in April depending on weather.
3. Blaine Tech will conduct the second quarter 2014 groundwater monitoring event.

2.0 CURRENT PROJECT STATUS

Current phase of project:	Quarterly groundwater monitoring
Current monitoring well gauging schedule*:	Quarterly: MW-2R, MW-3R, MW-7 and MW-8; VW-1 through VW-7
Current monitoring well sampling schedule:	Quarterly: MW-2R, MW-3R and MW-8 Annually (1st Quarter): MW-7
Local receptors:	As of the October 2010 *Sensitive Receptor Survey*, there are no known wells within ½ mile of the site. There are as many as 7 sensitive receptor businesses located within 2,500 feet of the site (see **Appendix A**).
Current remediation technique	No active remediation (dormant SVE and air sparge systems)

2.1 Regulatory Correspondence

Antea Group did not exchange correspondence with the SFBRWQCB during the first quarter 2014.

2.2 Groundwater Monitoring

For the first quarter 2014 groundwater monitoring and sampling event, Blaine Tech gauged eleven wells and purged/sampled four wells per their standard sampling protocol. **Appendix B** includes copies of Blaine Tech's field data sheets, and the following table presents a summary of the recent gauging and sampling process.

Well gauging and sampling date:	February 6, 2014
Wells gauged:	MW-2R, MW-3R, MW-7 and MW-8; VW-1 through VW-7 **(Table 1)**
Wells sampled:	MW-2R, MW-3R, MW-7, and MW-8
Purge method:	3 well casing volumes via electric submersible pump
Sample collection method:	Disposable bailers
Groundwater parameters measured (**Appendix B**):	Temperature, pH, Conductivity, Oxidation-reduction potential (ORP), Turbidity, Dissolved Oxygen (DO)
Wells with measurable LNAPL:	None

2.2.1 Groundwater Flow Gradient and Directional Trends

Using the gauging data collected on February 6, 2014, Antea Group calculated the groundwater elevation in each well from surveyed well casings (**Tables 1** and **2**). **Figure 3** shows an overall groundwater flow direction to the northeast at a gradient of 0.002 feet per foot (ft/ft), which is generally consistent with historical groundwater flow and gradient trends.

2.2.2 Groundwater Quality Data

Blaine Tech submitted groundwater samples collected during this sample event under chain-of-custody protocol to Kiff Analytical, LLC. (Kiff), a National Environmental Laboratory Accreditation Program (NELAP) certified laboratory (Certification No. 08263CA). The analytical report is included in **Appendix C**. Groundwater samples were analyzed for the following contaminants of concern:

- Gasoline Range Organics (GRO; referred to as total petroleum hydrocarbons as gasoline (TPH-gas) in the laboratory analytical report), benzene, toluene, ethylbenzene, total xylenes (BTEX compounds), and methyl tertiary-butyl ether (MTBE) by Environmental Protection Agency Method 8260B.

Groundwater analytical results are presented in **Table 2** (current) and **Tables 3** and **3a** (historical). Historical geochemical data are presented in **Table 4** for reference and a brief discussion is included in **Appendix A**.

The laboratory reported the following ranges of contaminant concentrations in the groundwater samples collected during this sample event (the table below lists only the reported contaminants):

Constituents (ESL in µg/L)	Number of Reported Samples Above LRL of the Samples Collected	Minimum Reported Concentration, in µg/L (Sample ID)	Maximum Reported Concentration, in µg/L (Sample ID)
GRO (100)	2 of 4	450 (MW-3R)	5,000 (MW-2R)
Benzene (1.0)	1 of 4	<0.50	4.3 (MW-2R)
Ethylbenzene (30)	1 of 4	<0.50	250 (MW-2R)
Total Xylenes (20)	1 of 4	<0.50	120 (MW-2R)
MTBE (5.0)	1 of 4	<0.50	3.6 (MW-2R)

Explanations:
ESL = Regional Water Quality Control Board, San Francisco Bay Region, Environmental Screening Level where groundwater is a potential or current drinking water source
µg/L = Micrograms per liter
LRL = Laboratory Reporting Limit

2.2.3 Groundwater Contaminant Trends

Well MW-2R reported the maximum contaminant concentrations during this first quarter sampling event, as shown in the table above. The dissolved-phase GRO plume is centered on the northern end of the underground storage tanks, as indicated by contaminant concentrations in MW-2R (**Figure 4**). Concentrations of benzene, ethylbenzene, and MTBE were only reported in MW-2R during this sampling event (**Figure 5**), while toluene was not found above the LRL in any of the sampled wells.

Appendix D includes graphs depicting GRO, benzene and MTBE concentrations and groundwater elevations over time for wells MW-2/2R and MW-3/3R. Analytical data from replacement wells MW-2R and MW-3R is presented with historical data from MW-2 and MW-3 on the same time series graph for comparison. Contaminant concentrations at MW-2R continue to decrease from the previous sampling events.

2.2.4 Waste Disposal Summary

Blaine Tech generated approximately 31 gallons of wastewater from well purging/sampling and equipment cleaning during the recent sampling event. Blaine Tech transported the wastewater to their bulk facility in San Jose, California, and after the batching process, the wastewater will be transported to Seaport Environmental in Redwood City, California for disposal. The waste manifest for the first quarter is not yet available, and will be included in the next monitoring report.

2.2.5 Quality Assurance / Quality Control (QA/QC)

Antea Group's QA/QC measures included use of a trip blank and a detailed QA/QC data validation check on the Kiff analytical results for this sampling event. Our laboratory data validation checklist and the Kiff laboratory report are included in **Appendix C**.

Trip Blank (TB1_20140228):	No contaminants reported
Laboratory QA/QC Performed:	Yes (validated by Antea Group)
Laboratory Data Qualifiers:	None noted
Are the data valid for their intended purpose?	Yes, the data are valid

Kiff did not note any qualifiers in the laboratory analytical report for samples submitted during this first quarter 2014 event. Based on a review of the laboratory's analytical reports, including Kiff's QA/QC procedures and those implemented by Antea Group, we conclude that the laboratory data obtained are valid for their intended purpose.

3.0 CLOSING

- Antea Group continued quarterly groundwater monitoring with a February 2014 sampling event at four of the site monitoring wells.
- In general, the first quarter 2014 groundwater contaminant concentrations at well MW-2R are similar to those last reported in MW-2. GRO was the only contaminant reported at MW-3R during the first quarter 2014 sampling event.
- Antea Group and Blaine Tech will continue quarterly groundwater monitoring activities at the site with the next scheduled event to occur in May 2014.

4.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

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Antea Group

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature follows.

Licensed Approver:

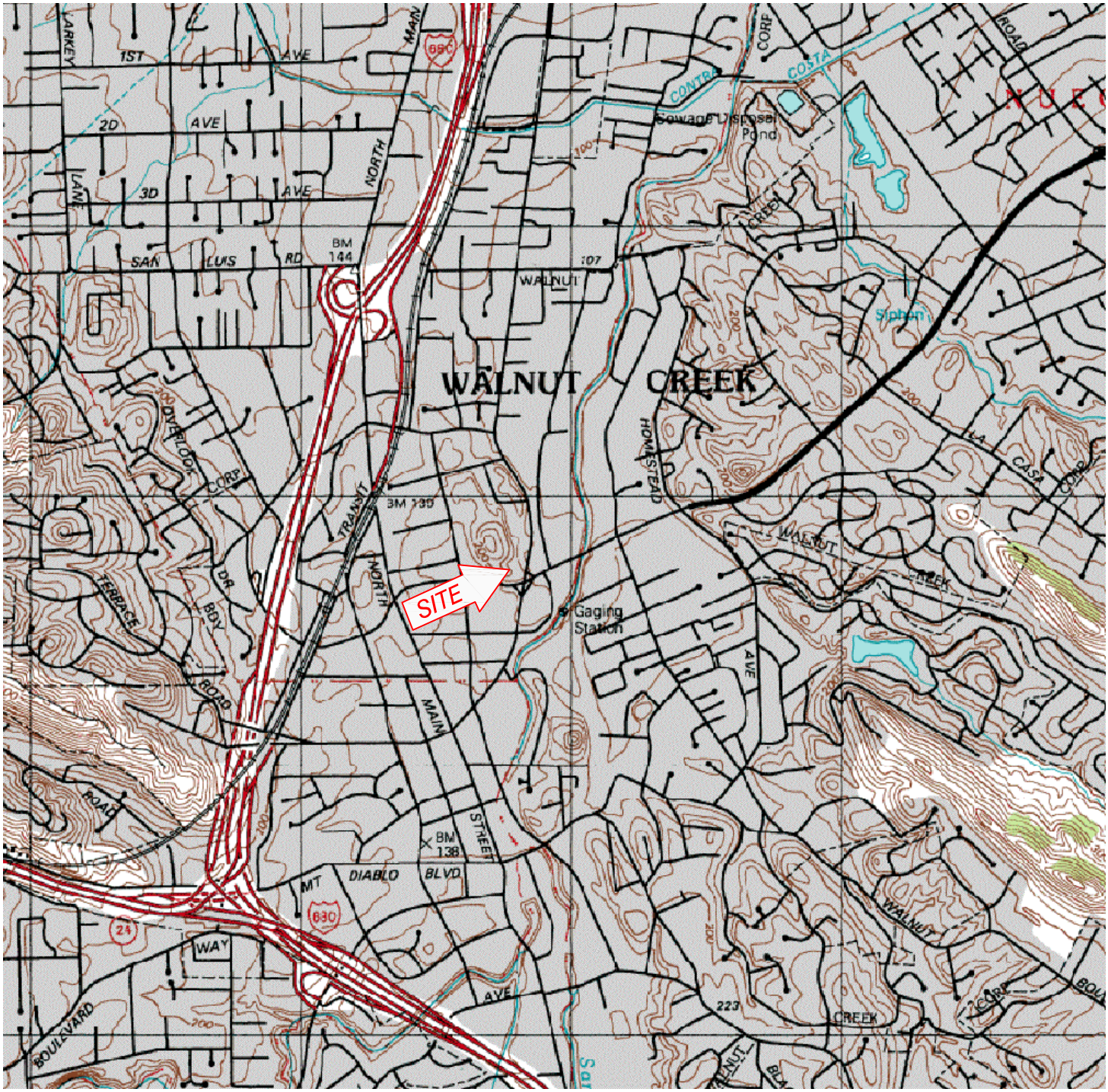
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Project Professional
California Registered Professional Geologist No. 8288
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REGINA M. BUSSARD
No. 8288
EXP. 1/31/16
STATE OF CALIFORNIA

cc: GeoTracker (upload)
Kazem Khorassani, 76 Station No. 11147

Figures

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Figure 2 Site Plan
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Figure 4 Dissolved Phase GRO Isoconcentration Map – February 6, 2014
Figure 5 Dissolved Phase Benzene and MTBE Concentration Map – February 6, 2014



1 1/2 0 1

SCALE (MILES)

1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE (FEET)

North

CALIFORNIA

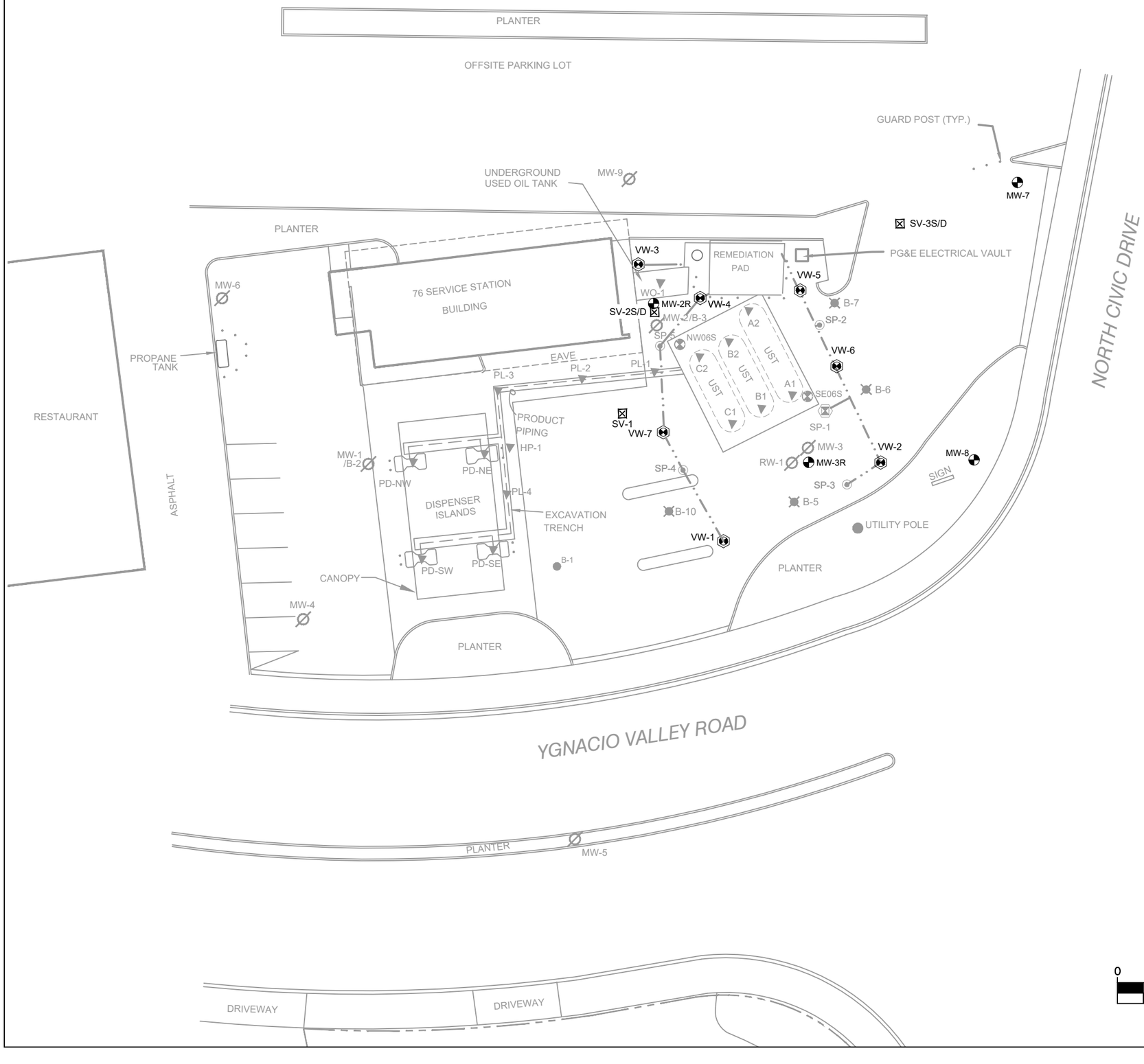
REFERENCE: USGS 7.5 MINUTE QUADRANGLE, WALNUT CREEK, CALIFORNIA

FIGURE 1
SITE LOCATION MAP

76 (FORMER BP) STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
142511147	DK	JH
DATE	REVIEWED BY	FILE NAME
04/15/11	DU	11147-Topo

anteagroup



LEGEND:

MW-1	76 GROUNDWATER MONITORING WELL
MW-3	DESTROYED GROUNDWATER MONITORING WELL
SV-1	SOIL VAPOR SAMPLING POINT
SP-1	AIR SPARGE POINT
SP-2	AIR SPARGE POINT WITH WELL VAULT
VW-6	VAPOR EXTRACTION WELL
NW06S	OBSERVATION WELL
B-1	SOIL BORING LOCATION (1992)
B-6	SOIL BORING LOCATION (2011)
PL-2	SOIL SAMPLE LOCATION
	REMEDIATION TRENCH

NOTES:

1. SAMPLES A1 THRU C2 COLLECTED 2' BELOW FORMER USTs.
2. SAMPLE WO-1 COLLECTED BENEATH FORMER WASTE OIL TANK.
3. BORINGS B-8 AND B-9 WERE NOT INSTALLED DUE TO UTILITIES AND LIMITED ACCESS.

N

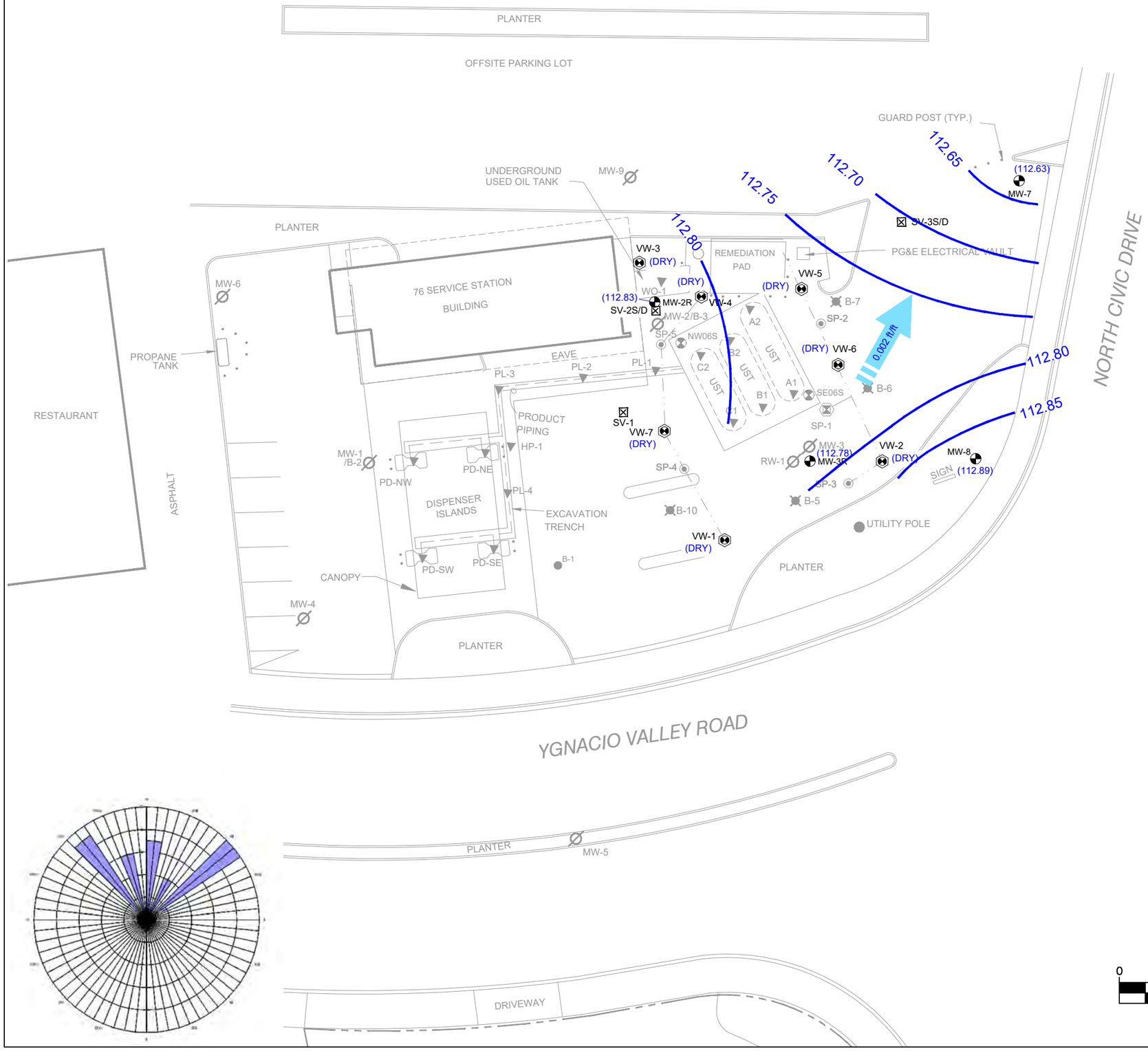
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SCALE

FIGURE 2
SITE PLAN

76 SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
142511147	RR	JH	
DATE	REVIEWED BY	FILE NAME	
9/27/13	RB	11147-SiteS	antea group



LEGEND:

MW-1	76 GROUNDWATER MONITORING WELL
MW-3	DESTROYED GROUNDWATER MONITORING WELL
SV-1	SOIL VAPOR SAMPLING POINT
SP-1	AIR SPARGE POINT
SP-2	AIR SPARGE POINT WITH WELL VAULT
VW-6	VAPOR EXTRACTION WELL
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3. BORINGS B-8 AND B-9 WERE NOT INSTALLED DUE TO UTILITIES AND LIMITED ACCESS.

(112.79)	GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (ft/msl)
(DRY)	NO WATER OBSERVED IN WELL
112.70	GROUNDWATER CONTOUR LINE (ft/msl) -DASHED WHERE INFERRED (CONTOUR INTERVAL: 0.05 ft)
0.002 ft/ft	GENERALIZED GROUNDWATER FLOW DIRECTION WITH HYDRAULIC GRADIENT

N

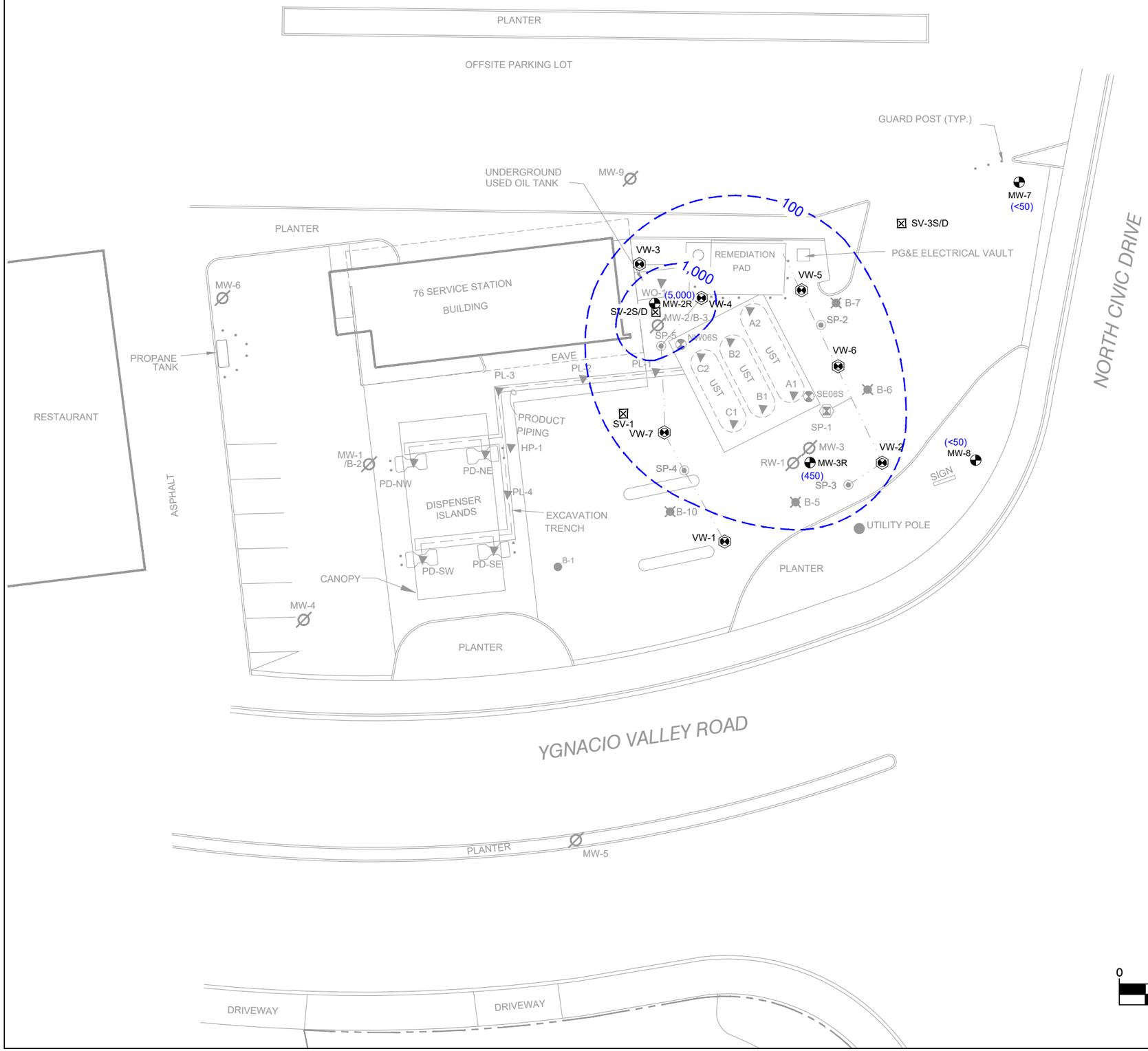
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SCALE

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP
FEBRUARY 6, 2014
76 SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
142511147	SS	JH
DATE	REVIEWED BY	FILE NAME
4/10/14	RB	11147-SiteS

antea group



LEGEND:

MW-1	76 GROUNDWATER MONITORING WELL
MW-3	DESTROYED GROUNDWATER MONITORING WELL
SV-1	SOIL VAPOR SAMPLING POINT
SP-1	AIR SPARGE POINT
SP-2	AIR SPARGE POINT WITH WELL VAULT
VW-6	VAPOR EXTRACTION WELL
NW06S	OBSERVATION WELL
B-1	SOIL BORING LOCATION (1992)
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PL-2	SOIL SAMPLE LOCATION
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2. SAMPLE WO-1 COLLECTED BENEATH FORMER WASTE OIL TANK.
3. BORINGS B-8 AND B-9 WERE NOT INSTALLED DUE TO UTILITIES AND LIMITED ACCESS.

1,000	DISSOLVED PHASE GRO ISOCONTOUR (µg/L) -DASHED WHERE INFERRED
(5,000)	DISSOLVED PHASE GRO ISOCONCENTRATION (µg/L)
µg/L	MICROGRAMS PER LITER
GRO	GASOLINE RANGE ORGANICS
NS	NOT SAMPLED
<50	LESS THAN LABORATORY INDICATED REPORTING LIMITS

N

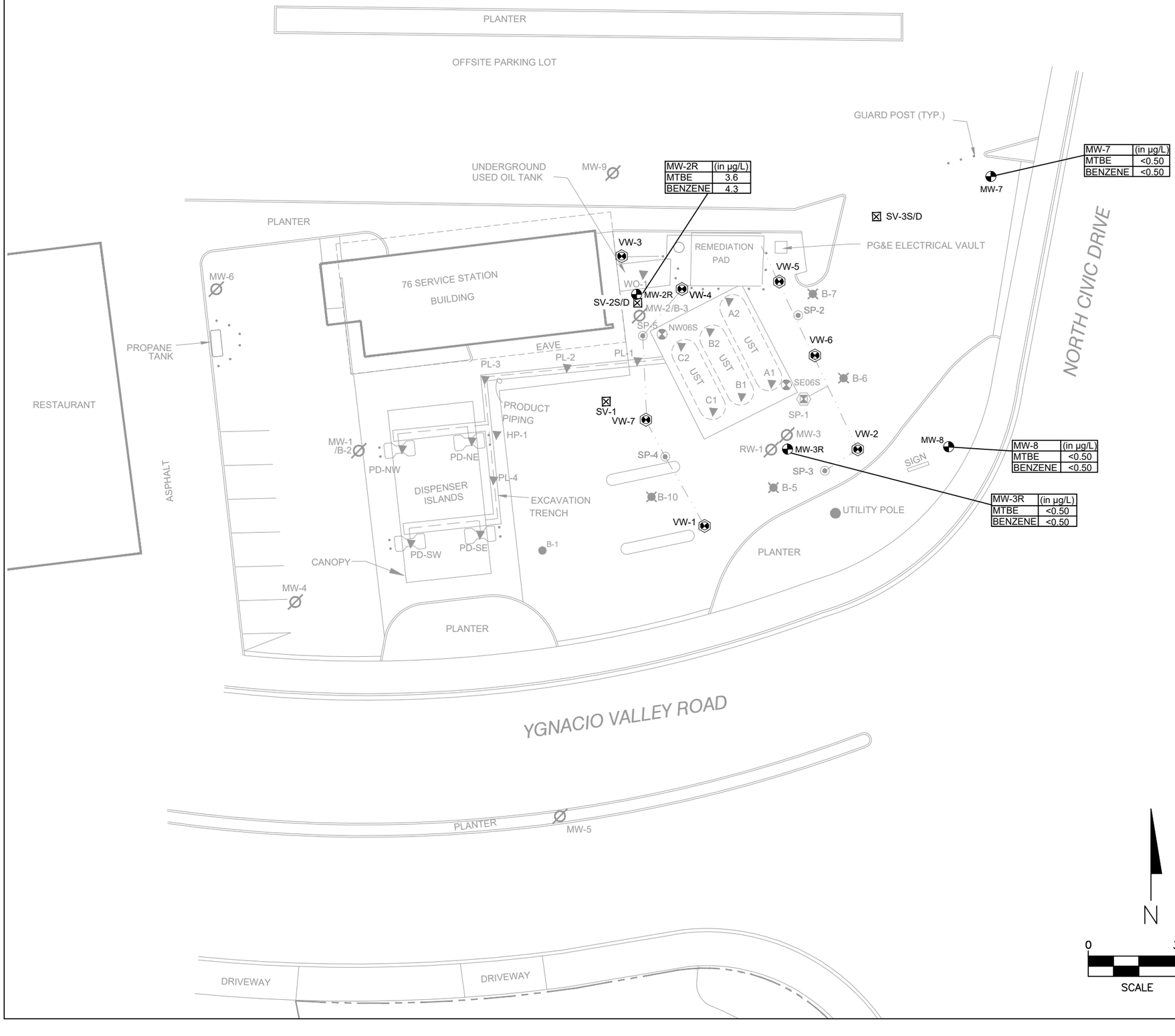
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SCALE

FIGURE 4
DISSOLVED PHASE GRO ISOCONCENTRATION MAP FEBRUARY 6, 2014
76 SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
142511147	SS	JH
DATE	REVIEWED BY	FILE NAME
3/27/14	RB	11147-SiteS

antea group



LEGEND:

MW-1	76 GROUNDWATER MONITORING WELL
MW-3	DESTROYED GROUNDWATER MONITORING WELL
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NOTES:

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2. SAMPLE WO-1 COLLECTED BENEATH FORMER WASTE OIL TANK.
3. BORINGS B-8 AND B-9 WERE NOT INSTALLED DUE TO UTILITIES AND LIMITED ACCESS.

MTBE = METHYL TERTIARY BUTYL ETHER

µg/L = MICROGRAMS PER LITER

NS = NOT SAMPLED

<0.50 = LESS THAN LABORATORY INDICATED REPORTING LIMITS

N

0 30 FT

SCALE

FIGURE 5
DISSOLVED PHASE BENZENE AND MTBE CONCENTRATION MAP – FEBRUARY 6, 2014
76 SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
142511147	SS	JH	
DATE	REVIEWED BY	FILE NAME	
3/27/14	RB	11147-SiteS	antea group

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TABLE 1
SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS
76 (FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Updated September 24, 2013

Boring/Well ID	Well/Boring Completion Date	TOC Elevation[1] (ft)	Borehole Depth (ft bgs)	Borehole Diameter (in)	Well Depth (ft)	Well Casing Diameter (in)	Well Casing Material	Well Screen Slot Size (in)	Well Screen Interval (ft bgs)	Cement Grout Seal Interval (ft bgs)	Bentonite Seal Interval (ft bgs)	Filter Pack Interval (ft bgs)	Comments
Soil Borings													
B-1	Oct-92	NA	35.0	8.0	NA	NA	NA	NA	NA to NA	0.0 to 35.0	NA to NA	NA to NA	Refusal at total depth of boring at 35 ft bgs
B-5	Feb-11	NA	43.0	8.0	NA	NA	NA	NA	NA to NA	0.0 to 43.0	NA to NA	NA to NA	
B-6	Feb-11	NA	45.0	8.0	NA	NA	NA	NA	NA to NA	0.0 to 45.0	NA to NA	NA to NA	
B-7	Feb-11	NA	47.0	8.0	NA	NA	NA	NA	NA to NA	0.0 to 47.0	NA to NA	NA to NA	
B-10	Feb-11	NA	45.0	8.0	NA	NA	NA	NA	NA to NA	0.0 to 45.0	NA to NA	NA to NA	
Groundwater Monitoring Wells													
MW-1 (B-2)	Oct-92	143.12	42.0	8.0	42.0	2	PVC	0.02	27.0 to 42.0	0.0 to 24.0	24.0 to 25.0	25.0 to 42.0	Destroyed September 2012
MW-2 (B-3)	Oct-92	143.73	44.0	8.0	43.5	2	PVC	0.02	23.5 to 43.5	0.0 to 21.5	21.5 to 22.5	22.5 to 23.5	Destroyed August 2013
MW-2R	Aug-13	144.02	40.0	8.0	38.5	2	PVC	0.01	23.5 to 38.5	0.0 to 19.5	19.5 to 21.5	21.5 to 40.0	
MW-3 (B-4)	Sep-92	143.62	45.5	8.0	44.0	2	PVC	0.02	24.0 to 44.0	0.0 to 21.0	21.0 to 22.0	22.0 to 44.5	Destroyed September 2012
MW-3R	Sep-12	143.49	40.0	10.0	40.0	4	PVC	0.01	25.0 to 40.0	0.0 to 21.0	21.0 to 23.0	23.0 to 40.0	
MW-4	Aug-93	140.98	40.5	8.0	40.0	2	PVC	0.02	20.0 to 40.0	0.0 to 17.0	17.0 to 18.0	18.0 to 40.5	Destroyed September 2012
MW-5	Aug-93	144.53	40.5	8.0	40.0	2	PVC	0.02	20.0 to 40.0	0.0 to 17.0	17.0 to 18.0	18.0 to 40.5	Destroyed September 2012
MW-6	Aug-93	143.41	40.5	8.0	40.0	2	PVC	0.02	25.0 to 40.0	0.0 to 22.0	22.0 to 23.0	23.0 to 40.5	Destroyed September 2012
MW-7	Aug-93	140.28	35.0	8.0	35.0	2	PVC	0.02	20.0 to 35.0	0.0 to 17.0	17.0 to 18.0	18.0 to 35.0	Refusal encountered at 35 ft bgs
MW-8	Apr-02	142.34	40.5	8.0	40.0	2	PVC	0.02	20.0 to 40.0	0.0 to 17.0	17.0 to 18.0	18.0 to 40.5	
MW-9	Jan-11	142.91	37.0	8.0	37.0	2	PVC	0.02	22.0 to 37.0	0.0 to 18.0	18.0 to 20.0	20.0 to 37.0	Destroyed September 2012
RW-1	Aug-93	143.69	40.5	8.0	40.0	4.0	PVC	0.01	20.0 to 40.0	0.0 to 17.0	17.0 to 18.0	18.0 to 40.5	Destroyed September 2012
Air Sparge Wells													
SP-1	Mar-94	NSVD	42.0	8.0	42.0	2.0	PVC	0.02	40.0 to 42.0	0.0 to 37.0	37.0 to 38.0	38.0 to 42.0	
SP-2	Apr-02	NSVD	45.0	8.0	45.0	2.0	PVC	0.01	40.0 to 45.0	0.0 to 37.0	37.0 to 39.0	39.0 to 45.0	
SP-3	Apr-02	NSVD	45.0	8.0	45.0	2.0	PVC	0.01	40.0 to 45.0	0.0 to 37.0	37.0 to 39.0	39.0 to 45.0	
SP-4	Apr-02	NSVD	45.0	8.0	45.0	2.0	PVC	0.01	40.0 to 45.0	0.0 to 37.0	37.0 to 39.0	39.0 to 45.0	
SP-5	Apr-02	NSVD	45.0	8.0	45.0	2.0	PVC	0.01	40.0 to 45.0	0.0 to 37.0	37.0 to 39.0	39.0 to 45.0	
Vapor Extraction Wells													
VW-1	Apr-02	144.28	30.0	10.0	30.0	4.0	PVC	0.01	10.0 to 30.0	0.0 to 7.0	7.0 to 8.0	8.0 to 30.0	
VW-2	Apr-02	142.78	30.0	10.0	30.0	4.0	PVC	0.01	10.0 to 30.0	0.0 to 7.0	7.0 to 8.0	8.0 to 30.0	
VW-3	Apr-02	143.94	30.0	10.0	30.0	4.0	PVC	0.01	10.0 to 30.0	0.0 to 7.0	7.0 to 8.0	8.0 to 30.0	
VW-4	Apr-02	144.24	30.0	10.0	30.0	4.0	PVC	0.01	10.0 to 30.0	0.0 to 7.0	7.0 to 8.0	8.0 to 30.0	
VW-5	Apr-02	143.88	30.0	10.0	30.0	4.0	PVC	0.01	10.0 to 30.0	0.0 to 7.0	7.0 to 8.0	8.0 to 30.0	
VW-6	Apr-02	143.24	30.0	10.0	30.0	4.0	PVC	0.01	10.0 to 30.0	0.0 to 7.0	7.0 to 8.0	8.0 to 30.0	
VW-7	Apr-02	143.79	30.0	10.0	30.0	4.0	PVC	0.01	10.0 to 30.0	0.0 to 7.0	7.0 to 8.0	8.0 to 30.0	
SV-1	Jan-11	NSVD*	5.5	2.0	5.0	0.25	Teflon	NA	NA to NA	0.0 to 3.5	3.5 to 4.5	4.5 to 5.5	
SV-2s	Jan-11	NSVD*	10.0	2.0	5.0	0.25	Teflon	NA	NA to NA	0.0 to 3.5	3.5 to 4.5	4.5 to 5.5	SV-2 is a dual-nested well with a shallow probe and deeper probe
SV-2d	Jan-11	NSVD*	10.0	2.0	9.5	0.25	Teflon	NA	NA to NA	5.5 to 8.0	8.0 to 9.0	9.0 to 10.0	
SV-3s	Aug-13	NSVD*	10.0	6.0	5.0	0.25	Teflon	NA	NA to NA	0.0 to 3.5	3.5 to 4.5	4.5 to 5.5	SV-3 is a dual-nested well with a shallow probe and deeper probe
SV-3d	Aug-13	NSVD*	10.0	6.0	9.5	0.25	Teflon	NA	NA to NA	5.5 to 8.0	8.0 to 9.0	9.0 to 10.0	

Notes:

ft = feet
in = inches
TOC = Top of Casing
NSVD = not surveyed
bgs = below ground surface

SP = air sparge well
MW = monitoring well
B = soil boring
VW = vapor well
SV = temporary soil vapor well

[1] = TOC Elevations were surveyed on the following dates:
MW-1 through MW-7 and RW-1 on November 10, 1992 -- by Wes J. Carpenter -- datum unknown
MW-8, MW-9, SV-1, SV-2, and VW-1 through VW-7 -- February 10, 2011 by Morrow Surveying
MW-3R on October 26, 2012 by Morrow Surveying
MW-2R and SV-3 S/D on September 9, 2013 by Morrow Surveying

*Temporary SV wells were not surveyed to the vertical datum

NA = not applicable

TABLE 2
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
76 (FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA					
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)
MW-2R	2/6/2014	144.02	31.19	NP	112.83	5000	4.3	<0.50	250	120	3.6
MW-3R	2/6/2014	143.49	30.71	NP	112.78	450	<0.50	<0.50	<0.50	<0.50	<0.50
MW-7	2/6/2014	140.28	27.65	NP	112.63	<50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-8	2/6/2014	142.34	29.45	NP	112.89	<50	<0.50	<0.50	<0.50	<0.50	<0.50
VW-1	2/6/2014	144.28	dry	dry	dry	--	--	--	--	--	--
VW-2	2/6/2014	142.78	dry	dry	dry	--	--	--	--	--	--
VW-3	2/6/2014	143.94	dry	dry	dry	--	--	--	--	--	--
VW-4	2/6/2014	144.24	dry	dry	dry	--	--	--	--	--	--
VW-5	2/6/2014	143.88	dry	dry	dry	--	--	--	--	--	--
VW-6	2/6/2014	143.24	dry	dry	dry	--	--	--	--	--	--
VW-7	2/6/2014	143.79	dry	dry	dry	--	--	--	--	--	--
TB1	2/6/2014	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50

Gauging Notes:
TOC - Top of Casing
ft - Feet
NP - LNAPL not present
LNAPL - Light non-aqueous phase liquid
* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)
DRY - Well is dry
-- - No information available
TB - Trip Blank

Analytical Notes:
< - Not detected at or above indicated laboratory reporting limit
ug/L - micrograms/liter
GRO- gasoline range organics
MTBE- Methyl tertiary-butyl ether

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-1	11/10/1992	143.12	31.45	NP	111.67	180	5.0	7.1	2.0	15	--	--	--	--	--	--	--	--
	12/3/1992	143.12	31.46	NP	111.66	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/16/1993	143.12	29.88	NP	113.24	100	2.5	<0.50	<0.50	<0.50	17	--	--	--	--	--	--	--
	9/28/1993	143.12	30.14	NP	112.98	<50	<0.50	<0.50	<0.50	<0.50	8.3	--	--	--	--	--	--	--
	1/11/1994	143.12	30.12	NP	113.00	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	5/10/1994	143.12	29.72	NP	113.40	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	8/15/1994	143.12	30.56	NP	112.56	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	10/31/1994	143.12	30.86	NP	112.26	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	3/1/1995	143.12	28.52	NP	114.60	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	5/30/1995	143.12	27.97	NP	115.15	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	8/7/1995	143.12	28.77	NP	114.35	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	10/18/1995	143.12	30.59	NP	112.53	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	--	--	--
	5/1/1996	143.12	27.80	NP	115.32	<250	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	--	--
	7/10/1996	143.12	27.57	NP	115.55	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1996	143.12	28.47	NP	114.65	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/8/1997	143.12	28.77	NP	114.35	<50	<0.50	<1.0	<1.0	<1.0	460	--	--	--	--	--	--	--
	4/24/1997	143.12	28.47	NP	114.65	<50	<0.50	<1.0	<1.0	<1.0	10	--	--	--	--	--	--	--
	7/7/1997	143.12	31.92	NP	111.20	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1997	143.12	29.39	NP	113.73	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/19/1998	143.12	28.27	NP	114.85	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	4/24/1998	143.12	26.67	NP	116.45	<50	3.5	7.0	1.4	6.6	<10	--	--	--	--	--	--	--
	8/6/1998	143.12	27.91	NP	115.21	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	12/1/1998	143.12	28.58	NP	114.54	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/26/1999	143.12	27.82	NP	115.30	180000	5300	24000	5800	32000	<100	--	--	--	--	--	--	--
	5/13/1999	143.12	27.64	NP	115.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/9/1999	143.12	28.08	NP	115.04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/15/1999	143.12	29.11	NP	114.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/22/2000	143.12	27.85	NP	115.27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/5/2000	143.12	27.69	NP	115.43	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/4/2000	143.12	28.40	NP	114.72	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/2000	143.12	29.21	NP	113.91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/23/2001	143.12	28.81	NP	114.31	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/21/2001	143.12	28.67	NP	114.45	<50	<0.50	<0.50	<0.50	2.4	<0.50	--	--	--	--	--	--	--
	8/17/2001	143.12	29.33	NP	113.79	<50	<0.50	<0.50	<0.50	<1.5	0.88	--	--	--	--	--	--	--
	11/19/2001	143.12	29.74	0.40	113.68	<50	<0.50	<0.50	<0.50	<1.5	1.0	--	--	--	--	--	--	--
	2/11/2002	143.12	28.66	NP	114.46	<50	<0.50	<0.50	<0.50	1.6	<0.50	--	--	--	--	--	--	--
	5/16/2002	143.12	28.84	NP	114.28	<50	<0.50	<0.50	<0.50	<1.0	0.60	--	--	--	--	--	--	--
	6/20/2002	143.12	28.92	NP	114.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2002	143.12	29.30	NP	113.82	420	<0.50	1.9	17	80	0.52	--	--	--	--	--	--	--
	11/18/2002	143.12	29.52	NP	113.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	2/13/2003	143.12	28.21	NP	114.91	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2003	143.12	27.90	NP	115.22	64	0.97	4.0	3.2	14	4.9	--	--	--	--	--	--	--
	8/20/2003	143.12	29.30	NP	113.82	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	11/13/2003	143.12	30.52	NP	112.60	310	2.4	15	19	100	2.8	--	--	--	--	--	--	--
	2/18/2004	143.12	29.53	NP	113.59	<50	<0.50	<0.50	<0.50	0.60	<2.5	--	--	--	--	--	--	--
	5/6/2004	143.12	29.07	NP	114.05	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	8/10/2004	143.12	29.81	NP	113.31	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	11/24/2004	143.12	29.78	NP	113.34	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	2/24/2005	143.12	28.00	NP	115.12	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/16/2005	143.12	27.51	NP	115.61	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	8/15/2005	143.12	28.52	NP	114.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	11/29/2005	143.12	28.73	NP	114.39	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	2/13/2006	143.12	27.32	NP	115.80	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-1	5/12/2006	143.12	26.20	NP	116.92	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	8/14/2006	143.12	27.57	NP	115.55	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	12/6/2006	143.12	28.10	NP	115.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/12/2007	143.12	28.02	NP	115.10	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/14/2007	143.12	28.19	NP	114.93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	8/15/2007	143.12	29.00	NP	114.12	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	11/13/2007	143.12	29.52	NP	113.60	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/7/2008	143.12	28.18	NP	114.94	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/1/2008	143.12	28.60	NP	114.52	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	8/8/2008	143.12	29.52	NP	113.60	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	11/12/2008	143.12	29.98	NP	113.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/11/2009	143.12	30.05	NP	113.07	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/27/2009	143.12	29.20	NP	113.92	<0.50	<0.50	<0.50	<0.50	<0.50	5.3	--	--	--	--	--	--	--
	8/13/2009	143.12	30.03	NP	113.09	<0.50	<0.50	<0.50	<0.50	<0.50	3.9	--	--	--	--	--	--	--
	11/10/2009	143.12	30.18	NP	112.94	<0.50	<0.50	<0.50	<0.50	<0.50	5.95	--	--	--	--	--	--	--
	2/11/2010	143.12	29.21	NP	113.91	<50.0	0.88	<0.50	3.4	9.7	<0.50	--	--	--	--	--	--	--
	5/25/2010	143.12	28.48	NP	114.64	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	8/31/2010	143.12	29.08	NP	114.04	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	11/10/2010	143.12	29.74	NP	113.38	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	2/16/2011	143.12	29.02	NP	114.10	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/12/2011	143.12	27.90	NP	115.22	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	8/23/2011	143.12	28.59	NP	114.53	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	11/9/2011	143.12	29.25	NP	113.87	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	2/8/2012	143.12	29.46	NP	113.66	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/16/2012	143.12	28.50	NP	114.62	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	8/9/2012	143.12	29.36	NP	113.76	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
MW-2	11/10/1992	143.73	32.09	0.01	111.65	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/3/1992	143.73	32.14	0.02	111.61	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/16/1993	143.73	30.50	0.01	113.24	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/28/1993	143.73	30.88	0.01	112.86	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/11/1994	143.73	30.85	NP	112.88	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/10/1994	143.73	30.94	0.15	112.90	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/15/1994	143.73	31.22	0.14	112.62	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/31/1994	143.73	31.46	0.05	112.31	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/1/1995	143.73	29.15	0.54	114.99	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/30/1995	143.73	28.51	0.06	115.27	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/7/1995	143.73	29.38	0.49	114.72	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/18/1995	143.73	30.15	0.30	113.81	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/1/1996	143.73	28.45	0.01	115.29	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/10/1996	143.73	27.12	0.18	116.75	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/17/1996	143.73	28.02	0.12	115.80	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/8/1997	143.73	28.40	0.09	115.40	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/24/1997	143.73	28.92	0.05	114.85	<120000	7000	16000	3200	16500	<25000	--	--	--	--	--	--	--
	7/7/1997	143.73	31.66	0.20	112.22	140000	7100	14000	2100	10700	9400	--	--	--	--	--	--	--
	10/17/1997	143.73	30.00	NP	113.73	93000	8200	20000	4000	18900	8000	--	--	--	--	--	--	--
	1/19/1998	143.73	28.74	NP	114.99	140000	7200	18000	3700	17600	9000	--	--	--	--	--	--	--
	4/24/1998	143.73	27.29	NP	116.44	36000	7700	19000	4400	20500	11000	--	--	--	--	--	--	--
	8/6/1998	143.73	28.46	NP	115.27	92000	5600	14000	3200	15900	7400	--	--	--	--	--	--	--
	12/1/1998	143.73	29.30	NP	114.43	130000	4600	14000	3700	17300	9900	--	--	--	--	--	--	--
	2/26/1999	143.73	28.47	NP	115.26	130000	5100	13000	4300	23000	9200	--	--	--	--	--	--	--
	5/13/1999	143.73	28.45	NP	115.28	110000	6200	15000	4200	20000	4400	--	--	--	--	--	--	--
	8/9/1999	143.73	29.25	NP	114.48	140000	7300	19000	6100	30000	11000	--	--	--	--	--	--	--
	11/15/1999	143.73	29.57	NP	114.16	78000	4000	12000	4300	22000	7300	--	--	--	--	--	--	--

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-2	2/22/2000	143.73	28.51	NP	115.22	120000	6500	24000	6400	31000	9800	--	--	--	--	--	--	--
	5/5/2000	143.73	28.33	NP	115.40	97000	5000	15000	4900	22000	8100	--	--	--	--	--	--	--
	8/4/2000	143.73	29.15	NP	114.58	77000	4800	11000	3800	15000	10000	--	--	--	--	--	--	--
	11/16/2000	143.73	29.81	NP	113.92	160000	5600	19000	8000	39000	6300	--	--	--	--	--	--	--
	2/23/2001	143.73	29.41	NP	114.32	79000	4850	15300	4250	21700	8900	--	--	--	--	--	--	--
	5/21/2001	143.73	29.35	NP	114.38	80000	2440	6390	4270	20100	8180	--	--	--	--	--	--	--
	8/17/2001	143.73	29.96	NP	113.77	57000	2830	7620	3490	16200	7960	--	--	--	--	--	--	--
	11/19/2001	143.73	30.38	NP	113.35	50000	1630	3890	2360	10600	6560	--	--	--	--	--	--	--
	2/11/2002	143.73	29.34	NP	114.39	54000	2030	5370	2840	12600	7690	--	--	--	--	--	--	--
	5/16/2002	143.73	29.45	NP	114.28	75000	1710	4300	2390	3410	7170	--	--	--	--	--	--	--
	6/20/2002	143.73	29.58	NP	114.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2002	143.73	29.86	NP	113.87	69000	1660	4830	3150	14700	7790	--	--	--	--	--	--	--
	11/18/2002	143.73	30.18	NP	113.55	64000	2200	4800	2900	14000	8700	--	--	--	--	--	--	--
	2/13/2003	143.73	28.86	NP	114.87	69000	2800	5800	3300	16000	7000	--	--	--	--	--	--	--
	5/12/2003	143.73	28.60	NP	115.13	78000	3600	10000	4100	20000	6300	--	--	--	--	--	--	--
	8/20/2003	143.73	29.98	NP	113.75	78000	3500	8400	4500	19000	6600	--	--	--	--	--	--	--
	11/13/2003	143.73	31.15	NP	112.58	64000	3100	5800	3600	16000	7900	--	--	--	--	--	--	--
	2/18/2004	143.73	30.01	NP	113.72	68000	790	4800	3100	15000	2000	--	--	--	--	--	--	--
	5/6/2004	143.73	29.50	NP	114.23	<50000	<500	2000	2700	14000	<2500	--	--	--	--	--	--	--
	8/10/2004	143.73	30.34	NP	113.39	33000	<120	360	1200	5900	<120	--	--	--	--	--	--	--
	11/24/2004	143.73	30.41	NP	113.32	28000	<100	160	1300	5800	<500	--	--	--	--	--	--	--
	2/24/2005	143.73	28.62	NP	115.11	20000	<100	<100	1200	4200	<500	--	--	--	--	--	--	--
	5/16/2005	143.73	28.05	NP	115.68	24000	53	61	1200	4500	<250	--	--	--	--	--	--	--
	8/15/2005	143.73	29.00	NP	114.73	18000	<50	<50	820	2700	<250	--	--	--	--	--	--	--
	11/29/2005	143.73	29.43	NP	114.30	14000	<50	<50	790	2400	<250	--	--	--	--	--	--	--
	2/13/2006	143.73	27.84	NP	115.89	12000	<50	<50	730	1600	<250	--	--	--	--	--	--	--
	5/12/2006	143.73	26.77	NP	116.96	8800	39	<10	590	1300	90	--	--	--	--	--	--	--
	8/14/2006	143.73	28.24	NP	115.49	5500	17	<12	370	420	<62	--	--	--	--	--	--	--
	12/6/2006	143.73	28.75	NP	114.98	7100	<10	<10	520	710	42	--	--	--	--	--	--	--
	2/12/2007	143.73	28.60	NP	115.13	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/14/2007	143.73	28.83	NP	114.90	4400	<10	<10	340	160	19	--	--	--	--	--	--	--
	8/15/2007	143.73	29.63	NP	114.10	8200	<10	<10	430	420	21	--	--	--	--	--	--	--
	11/13/2007	143.73	31.14	NP	112.59	7400	<5.0	<5.0	370	280	16	--	--	--	--	--	--	--
	2/7/2008	143.73	28.82	NP	114.91	9600	<5.0	<5.0	320	360	17	--	--	--	--	--	--	--
	5/1/2008	143.73	29.25	NP	114.48	7200	<100	<100	6700	7200	360	--	--	--	--	--	--	--
	8/8/2008	143.73	30.14	NP	113.59	4300	<5.0	<5.0	290	260	15	--	--	--	--	--	--	--
	11/12/2008	143.73	30.64	NP	113.09	6300	<5.0	<5.0	270	190	15	--	--	--	--	--	--	--
	2/11/2009	143.73	30.65	NP	113.08	<5.0	<5.0	270<	170	11	1.6	--	--	--	--	--	--	--
	5/27/2009	143.73	29.81	NP	113.92	2.6	<0.50	230	97	9.2	4.2	--	--	--	--	--	--	--
	8/13/2009	143.73	30.66	NP	113.07	<5.0	<5.0	580	340	15	1.8	--	--	--	--	--	--	--
	11/10/2009	143.73	30.87	NP	112.86	<10	<10	480	350	11	4.5	--	--	--	--	--	--	--
	2/11/2010	143.73	29.86	NP	113.87	6540	4.4	1.5	678	456	15.1	--	--	--	--	--	--	--
	5/25/2010	143.73	29.09	NP	114.64	5960	3.9	1.0	407	165	10.4	--	--	--	--	--	--	--
	8/31/2010	143.73	29.63	NP	114.10	7940	4.8	2.8	523	218	<0.50	--	--	--	--	--	--	--
	11/10/2010	143.73	30.38	NP	113.35	5830	2.0	0.76	220	62.1	6.5	--	--	--	--	--	--	--
	2/16/2011	143.73	29.62	NP	114.11	4540	3.4	1.1	354	92.4	12.4	--	--	--	--	--	--	--
	5/12/2011	143.73	28.50	NP	115.23	4160	3.2	0.92	268	50.4	9.4	--	--	--	--	--	--	--
	8/23/2011	143.73	29.12	NP	114.61	4800	4.2	1.0	172	35.9	10.3	--	--	--	--	--	--	--
	11/9/2011	143.73	29.77	NP	113.96	5590	5.2	0.94	256	81.0	11.9	--	--	--	--	--	--	--
	2/8/2012	143.73	30.13	NP	113.60	8800	4.1	0.77	324	104	8.4	--	--	--	--	--	--	--
	5/16/2012	143.73	29.12	NP	114.61	6500	2.4	0.87	131	35.9	6.6	--	--	--	--	--	--	--
	8/9/2012	143.73	29.93	NP	113.80	5800	3.1	<0.90	250	67	8.5	--	--	--	--	--	--	--
	10/19/2012	143.73	30.50	NP	113.23	6900	3.4	1.2	200	59	8.0	--	--	--	--	--	--	--

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-2	12/28/2012	143.73	29.34	NP	114.39	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	143.73	30.06	NP	113.67	6500	2.2	<0.90	130	35	5.6	--	--	--	--	--	--	--
	5/8/2013	143.73	30.41	NP	113.32	4400	1.7	<0.90	110	28	4.8	--	--	--	--	--	--	--
MW-2R	9/6/2013	144.02	30.95	NP	113.07	11000	5.3	<1.5	700	540	4.4	--	--	--	--	--	--	--
	11/8/2013	144.02	31.20	NP	112.82	8000	5.3	<1.5	600	200	3.8	--	--	--	--	--	--	--
	2/6/2014	144.02	31.19	NP	112.83	5000	4.3	<0.50	250	120	3.6	--	--	--	--	--	--	--
MW-3	11/10/1992	143.62	33.13	1.27	111.44	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	12/3/1992	143.62	33.44	1.95	111.64	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/16/1993	143.62	30.40	0.41	113.53	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/28/1993	143.62	30.67	0.06	113.00	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/11/1994	143.62	30.72	0.01	112.91	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/10/1994	143.62	30.25	0.03	113.39	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/15/1994	143.62	31.11	0.25	112.70	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/31/1994	143.62	31.50	0.35	112.38	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/1/1995	143.62	29.70	0.95	114.63	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/30/1995	143.62	29.16	0.52	114.85	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/7/1995	143.62	29.94	0.87	114.33	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/18/1995	143.62	30.42	0.50	113.58	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/1/1996	143.62	28.71	0.62	115.38	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	7/10/1996	143.62	27.47	0.46	116.50	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/17/1996	143.62	28.39	0.39	115.52	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/8/1997	143.62	28.74	0.22	115.05	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/24/1997	143.62	29.27	0.14	114.46	370000	18000	270000	180000	1070000	<50000	--	--	--	--	--	--	--
	7/7/1997	143.62	31.98	NP	111.64	150000	5200	25000	4300	24500	<10000	--	--	--	--	--	--	--
	10/17/1997	143.62	30.19	0.05	113.47	400000	7200	30000	15000	84000	<2500	--	--	--	--	--	--	--
	1/19/1998	143.62	28.98	NP	114.64	280000	3800	20000	8400	46000	<10000	--	--	--	--	--	--	--
	4/24/1998	143.62	27.47	NP	116.15	89000	5100	15000	5300	29300	<500	--	--	--	--	--	--	--
	8/6/1998	143.62	28.70	0.02	114.94	150000	3700	16000	5200	31300	<10000	--	--	--	--	--	--	--
	12/1/1998	143.62	29.40	0.35	114.48	6500000	<25000	130000	140000	780000	<50000	--	--	--	--	--	--	--
	2/26/1999	143.62	28.51	0.30	115.34	290000	2700	15000	9600	59000	<200	--	--	--	--	--	--	--
	5/13/1999	143.62	28.21	0.21	115.57	2700000	7500	100000	75000	430000	4000	--	--	--	--	--	--	--
	8/9/1999	143.62	29.44	0.18	114.32	700000	3300	29000	23000	140000	<1000	--	--	--	--	--	--	--
	11/15/1999	143.62	29.90	0.31	113.95	250000	4700	18000	8500	60000	760	--	--	--	--	--	--	--
	2/22/2000	143.62	28.17	0.04	115.48	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/5/2000	143.62	28.25	0.05	115.41	110000	4100	15000	5500	31000	490	--	--	--	--	--	--	--
	8/4/2000	143.62	29.11	0.15	114.62	89000	4500	12000	4600	23000	490	--	--	--	--	--	--	--
	11/16/2000	143.62	29.25	0.23	114.54	130000	4100	12000	6200	35000	1400	--	--	--	--	--	--	--
	2/23/2001	143.62	29.33	NP	114.29	120000	3130	10000	5910	35400	492	--	--	--	--	--	--	--
	5/21/2001	143.62	29.28	NP	114.34	1800000	2570	16500	54100	315000	2460	--	--	--	--	--	--	--
	8/17/2001	143.62	30.43	0.30	113.42	89000	1950	5820	4330	23800	729	--	--	--	--	--	--	--
	11/19/2001	143.62	30.41	NP	113.21	110000	1350	3820	4020	22000	481	--	--	--	--	--	--	--
	2/11/2002	143.62	29.14	0.01	114.49	110000	2410	6950	5060	25100	444	--	--	--	--	--	--	--
	5/16/2002	143.62	29.25	NP	114.37	86000	1820	5630	4740	25300	667	--	--	--	--	--	--	--
	6/20/2002	143.62	29.45	NP	114.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2002	143.62	29.89	0.12	113.82	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	11/18/2002	143.62	30.05	NP	113.57	100000	2100	6500	5700	29000	1300	--	--	--	--	--	--	--
	2/13/2003	143.62	28.80	NP	114.82	120000	1500	3900	6700	35000	<1200	--	--	--	--	--	--	--
	5/12/2003	143.62	28.38	NP	115.24	64000	1500	3800	4800	22000	<1000	--	--	--	--	--	--	--
	8/20/2003	143.62	29.79	NP	113.83	240000	1400	3400	7600	41000	1400	--	--	--	--	--	--	--
	11/13/2003	143.62	31.30	0.12	112.41	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	2/18/2004	143.62	29.95	NP	113.67	1100000	<1000	5500	19000	130000	<5000	--	--	--	--	--	--	--
	5/6/2004	143.62	29.51	NP	114.11	<100000	1000	4900	4800	27000	<5000	--	--	--	--	--	--	--
	8/10/2004	143.62	30.44	NP	113.18	110000	660	4600	4700	26000	<500	--	--	--	--	--	--	--

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(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-3	11/24/2004	143.62	30.18	NP	113.44	51000	260	1700	2400	13000	<1200	--	--	--	--	--	--	--
	2/24/2005	143.62	28.51	NP	115.11	48000	400	2400	3500	16000	<1200	--	--	--	--	--	--	--
	5/16/2005	143.62	28.24	NP	115.38	53000	370	1700	4700	15000	<1200	--	--	--	--	--	--	--
	8/15/2005	143.62	28.98	NP	114.64	18000	140	180	1600	2700	<250	--	--	--	--	--	--	--
	11/29/2005	143.62	29.24	NP	114.38	19000	140	250	1600	3000	<250	--	--	--	--	--	--	--
	2/13/2006	143.62	27.81	0.01	115.82	13000	130	77	1000	1600	<250	--	--	--	--	--	--	--
	5/12/2006	143.62	26.71	NP	116.91	38000	190	800	3600	11000	<250	--	--	--	--	--	--	--
	8/14/2006	143.62	28.02	0.01	115.61	35000	140	700	3700	9400	<500	--	--	--	--	--	--	--
	12/6/2006	143.62	28.55	NP	115.07	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/12/2007	143.62	28.46	NP	115.16	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/14/2007	143.62	28.75	NP	114.87	27000	52	280	2900	7100	<50	--	--	--	--	--	--	--
	8/15/2007	143.62	29.46	NP	114.16	23000	53	180	3100	7300	<50	--	--	--	--	--	--	--
	11/13/2007	143.62	29.99	NP	113.63	36000	51	260	3300	9500	<50	--	--	--	--	--	--	--
	2/7/2008	143.62	28.85	NP	114.77	48000	42	190	5200	10000	<20	--	--	--	--	--	--	--
	5/1/2008	143.62	29.07	NP	114.55	39000	<5.0	9.2	210	450	<5.0	--	--	--	--	--	--	--
	8/8/2008	143.62	30.00	NP	113.62	39000	39	170	3200	8200	<5.0	--	--	--	--	--	--	--
	11/12/2008	143.62	30.40	NP	113.22	43000	<50	170	4200	9700	<50	--	--	--	--	--	--	--
	2/11/2009	143.62	30.48	NP	113.14	51000	<100	180	4400	11000	<100	--	--	--	--	--	--	--
	5/27/2009	143.62	29.68	NP	113.94	50000	24	130	2600	7100	<20	--	--	--	--	--	--	--
	8/13/2009	143.62	30.50	NP	113.12	39000	<50	120	2900	7300	<50	--	--	--	--	--	--	--
	11/10/2009	143.62	30.64	NP	112.98	35000	<50	200	3400	12000	<50	--	--	--	--	--	--	--
	2/11/2010	143.62	29.79	NP	113.83	38700	24.3	151	4240	11400	1.9	--	--	--	--	--	--	--
	5/25/2010	143.62	28.92	NP	114.70	57700	22.5	113	3520	9770	2.3	--	--	--	--	--	--	--
	8/31/2010	143.62	29.59	NP	114.03	56700	18.0	142	4160	11500	0.88	--	--	--	--	--	--	--
	11/10/2010	143.62	30.19	NP	113.43	39700	17.7	101	3940	9170	1.1	--	--	--	--	--	--	--
	2/16/2011	143.62	29.49	NP	114.13	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/17/2011	--	--	--	--	32500	14.3	66.6	2720	5210	1.2	--	--	--	--	--	--	--
	5/12/2011	143.62	28.42	NP	115.20	36100	11.2	70.2	2840	5330	1.1	--	--	--	--	--	--	--
	8/23/2011	143.62	28.95	NP	114.67	34000	7.0	50.8	2120	3410	0.52	--	--	--	--	--	--	--
	11/9/2011	143.62	29.51	NP	114.11	27300	8.2	54.0	2000	3940	<0.50	--	--	--	--	--	--	--
	2/8/2012	143.62	29.94	NP	113.68	31300	8.7	46.7	2420	3610	<0.50	--	--	--	--	--	--	--
	5/16/2012	143.62	28.98	NP	114.64	39300	7.1	38.1	2560	4290	0.57	--	--	--	--	--	--	--
	8/9/2012	143.62	29.76	NP	113.86	25000	5.8	40	2500	3600	<5.0	--	--	--	--	--	--	--
MW-3R	10/19/2012	143.49	30.26	NP	113.23	540	<0.50	<0.50	3.2	<0.50	<0.50	--	--	--	--	--	--	--
	12/28/2012	143.49	29.09	NP	114.40	460	<0.50	<0.50	1.0	<0.50	<0.50	--	--	--	--	--	--	--
	3/20/2013	143.49	29.70	NP	113.79	360	<0.50	<0.50	0.52	<0.50	<0.50	--	--	--	--	--	--	--
	5/8/2013	143.49	29.90	NP	113.59	140	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	9/6/2013	143.49	30.42	NP	113.07	150	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	11/8/2013	143.49	30.60	NP	112.89	100	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/6/2014	143.49	30.71	NP	112.78	450	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
MW-4	7/16/1993	140.98	27.69	NP	113.29	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	9/28/1993	140.98	27.93	NP	113.05	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	1/11/1994	140.98	28.04	NP	112.94	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	5/10/1994	140.98	27.57	NP	113.41	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	8/15/1994	140.98	28.38	NP	112.60	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	10/31/1994	140.98	28.67	NP	112.31	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	3/1/1995	140.98	26.34	NP	114.64	<50	0.50	<0.50	<0.50	1.2	--	--	--	--	--	--	--	--
	5/30/1995	140.98	26.81	NP	114.17	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	8/7/1995	140.98	26.55	NP	114.43	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	10/18/1995	140.98	27.37	NP	113.61	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	--	--	--
	5/1/1996	140.98	25.60	NP	115.38	<250	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	--	--
	7/10/1996	140.98	24.39	NP	116.59	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/1996	140.98	NG	NG	NG	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-4	10/17/1996	140.98	25.27	NP	115.71	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/8/1997	140.98	25.62	NP	115.36	<50	<0.50	1.6	<1.0	<1.0	450	--	--	--	--	--	--	--
	4/24/1997	140.98	26.15	NP	114.83	48	83	2200	1800	10500	<1000	--	--	--	--	--	--	--
	7/7/1997	140.98	28.83	NP	112.15	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1997	140.98	27.19	NP	113.79	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/19/1998	140.98	27.09	NP	113.89	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	4/24/1998	140.98	24.50	NP	116.48	<50	<0.50	1.4	<1.0	1.1	<10	--	--	--	--	--	--	--
	8/6/1998	140.98	25.66	NP	115.32	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	12/1/1998	140.98	26.45	NP	114.53	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/26/1999	140.98	25.62	NP	115.36	<50	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	5/13/1999	140.98	25.73	NP	115.25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/9/1999	140.98	25.89	NP	115.09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/15/1999	140.98	26.89	NP	114.09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/22/2000	140.98	25.65	NP	115.33	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/5/2000	140.98	25.52	NP	115.46	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/4/2000	140.98	26.32	NP	114.66	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/2000	140.98	26.96	NP	114.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/23/2001	140.98	26.60	NP	114.38	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/21/2001	140.98	26.50	NP	114.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/17/2001	140.98	27.14	NP	113.84	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/2001	140.98	27.54	NP	113.44	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2002	140.98	26.65	NP	114.33	<50	<0.50	<0.50	<0.50	1.4	<0.50	--	--	--	--	--	--	--
	5/16/2002	140.98	26.63	NP	114.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	140.98	26.72	NP	114.26	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2002	140.98	27.12	NP	113.86	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/2002	140.98	27.33	NP	113.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/13/2003	140.98	26.01	NP	114.97	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2003	140.98	25.78	NP	115.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/20/2003	140.98	27.19	NP	113.79	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2003	140.98	28.36	NP	112.62	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/18/2004	140.98	27.38	NP	113.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/6/2004	140.98	26.90	NP	114.08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/10/2004	140.98	27.64	NP	113.34	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/24/2004	140.98	27.63	NP	113.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/24/2005	140.98	25.79	NP	115.19	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/16/2005	140.98	25.29	NP	115.69	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2005	140.98	26.33	NP	114.65	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/2005	140.98	26.59	NP	114.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/13/2006	140.98	25.11	NP	115.87	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2006	140.98	24.04	NP	116.94	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2006	140.98	25.40	NP	115.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	140.98	25.92	NP	115.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/12/2007	140.98	25.82	NP	115.16	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/14/2007	140.98	25.99	NP	114.99	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2007	140.98	26.79	NP	114.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2007	140.98	27.32	NP	113.66	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/7/2008	140.98	25.98	NP	115.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/1/2008	140.98	26.40	NP	114.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/8/2008	140.98	27.32	NP	113.66	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	140.98	27.68	NP	113.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2009	140.98	27.72	NP	113.26	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/27/2009	140.98	27.03	NP	113.95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/13/2009	140.98	27.86	NP	113.12	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-4	11/10/2009	140.98	28.02	NP	112.96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2010	140.98	27.07	NP	113.91	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/25/2010	140.98	26.24	NP	114.74	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	140.98	26.93	NP	114.05	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	140.98	27.57	NP	113.41	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	140.98	26.82	NP	114.16	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/12/2011	140.98	25.70	NP	115.28	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	140.98	26.27	NP	114.71	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	140.98	27.05	NP	113.93	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	140.98	27.31	NP	113.67	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/16/2012	140.98	26.30	NP	114.68	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	140.98	27.18	NP	113.80	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	7/16/1993	144.53	31.33	NP	113.20	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	9/28/1993	144.53	31.53	NP	113.00	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	1/11/1994	144.53	31.65	NP	112.88	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	5/10/1994	144.53	31.16	NP	113.37	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	8/15/1994	144.53	31.96	NP	112.57	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	10/31/1994	144.53	32.24	NP	112.29	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	3/1/1995	144.53	29.88	NP	114.65	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	5/30/1995	144.53	29.39	NP	115.14	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	8/7/1995	144.53	30.07	NP	114.46	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	10/18/1995	144.53	30.99	NP	113.54	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	--	--	--
	5/1/1996	144.53	29.26	NP	115.27	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	7/10/1996	144.53	27.94	NP	116.59	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1996	144.53	28.86	NP	115.67	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/8/1997	144.53	29.17	NP	115.36	<50	<0.50	<1.0	<1.0	<1.0	450	--	--	--	--	--	--	--
	4/24/1997	144.53	27.23	NP	117.30	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	7/7/1997	144.53	32.30	NP	112.23	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1997	144.53	30.88	NP	113.65	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/19/1998	144.53	29.71	NP	114.82	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	4/24/1998	144.53	27.81	NP	116.72	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	8/6/1998	144.53	29.03	NP	115.50	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	12/1/1998	144.53	30.05	NP	114.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/26/1999	144.53	29.46	NP	115.07	<50	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	5/13/1999	144.53	29.36	NP	115.17	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/9/1999	144.53	29.51	NP	115.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/15/1999	144.53	30.47	NP	114.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/22/2000	144.53	29.35	NP	115.18	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/5/2000	144.53	29.13	NP	115.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/4/2000	144.53	29.90	NP	114.63	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/2000	144.53	30.38	NP	114.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/23/2001	144.53	30.25	NP	114.28	<50	<0.50	<0.50	<0.50	0.53	<0.50	--	--	--	--	--	--	--
	5/21/2001	144.53	30.21	NP	114.32	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/17/2001	144.53	30.89	NP	113.64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/2001	144.53	31.11	NP	113.42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2002	144.53	30.33	NP	114.20	110	0.54	2.3	2.6	14	<0.50	--	--	--	--	--	--	--
	5/16/2002	144.53	30.23	NP	114.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	144.53	30.35	NP	114.18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2002	144.53	30.73	NP	113.80	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/2002	144.53	29.97	NP	114.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/13/2003	144.53	29.61	NP	114.92	<50	<0.50	<0.50	<0.50	0.54	<2.5	--	--	--	--	--	--	--
	5/12/2003	144.53	29.37	NP	115.16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/20/2003	144.53	30.77	NP	113.76	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-5	11/13/2003	144.53	32.01	NP	112.52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/18/2004	144.53	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	5/6/2004	144.53	30.49	NP	114.04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/10/2004	144.53	31.13	NP	113.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/24/2004	144.53	30.02	NP	114.51	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/24/2005	144.53	29.45	NP	115.08	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/16/2005	144.53	28.93	NP	115.60	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2005	144.53	29.31	NP	115.22	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/2005	144.53	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	2/13/2006	144.53	28.75	NP	115.78	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2006	144.53	27.71	NP	116.82	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2006	144.53	29.03	NP	115.50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	144.53	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	2/12/2007	144.53	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	5/14/2007	144.53	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	8/15/2007	144.53	30.39	NP	114.14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2007	144.53	30.92	NP	113.61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/7/2008	144.53	29.60	NP	114.93	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/1/2008	144.53	30.00	NP	114.53	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/8/2008	144.53	30.90	NP	113.63	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	144.53	31.30	NP	113.23	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2009	144.53	31.40	NP	113.13	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/27/2009	144.53	30.59	NP	113.94	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/13/2009	144.53	31.39	NP	113.14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/10/2009	144.53	31.58	NP	112.95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2010	144.53	30.61	NP	113.92	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/25/2010	144.53	29.86	NP	114.67	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	144.53	30.52	NP	114.01	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	144.53	31.15	NP	113.38	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/2011	144.53	29.30	NP	115.23	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	144.53	29.89	NP	114.64	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	144.53	30.65	NP	113.88	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	144.53	30.97	NP	113.56	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/16/2012	144.53	29.93	NP	114.60	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	144.53	30.75	NP	113.78	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	7/16/1993	143.41	30.18	NP	113.23	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	9/28/1993	143.41	30.42	NP	112.99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	1/11/1994	143.41	30.52	NP	112.89	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/10/1994	143.41	30.06	NP	113.35	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	8/15/1994	143.41	30.87	NP	112.54	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	10/31/1994	143.41	31.16	NP	112.25	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	3/1/1995	143.41	28.85	NP	114.56	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	5/30/1995	143.41	28.28	NP	115.13	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	8/7/1995	143.41	29.12	NP	114.29	<50	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--
	10/18/1995	143.41	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI	WI
	7/10/1996	143.41	28.98	NP	114.43	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/1996	143.41	NG	NG	NG	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1996	143.41	29.88	NP	113.53	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/8/1997	143.41	30.14	NP	113.27	<50	<0.50	<1.0	<1.0	<1.0	450	--	--	--	--	--	--	--
	4/24/1997	143.41	26.53	NP	116.88	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	7/7/1997	143.41	33.19	NP	110.22	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1997	143.41	29.66	NP	113.75	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/19/1998	143.41	28.48	NP	114.93	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--

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(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-6	4/24/1998	143.41	26.95	NP	116.46	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	8/6/1998	143.41	28.23	NP	115.18	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	12/1/1998	143.41	28.90	NP	114.51	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/26/1999	143.41	28.17	NP	115.24	<50	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	5/13/1999	143.41	28.12	NP	115.29	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/9/1999	143.41	28.26	NP	115.15	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/15/1999	143.41	29.37	NP	114.04	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/22/2000	143.41	28.00	NP	115.41	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/5/2000	143.41	28.01	NP	115.40	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/4/2000	143.41	28.80	NP	114.61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/2000	143.41	29.14	NP	114.27	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/23/2001	143.41	29.13	NP	114.28	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/21/2001	143.41	29.00	NP	114.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/17/2001	143.41	29.59	NP	113.82	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/2001	143.41	29.45	NP	113.96	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2002	143.41	29.22	NP	114.19	55	0.61	1.3	1.4	7.2	<0.50	--	--	--	--	--	--	--
	5/16/2002	143.41	29.17	NP	114.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	143.41	29.28	NP	114.13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2002	143.41	29.52	NP	113.89	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/2002	143.41	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/13/2003	143.41	28.55	NP	114.86	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2003	143.41	28.27	NP	115.14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/20/2003	143.41	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	11/13/2003	143.41	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/18/2004	143.41	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/6/2004	143.41	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	8/10/2004	143.41	29.72	NP	113.69	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/24/2004	143.41	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/24/2005	143.41	28.23	NP	115.18	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/16/2005	143.41	28.88	NP	114.53	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2005	143.41	28.87	NP	114.54	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/2005	143.41	29.13	NP	114.28	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/13/2006	143.41	27.53	NP	115.88	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2006	143.41	26.50	NP	116.91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2006	143.41	27.90	NP	115.51	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	143.41	28.33	NP	115.08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/12/2007	143.41	28.30	NP	115.11	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/14/2007	143.41	28.50	NP	114.91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2007	143.41	29.42	NP	113.99	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2007	143.41	29.83	NP	113.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/7/2008	143.41	28.52	NP	114.89	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/1/2008	143.41	28.92	NP	114.49	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/8/2008	143.41	29.83	NP	113.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	143.41	30.25	NP	113.16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2009	143.41	30.31	NP	113.10	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/27/2009	143.41	29.50	NP	113.91	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/13/2009	143.41	30.35	NP	113.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/10/2009	143.41	30.57	NP	112.84	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2010	143.41	29.83	NP	113.58	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/25/2010	143.41	27.41	NP	116.00	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	143.41	29.42	NP	113.99	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	143.41	30.08	NP	113.33	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	143.41	29.30	NP	114.11	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--

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Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-6	5/12/2011	143.41	28.19	NP	115.22	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	143.41	28.67	NP	114.74	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	143.41	28.05	NP	115.36	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	143.41	29.80	NP	113.61	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/16/2012	143.41	28.80	NP	114.61	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	143.41	29.57	NP	113.84	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	7/16/1993	140.28	27.15	NP	113.13	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	9/28/1993	140.28	27.35	NP	112.93	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	1/11/1994	140.28	27.47	NP	112.81	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	5/10/1994	140.28	26.98	NP	113.30	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	8/15/1994	140.28	27.83	NP	112.45	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	10/31/1994	140.28	28.11	NP	112.17	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	--	--	--	--	--
	3/1/1995	140.28	25.81	NP	114.47	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	5/30/1995	140.28	25.26	NP	115.02	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/5/1995	140.28	25.37	NP	114.91	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	8/7/1995	140.28	26.05	NP	114.23	<50	<0.50	<0.50	<0.50	<1.0	--	--	--	--	--	--	--	--
	10/18/1995	140.28	28.72	NP	111.56	<50	<0.50	<0.50	<0.50	<1.0	<5.0	--	--	--	--	--	--	--
	5/1/1996	140.28	25.08	NP	115.20	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	7/10/1996	140.28	25.77	NP	114.51	--	--	--	--	--	--	--	--	--	--	--	--	--
	7/11/1996	140.28	NG	NG	NG	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1996	140.28	26.69	NP	113.59	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/8/1997	140.28	27.04	NP	113.24	<50	<0.50	1.5	<1.0	<1.0	440	--	--	--	--	--	--	--
	4/24/1997	140.28	25.71	NP	114.57	<50	<0.50	<1.0	<1.0	1.3	<10	--	--	--	--	--	--	--
	7/7/1997	140.28	30.30	NP	109.98	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	10/17/1997	140.28	26.62	NP	113.66	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	1/19/1998	140.28	25.66	NP	114.62	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	4/24/1998	140.28	23.90	NP	116.38	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	8/6/1998	140.28	25.17	NP	115.11	<50	<0.50	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--
	12/1/1998	140.28	25.75	NP	114.53	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/26/1999	140.28	25.10	NP	115.18	<50	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--
	5/13/1999	140.28	25.03	NP	115.25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/9/1999	140.28	25.20	NP	115.08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/15/1999	140.28	26.33	NP	113.95	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/22/2000	140.28	25.45	NP	114.83	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/5/2000	140.28	24.93	NP	115.35	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/4/2000	140.28	25.78	NP	114.50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/16/2000	140.28	26.45	NP	113.83	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/23/2001	140.28	26.06	NP	114.22	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/21/2001	140.28	25.94	NP	114.34	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/17/2001	140.28	27.60	NP	112.68	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/19/2001	140.28	27.04	NP	113.24	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2002	140.28	26.00	NP	114.28	<50	<0.50	<0.50	<0.50	2.3	<0.50	--	--	--	--	--	--	--
	5/16/2002	140.28	26.12	NP	114.16	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	6/20/2002	140.28	26.23	NP	114.05	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2002	140.28	26.65	NP	113.63	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/18/2002	140.28	26.83	NP	113.45	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/13/2003	140.28	25.50	NP	114.78	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2003	140.28	25.20	NP	115.08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/20/2003	140.28	26.57	NP	113.71	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2003	140.28	27.69	NP	112.59	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/18/2004	140.28	26.71	NP	113.57	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/6/2004	140.28	26.28	NP	114.00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/10/2004	140.28	27.08	NP	113.20	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-7	11/24/2004	140.28	27.03	NP	113.25	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/24/2005	140.28	25.22	NP	115.06	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/16/2005	140.28	24.69	NP	115.59	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2005	140.28	25.65	NP	114.63	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/2005	140.28	25.98	NP	114.30	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/13/2006	140.28	24.55	NP	115.73	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2006	140.28	23.62	NP	116.66	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2006	140.28	24.77	NP	115.51	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	140.28	25.27	NP	115.01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/12/2007	140.28	25.15	NP	115.13	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/14/2007	140.28	25.43	NP	114.85	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2007	140.28	26.22	NP	114.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2007	140.28	26.78	NP	113.50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/7/2008	140.28	25.53	NP	114.75	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/1/2008	140.28	25.90	NP	114.38	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/8/2008	140.28	26.80	NP	113.48	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	140.28	27.22	NP	113.06	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2009	140.28	27.21	NP	113.07	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/27/2009	140.28	26.40	NP	113.88	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/13/2009	140.28	27.29	NP	112.99	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/10/2009	140.28	27.42	NP	112.86	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/11/2010	140.28	26.57	NP	113.71	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/25/2010	140.28	25.79	NP	114.49	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	140.28	26.37	NP	113.91	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	140.28	26.98	NP	113.30	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	140.28	26.21	NP	114.07	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/12/2011	140.28	25.11	NP	115.17	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	140.28	25.75	NP	114.53	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	140.28	26.53	NP	113.75	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	140.28	26.73	NP	113.55	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/16/2012	140.28	25.81	NP	114.47	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	140.28	26.59	NP	113.69	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	140.28	27.19	NP	113.09	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2012	140.28	25.98	NP	114.3	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	140.28	26.63	NP	113.65	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/8/2013	140.28	26.83	NP	113.45	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2013	140.28	27.42	NP	112.86	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/2013	140.28	28.05	NP	112.23	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/6/2014	140.28	27.65	NP	112.63	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
MW-8	6/20/2002	142.36	28.15	NP	114.21	<50	<0.50	<0.50	<0.50	1.7	1.0	--	--	--	--	--	--	--
	8/14/2002	142.36	28.11	NP	114.25	<50	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	11/18/2002	142.36	28.74	NP	113.62	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	2/13/2003	142.36	27.47	NP	114.89	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2003	142.36	27.18	NP	115.18	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	8/20/2003	142.36	28.60	NP	113.76	<50	<0.50	0.58	<0.50	2.0	<2.5	--	--	--	--	--	--	--
	11/13/2003	142.36	29.78	NP	112.58	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	2/18/2004	142.36	28.70	NP	113.66	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/6/2004	142.36	28.22	NP	114.14	<5000	<50	<50	<50	220	<250	--	--	--	--	--	--	--
	8/10/2004	142.36	28.29	NP	114.07	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	11/24/2004	142.36	29.03	NP	113.33	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	2/24/2005	142.36	27.27	NP	115.09	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/16/2005	142.36	26.79	NP	115.57	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	8/15/2005	142.36	27.67	NP	114.69	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--

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(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
MW-8	11/29/2005	142.36	28.02	NP	114.34	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	2/13/2006	142.36	26.57	NP	115.79	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	5/12/2006	142.36	25.46	NP	116.90	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	8/14/2006	142.36	26.76	NP	115.60	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--
	12/6/2006	142.36	27.29	NP	115.07	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/12/2007	142.36	27.21	NP	115.15	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/14/2007	142.36	27.44	NP	114.92	<50	<0.50	<0.50	<0.50	0.68	<0.50	--	--	--	--	--	--	--
	8/15/2007	142.36	28.22	NP	114.14	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	11/13/2007	142.36	28.74	NP	113.62	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/7/2008	142.36	27.40	NP	114.96	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/1/2008	142.36	27.81	NP	114.55	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	8/8/2008	142.36	28.77	NP	113.59	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	11/12/2008	142.36	29.25	NP	113.11	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/11/2009	142.36	29.21	NP	113.15	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/27/2009	142.36	28.40	NP	113.96	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	8/13/2009	142.36	29.32	NP	113.04	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	11/10/2009	142.36	29.39	NP	112.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/11/2010	142.36	28.53	NP	113.83	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/25/2010	142.36	27.73	NP	114.63	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	8/31/2010	142.36	28.34	NP	114.02	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	11/10/2010	142.36	28.93	NP	113.43	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	2/16/2011	142.34	28.21	NP	114.13	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/12/2011	142.34	27.20	NP	115.14	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	8/23/2011	142.34	27.70	NP	114.64	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	11/9/2011	142.34	28.46	NP	113.88	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	2/8/2012	142.34	28.70	NP	113.64	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/16/2012	142.34	27.75	NP	114.59	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	8/9/2012	142.34	28.58	NP	113.76	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	10/19/2012	142.34	29.03	NP	113.31	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	12/28/2012	142.34	27.96	NP	114.38	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	142.34	28.54	NP	113.8	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	5/8/2013	142.34	28.71	NP	113.63	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	9/6/2013	142.34	29.27	NP	113.07	<50	<0.50	<0.50	<0.50	0.76	<0.50	--	--	--	--	--	--	--
	11/8/2013	142.34	30.24	NP	112.10	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
	2/6/2014	142.34	29.45	NP	112.89	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
MW-9	2/16/2011	142.91	28.92	NP	113.99	<50.0	<0.50	<0.50	<0.50	<1.5	6.3	--	--	--	--	--	--	--
	5/12/2011	142.91	27.80	NP	115.11	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	8/23/2011	142.91	28.38	NP	114.53	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	11/9/2011	142.91	29.18	NP	113.73	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	2/8/2012	142.91	29.39	NP	113.52	<50.0	<0.50	<0.50	<0.50	<1.5	<0.50	--	--	--	--	--	--	--
	5/16/2012	142.91	28.47	NP	114.44	84.9 1n	<0.50	<0.50	0.50	<1.5	<0.50	--	--	--	--	--	--	--
	8/9/2012	142.91	29.24	NP	113.67	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--
RW-1	7/16/1993	143.69	30.47	0.08	113.28	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	9/28/1993	143.69	30.96	0.05	112.77	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/11/1994	143.69	31.20	0.45	112.83	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/10/1994	143.69	30.64	0.49	113.42	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/15/1994	143.69	32.14	0.51	111.93	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/31/1994	143.69	31.85	0.63	112.31	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	3/1/1995	143.69	29.75	1.75	115.25	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/30/1995	143.69	28.90	1.48	115.90	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	8/7/1995	143.69	29.98	1.51	114.84	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/18/1995	143.69	29.59	0.82	114.72	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/1/1996	143.69	28.57	0.51	115.50	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
RW-1	7/10/1996	143.69	27.42	0.63	116.74	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	10/17/1996	143.69	28.34	0.55	115.76	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	1/8/1997	143.69	28.71	0.51	115.36	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	4/24/1997	143.69	29.31	0.75	114.94	1100000	7100	54000	33000	197000	<20000	--	--	--	--	--	--	--
	7/7/1997	143.69	31.90	NP	111.79	210000	11000	36000	4600	28500	<10000	--	--	--	--	--	--	--
	10/17/1997	143.69	30.51	0.01	113.19	240000	20000	51000	8500	50000	<5000	--	--	--	--	--	--	--
	1/19/1998	143.69	29.38	0.01	114.32	810000	6400	55000	21000	118000	<10000	--	--	--	--	--	--	--
	4/24/1998	143.69	27.45	0.01	116.25	47000	4600	23000	4500	26300	<2500	--	--	--	--	--	--	--
	8/6/1998	143.69	28.73	NP	114.96	220000	6200	27000	6900	42000	<10000	--	--	--	--	--	--	--
	12/1/1998	143.69	29.81	0.07	113.93	68000	3900	12000	2200	12000	<500	--	--	--	--	--	--	--
	2/26/1999	143.69	29.17	0.05	114.56	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH	LPH
	5/13/1999	143.69	29.41	NP	114.28	190000	7100	29000	5500	32000	120	--	--	--	--	--	--	--
	8/9/1999	143.69	29.56	NP	114.13	190000	11000	39000	6500	39000	<1000	--	--	--	--	--	--	--
	11/15/1999	143.69	29.68	NP	114.01	130000	7700	34000	5400	31000	<5.0	--	--	--	--	--	--	--
	2/22/2000	143.69	28.75	0.01	114.95	200000	6900	28000	7800	44000	270	--	--	--	--	--	--	--
	5/5/2000	143.69	28.56	NP	115.13	120000	5400	22000	5700	32000	190	--	--	--	--	--	--	--
	8/4/2000	143.69	29.18	NP	114.51	71000	5000	11000	3600	13000	<3.8	--	--	--	--	--	--	--
	11/16/2000	143.69	29.76	NP	113.93	100000	5500	19000	5500	26000	130	--	--	--	--	--	--	--
	2/23/2001	143.69	29.39	NP	114.30	68000	2910	7060	4430	19900	395	--	--	--	--	--	--	--
	5/21/2001	143.69	29.31	NP	114.38	770000	4490	39300	30600	170000	968	--	--	--	--	--	--	--
	8/17/2001	143.69	29.73	NP	113.96	83000	2460	7850	4500	19700	627	--	--	--	--	--	--	--
	11/19/2001	143.69	30.28	NP	113.41	68000	2180	6170	3550	16000	48	--	--	--	--	--	--	--
	2/11/2002	143.69	29.19	NP	114.50	83000	3250	10800	4530	18200	132	--	--	--	--	--	--	--
	5/16/2002	143.69	29.31	NP	114.38	92000	2140	6360	3710	4160	67	--	--	--	--	--	--	--
	6/20/2002	143.69	29.50	NP	114.19	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/14/2002	143.69	30.81	NP	112.88	120000	2680	11100	5170	23700	440	--	--	--	--	--	--	--
	11/18/2002	143.69	30.11	NP	113.58	65000	1900	4800	4900	19000	670	--	--	--	--	--	--	--
	2/13/2003	143.69	28.95	NP	114.74	130000	2500	9900	4800	21000	<1200	--	--	--	--	--	--	--
	5/12/2003	143.69	28.86	NP	114.83	69000	2100	8900	4400	19000	<1000	--	--	--	--	--	--	--
	8/20/2003	143.69	30.64	NP	113.05	77000	2200	8200	5400	22000	1100	--	--	--	--	--	--	--
	11/13/2003	143.69	32.59	NP	111.10	160000	3000	13000	8000	41000	<1200	--	--	--	--	--	--	--
	2/18/2004	143.69	30.51	NP	113.18	75000	1200	3800	5000	18000	<1200	--	--	--	--	--	--	--
	5/6/2004	143.69	30.22	NP	113.47	59000	1100	3200	4500	14000	<2500	--	--	--	--	--	--	--
	8/10/2004	143.69	31.55	NP	112.14	65000	710	2300	4100	12000	<250	--	--	--	--	--	--	--
	11/24/2004	143.69	31.60	NP	112.09	64000	1100	3900	4800	17000	<1200	--	--	--	--	--	--	--
	2/24/2005	143.69	28.60	NP	115.09	88000	940	4700	5400	19000	<2500	--	--	--	--	--	--	--
	5/16/2005	143.69	28.17	NP	115.52	54000	710	2400	4100	12000	<2500	--	--	--	--	--	--	--
	8/15/2005	143.69	29.83	NP	113.86	57000	750	3400	4400	14000	<1200	--	--	--	--	--	--	--
	11/29/2005	143.69	30.20	NP	113.49	91000	1100	5600	5000	22000	<1200	--	--	--	--	--	--	--
	2/13/2006	143.69	28.33	NP	115.36	40000	440	1100	3300	7300	<1200	--	--	--	--	--	--	--
	5/12/2006	143.69	27.45	NP	116.24	54000	690	3700	4200	14000	<1200	--	--	--	--	--	--	--
	8/14/2006	143.69	28.84	NP	114.85	50000	520	2100	3900	11000	<1200	--	--	--	--	--	--	--
	12/6/2006	143.69	28.93	NP	114.76	98000	510	5000	4400	17000	<50	--	--	--	--	--	--	--
	2/12/2007	143.69	28.62	NP	115.07	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2007	143.69	29.50	NP	114.19	35000	200	1300	2500	7700	<50	--	--	--	--	--	--	--
	8/15/2007	143.69	31.35	NP	112.34	47000	250	2900	4000	15000	<50	--	--	--	--	--	--	--
	11/13/2007	143.69	30.42	NP	113.27	29000	120	420	2500	6700	<50	--	--	--	--	--	--	--
	2/7/2008	143.69	30.00	NP	113.69	53000	47	1700	2500	11000	<5.0	--	--	--	--	--	--	--
	5/1/2008	143.69	29.15	NP	114.54	30000	<100	490	1100	4200	<100	--	--	--	--	--	--	--
	8/8/2008	143.69	31.25	NP	112.44	13000	86	920	1500	5600	<50	--	--	--	--	--	--	--
	11/12/2008	143.69	31.53	NP	112.16	34000	70	680	1400	5300	<50	--	--	--	--	--	--	--
	2/11/2009	143.69	31.40	NP	112.29	26000	<50	470	1400	5400	<50	--	--	--	--	--	--	--
	5/27/2009	143.69	29.71	NP	113.98	25000	40	460	970	3900	<10	--	--	--	--	--	--	--

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
RW-1	8/13/2009	143.69	30.55	NP	113.14	27000	62	1200	1600	7300	<50	--	--	--	--	--	--	--
	11/10/2009	143.69	30.72	NP	112.97	27000	62	1200	1600	7300	<50	--	--	--	--	--	--	--
	2/11/2010	143.69	29.84	NP	113.85	23900	56.4	891	2260	8460	1.0	--	--	--	--	--	--	--
	5/25/2010	143.69	29.01	NP	114.68	31200	56.5	797	1540	6560	2.1	--	--	--	--	--	--	--
	8/31/2010	143.69	29.58	NP	114.11	28400	47.4	240	1690	5630	0.86	--	--	--	--	--	--	--
	11/10/2010	143.69	30.31	NP	113.38	24500	39.1	427	1530	5550	<0.50	--	--	--	--	--	--	--
	2/16/2011	143.69	29.52	NP	114.17	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/17/2011	--	--	--	--	21100	46.7	410	1250	4080	<0.50	--	--	--	--	--	--	--
	5/12/2011	143.69	28.47	NP	115.22	57200	43.9	1560	2660	--	<0.50	--	--	--	--	--	--	--
	8/23/2011	143.69	29.00	NP	114.69	27100	33.1	469	1310	4320	0.57	--	--	--	--	--	--	--
	11/9/2011	143.69	29.76	NP	113.93	14100	24.2	283	1040	3320	<2.5	--	--	--	--	--	--	--
	2/8/2012	143.69	30.02	NP	113.67	22000	18.7	264	995	3540	<0.50	--	--	--	--	--	--	--
	5/16/2012	143.69	29.05	NP	114.64	14200	20.3	236	960	3140	<0.50	--	--	--	--	--	--	--
	8/9/2012	143.69	29.79	NP	113.90	18000	18	220	1200	3300	<5.0	--	--	--	--	--	--	--
VW-1	8/14/2006	NSVD	28.78	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/12/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/14/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	8/15/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	11/13/2007	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/7/2008	NSVD	NG	NG	NG	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/11/2009	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/27/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/13/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/11/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/25/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/2011	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2012	144.28	29.13	NP	115.15	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2012	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/8/2013	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2013	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/2013	144.28	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
VW-2	8/14/2006	NSVD	27.11	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	NSVD	27.43	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/12/2007	NSVD	27.33	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2007	NSVD	27.81	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2007	NSVD	28.49	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2007	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/7/2008	NSVD	NG	NG	NG	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/11/2009	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/27/2009	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--

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WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
VW-2	8/13/2009	NSVD	29.40	NP	NSVD	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/11/2010	NSVD	28.75	NP	NSVD	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/25/2010	NSVD	28.95	NP	NSVD	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	NSVD	28.54	NP	NSVD	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	142.78	28.62	NP	114.16	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/2011	142.78	27.41	NP	115.37	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	142.78	27.76	NP	115.02	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	142.78	28.71	NP	114.07	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	142.78	29.03	NP	113.75	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2012	142.78	28.00	NP	114.78	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	142.78	28.66	NP	114.12	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	142.78	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2012	142.78	28.1	NP	114.68	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	142.78	28.81	NP	113.96	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/8/2013	142.78	29.03	NP	113.75	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2013	142.78	dry	NP	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/2013	142.78	dry	NP	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
VW-3	8/14/2006	NSVD	NG	NG	NG	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/12/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/14/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	8/15/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	11/13/2007	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/7/2008	NSVD	NG	NG	NG	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/11/2009	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/27/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/13/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/11/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/25/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/2011	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2012	143.94	27.80	NP	116.14	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2012	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/8/2013	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2013	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/2013	143.94	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
VW-4	8/14/2006	NSVD	28.71	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	NSVD	29.29	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/12/2007	NSVD	29.14	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2007	NSVD	29.35	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2007	NSVD	30.13	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
VW-4	11/13/2007	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/7/2008	NSVD	NG	NG	NG	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/11/2009	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/27/2009	NSVD	30.07	NP	NSVD	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/13/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/11/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/25/2010	NSVD	29.61	NP	NSVD	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	NSVD	30.08	NP	NSVD	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/2011	144.24	29.03	NP	115.21	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	144.24	29.62	NP	114.62	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2012	144.24	29.69	NP	114.55	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2012	144.24	29.91	NP	114.33	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/8/2013	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2013	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/2013	144.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
VW-5	8/14/2006	NSVD	28.30	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	NSVD	28.89	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/12/2007	NSVD	28.83	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	8/15/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	11/13/2007	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/7/2008	NSVD	NG	NG	NG	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/11/2009	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/27/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/13/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/11/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/25/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/2011	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2012	143.88	29.03	NP	114.85	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2012	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/8/2013	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2013	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/2013	143.88	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
VW-6	8/14/2006	NSVD	27.74	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	NSVD	28.28	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/12/2007	NSVD	28.14	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2007	NSVD	28.35	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2007	NSVD	29.15	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/13/2007	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/7/2008	NSVD	NG	NG	NG	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/11/2009	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/27/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/13/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/11/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/25/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	NSVD	29.21	NP	NSVD	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	143.24	29.12	NP	114.12	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/2011	143.24	28.02	NP	115.22	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	143.24	28.64	NP	114.60	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	143.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	143.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2012	143.24	28.70	NP	114.54	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	143.24	29.44	NP	113.80	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	143.24	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/28/2012	143.24	28.87	NP	114.37	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	143.24	dry	NP	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/8/2013	143.24	dry	NP	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2013	143.24	dry	NP	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/2013	143.24	dry	NP	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
VW-7	8/14/2006	NSVD	28.31	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	12/6/2006	NSVD	28.69	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	2/12/2007	NSVD	28.55	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	5/14/2007	NSVD	28.78	NP	NSVD	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2007	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	11/13/2007	NSVD	NG	NG	NG	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/7/2008	NSVD	NG	NG	NG	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/12/2008	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	2/11/2009	NSVD	dry	dry	dry	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
	5/27/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/13/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2009	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/11/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/25/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/31/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/10/2010	NSVD	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/16/2011	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/12/2011	143.79	28.45	NP	115.34	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/23/2011	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/16/2012	143.79	29.05	NP	114.74	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3
HISORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUNDWATER GAUGING DATA				GROUNDWATER ANALYTICAL DATA												
		TOC Elevation (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Water Elevation* (ft)	GRO (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	Ethanol (ug/L)	1,2-Dibromoethane (EDB) (ug/L)	1,2-Dichloroethane (ug/L)
VW-7	12/28/2012	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/20/2013	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	5/8/2013	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/6/2013	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/8/2013	143.79	dry	dry	dry	--	--	--	--	--	--	--	--	--	--	--	--	--

Gauging Notes:
TOC - Top of Casing
ft - Feet
NP - LNAPL not present
LNAPL - Light non-aqueous phase liquid
* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)
NG - Not gauged
WI - Well Inaccessable
NSVD - Not surveyed
DRY - Well is dry
-- - No information available

Analytical Notes:
-- - No information available
< - Not detected at or above indicated laboratory reporting limit
DRY - Well was Dry; sample could not be taken
LPH - Liquid Phase Hydrocarbons
NS - Well not sampled.
ug/L - micrograms/liter
WI - Well Inaccessable
GRO- gasoline range organics
MTBE- Methyl tertiary-butyl ether
TBA- Tertiary-butyl alcohol
DIPE- Di-isopropyl ether
ETBE- Ethyl tertiary-butyl ether
TAME- Tertiary-amyl methyl ether
1n - Carryover was confirmed by a second analysis performed out of hold with non-detect result; result may be biased high due to carryover from previously analyzed sample.

TABLE 3a
ADDITIONAL HISTORICAL GROUNDWATER ANALYTICAL DATA
(FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	GROUND WATER ANALYTICAL DATA																		
		Biochemical Oxygen Demand (mg/L)	Chemical Oxygen Demand (mg/L)	Chloride (ug/L)	Total Iron (ug/L)	Iron, Ferric (ug/L)	Iron, Ferric Hand Calc (mg/L)	Iron, Ferrous (ug/L)	Manganese (ug/L)	Methane (ug/L)	Nitrate as N (ug/L)	Nitrite as N (ug/L)	Nitrogen (mg/L)	Nitrogen, Ammonia (mg/L)	Nitrogen, NO2 plus NO3 (ug/L)	Phosphate, Ortho (ug/L)	Phosphorous (mg/L)	Solids, Total Dissolved (ug/L)	Sulfate(ug/L)	Sulfide (ug/L)	Total Carbon (mg/L)
MW-1	2/11/2010	<2.0	<5.0	27200	15900	--	--	--	--	<0.4	7820	<10.0	<1.0	<0.05	7840	572	0.75	--	148000	<1000	1.6
	8/23/2011	--	--	--	--	--	--	--	--	<10.0	5380	10.1	--	--	5390	--	--	--	136000	--	--
	11/9/2011	--	--	--	17000	16200	--	800	269	<10.0	6480	<10.0	--	--	6480	--	--	423000	130000	--	--
	2/8/2012	--	--	--	70400	69400	--	1000	1320	<10.0	6430	<10.0	--	--	6430	--	--	462000	144000	--	--
	5/16/2012	--	--	--	22800	22800	--	<100	399	<6.6	6510	<10.0	--	--	6520	--	--	428000	120000 H	--	--
	8/9/2012	--	--	--	12	--	12	--	0.22	<1.00	6000	<100	--	--	--	--	--	340000	150000	--	--
MW-2	8/23/2011	--	--	--	--	--	--	--	--	4210	<50.0	<10.0	--	--	<50.0	--	--	--	2390	--	--
	11/9/2011	--	--	--	49300	48300	--	1000	1050	5710	62.1	<10.0	--	--	66.1	--	--	392000	3050	--	--
	2/8/2012	--	--	--	43300	42100	--	1200	1050	4630	65.6	<10.0	--	--	71.9	--	--	396000	3040	--	--
	5/16/2012	--	--	--	55800	54400	--	1400	955	2170	<50.0	<10.0	--	--	<50.0	--	--	416000	5800 H	--	--
	8/9/2012	--	--	--	28	--	26	--	1.0	1900	<100	<100	--	--	--	--	--	345000	3000	--	--
	10/19/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	8/23/2011	--	--	--	--	--	--	--	--	10400	<50.0	<10.0	--	--	<50.0	--	--	--	43200	--	--
	11/9/2011	--	--	--	12100	10700	--	1400	6410	11700	52.7	<10.0	--	--	59.1	--	--	576000	44400	--	--
	2/8/2012	--	--	--	23500	21900	--	1600	6670	9670	<50.0	<10.0	--	--	<50.0	--	--	506000	18700	--	--
	5/16/2012	--	--	--	39500	37700	--	1800	5940	61.8	<50.0	<10.0	--	--	<50.0	--	--	470000	24000 H	--	--
	8/9/2012	--	--	--	9.5	--	7.4	--	5.6	4030	<100	<100	--	--	--	--	--	430000	6700	--	--
MW-4	2/8/2012	--	--	--	28900	28700	--	200	234	<10.0	1460	<10.0	--	--	1460	--	--	352000	50900	--	--
	5/16/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	2/8/2012	--	--	--	37700	36900	--	800	806	<10.0	1400	<10.0	--	--	1410	--	--	412000	12100	--	--
	5/16/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	2/8/2012	--	--	--	23600	22800	--	800	1640	24.7	1540	<10.0	--	--	1540	--	--	448000	39200	--	--
	5/16/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7	2/8/2012	--	--	--	83900	83100	--	800	498	<10.0	7380	<10.0	--	--	7380	--	--	456000	108000	--	--
	5/16/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/19/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	8/23/2011	--	--	--	--	--	--	--	--	<10.0	1450	<10.0	--	--	1450	--	--	--	41900	--	--
	11/9/2011	--	--	--	880	<100	--	800	26.5	<10.0	1500	<10.0	--	--	1510	--	--	288000	49900	--	--
	2/8/2012	--	--	--	5520	4720	--	800	107	<10.0	1910	<10.0	--	--	1910	--	--	317000	49800	--	--
	5/16/2012	--	--	--	1090	1090	--	<100	31.3	<6.6	1870	<10.0	--	--	1870	--	--	307000	51000 H	--	--
	8/9/2012	--	--	--	2.2	--	2.2	--	0.043	<1.00	1400	<100	--	--	--	--	--	235000	50000	--	--
	10/19/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	8/23/2011	--	--	--	--	--	--	--	--	37.7	419	<10.0	--	--	426	--	--	--	6180	--	--
	11/9/2011	--	--	--	12700	11500	--	1200	125	<10.0	283	<10.0	--	--	292	--	--	221000	4390	--	--
	2/8/2012	--	--	--	11400	10400	--	1000	112	<10.0	326	<10.0	--	--	332	--	--	246000	4260	--	--
	5/16/2012	--	--	--	14600	14600	--	<100	148	<6.6	364	<10.0	--	--	374	--	--	226000	4600 H	--	--
	8/9/2012	--	--	--	12	--	12	--	0.15	<1.00	300	<100	--	--	--	--	--	175000	4200	--	--
RW-1	2/11/2010	22.8	85.7	6170	15700	--	--	--	--	1200	<50.0	<10.0	3.2	0.16	<50.0	578	0.76	--	1690	<1000	14
	8/23/2011	--	--	--	--	--	--	--	--	20.1	<50.0	<10.0	--	--	<50.0	--	--	--	4620	--	--
	11/9/2011	--	--	--	7780	6580	--	1200	9290	7820	<50.0	<10.0	--	--	<50.0	--	--	356000	2460	--	--
	2/8/2012	--	--	--	7780	6780	--	1000	8730	6090	<50.0	<10.0	--	--	<50.0	--	--	351000	3770	--	--
	5/16/2012	--	--	--	9090	7990	--	1100	7540	5260	<50.0	<10.0	--	--	<50.0	--	--	330000	3700 H	--	--
	8/9/2012	--	--	--	9.6	--	8.1	--	8.5	2060	<100	<100	--	--	--	--	--	330000	2000	--	--

Analytical Notes:
< - Not detected at or above indicated laboratory reporting limit
mg/L - milligrams per liter
ug/L - micrograms/liter
H - Sample result is estimated and biased high.

TABLE 4
GROUNDWATER GEOCHEMICAL DATA
76 (FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	Contaminants of Concern			Electron Acceptors			Reaction Endproducts			Other Geochemical Indicators				
		GRO (µg/L)	Benzene (µg/L)	MTBE (µg/L)	DO (mg/L)*	Nitrate as N (µg/L)	Sulfate (µg/L)	Iron (II) (µg/L)*	Manganese (µg/L)	Methane (µg/L)	ORP (mV)*	Temperature (Celsius)*	pH*	Conductivity (µS/cm)*	Turbidity (NTU)*
Upgradient / Cross-Gradient Wells															
MW-1	8/23/2011	<50.0	<0.50	<0.50	--	5380	136000	0.0	--	<10.0	--	22.6	6.65	504	>1000
	11/9/2011	<50.0	<0.50	<0.50	1.00	6480	130000	800	269	<10.0	-199.2	21.0	6.21	515	428
	2/8/2012	<50.0	<0.50	<0.50	1.43	6430	144000	1000	1320	<10.0	103.2	21.7	6.35	568	148
	5/16/2012	<50.0	<0.50	<0.50	4.32	6510	120000	0.0	399	<6.6	179.0	22.05	6.30	575	752
	8/9/2012	<50.0	<0.50	<0.50	1.53	6000	150000	0.0	220	<1.00	164.5	22.18	5.88	556	410
MW-4	8/23/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	<50.0	<0.50	<0.50	1.79	1460	50900	200	234	<10.0	121.4	21.3	6.83	453	>1000
	5/16/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	8/23/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	<50.0	<0.50	<0.50	0.95	1400	12100	800	806	<10.0	74.2	21.47	6.85	557	>1000
	5/16/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	8/23/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	<50.0	<0.50	<0.50	2.75	1540	39200	800	1640	24.7	28.6	20.7	7.01	644	>1000
	5/16/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-8	8/23/2011	<50.0	<0.50	<0.50	--	1450	41900	0.0	--	<10.0	--	21.9	6.09	287.9	79
	11/9/2011	<50.0	<0.50	<0.50	1.87	1500	49900	800	26.5	<10.0	-224.3	20.6	6.07	297	10
	2/8/2012	<50.0	<0.50	<0.50	1.74	1910	49800	800	107	<10.0	110.2	21.0	6.29	322	20
	5/16/2012	<50.0	<0.50	<0.50	6.39	1870	51000	0.0	31.3	2170	274.3	21.2	6.98	306	220
	8/9/2012	<50	<0.50	<0.50	3.09	1400	50000	0.0	43.0	<1.00	191.5	21.4	5.29	296	15
Wells Within Plume, in Source Area															
RW-1	8/23/2011	27100	33.1	0.57	--	<50.0	4620	100	--	20.1	--	25.0	6.27	1127	149
	11/9/2011	14100	24.2	<2.5	0.28	<50.0	2460	1200	9290	7820	-337.0	21.2	6.11	315	38
	2/8/2012	22000	18.7	<0.50	0.64	<50.0	3770	1000	8730	6090	-35.6	21.34	5.75	170	65
	5/16/2012	14200	20.3	<0.50	0.84	<50.0	3700	1100	7540	5260	61.9	21.58	5.74	223	125
	8/9/2012	18000	18.0	<5.0	0.47	<100	2000	1500	8500	2060	-46.2	21.54	5.36	540	16
MW-2	8/23/2011	4800	4.2	10.3	--	<50.0	2390	100	--	4210	--	22.5	6.48	589	>1000
	11/9/2011	5590	5.2	11.9	0.78	62.1	3050	100	6410	5710	-314.4	20.8	6.32	568	>1000
	2/8/2012	8800	4.1	8.4	1.15	65.6	3040	1200	1050	4630	-94.9	20.8	6.31	568	931
	5/16/2012	6500	2.4	6.6	1.35	<50.0	5800	1400	955	2170	-53.7	21.94	6.33	571	457
	8/9/2012	5800	3.1	8.5	0.31	<100	3000	2400	1000	1900	-85.5	21.69	5.85	538	322
MW-3	8/23/2011	34000	7.0	0.5	--	<50.0	43200	200	--	10400	--	22.9	6.08	864	355
	11/9/2011	27300	8.2	<0.5	1.23	52.7	44400	1400	6410	11700	-205	21.4	6.36	830	228
	2/8/2012	31300	8.7	<0.50	1.71	<50.0	18700	1600	6670	9670	-38.5	18.92	6.27	349	21
	5/16/2012	39300	7.1	0.57	1.78	<50.0	24000	1800	5940	61.8	-9.2	22.88	6.24	718	256
	8/9/2012	25000	5.8	<5.0	1.82	<100	6700	2100	5600	4030	-180.0	23.70	6.25	737	207
Wells Downgradient of Plume															
MW-7	8/23/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/9/2011	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	2/8/2012	<50.0	<0.50	<0.50	1.53	7380	108000	800	498	<10.0	28.1	21.9	6.39	441	>1000

TABLE 4
GROUNDWATER GEOCHEMICAL DATA
76 (FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA

Well I.D.	Date	Contaminants of Concern			Electron Acceptors			Reaction Endproducts			Other Geochemical Indicators				
		GRO (µg/L)	Benzene (µg/L)	MTBE (µg/L)	DO (mg/L)*	Nitrate as N (µg/L)	Sulfate (µg/L)	Iron (II) (µg/L)*	Manganese (µg/L)	Methane (µg/L)	ORP (mV)*	Temperature (Celsius)*	pH*	Conductivity (µS/cm)*	Turbidity (NTU)*
MW-7	5/16/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	8/9/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-9	8/23/2011	<50.0	<0.50	<0.50	--	419	6180	0.0	--	37.7	--	23.9	6.77	288.5	>1000
	11/9/2011	<50.0	<0.50	<0.50	1.79	283	4390	1200	125	<10.0	-213.5	20.9	6.49	260	149
	2/8/2012	<50.0	<0.50	<0.50	1.68	326	4260	1000	112	<10.0	52.7	21.09	6.56	254	316
	5/16/2012	84.9	<0.50	<0.50	5.87	364	4600	0.0	148	<6.6	187.6	21.39	6.1	254	302
	8/9/2012	<50	<0.50	<0.50	4.79	300	4200	0.0	150	<1.00	166.7	22.01	6.2	229	51

Analytical Notes:

-- - No information available, sample not collected

< - Not detected at or above indicated laboratory reporting limit

* Data from field measurements collected through a flow cell while purging three casing volumes using a submersible pump.

mV - millivolts

mg/L - milligrams per liter

µg/L - micrograms/liter

(µS/cm) - microsiemens per centimeter

NTU - nephelometric turbidity unit

ORP - Oxidation-Reduction Potential

DO - Dissolved Oxygen

Appendix A

Summary of Previous Environmental Investigations and Remedial Actions

SUMMARY OF PREVIOUS ENVIRONMENTAL INVESTIGATIONS AND REMEDIAL ACTIONS

Reported subsurface environmental investigations at 76 (Former BP) Service Station No.11147 date back to 1987 and periodic monitoring to 1992, with active remediation conducted between December 2003 and October 2005 via soil vapor extraction and air sparge system. A summary of the reported previous investigations and remediation work follows.

In **July 1987**, four underground storage tanks (USTs) – a 6,000-gallon, 8,000-gallon, and 10,000-gallon gasoline tank and one, 550-gallon waste oil tank – were removed. The tanks were reportedly in good condition. A limited amount of soil was reportedly excavated from the tank cavities at the time of the tank removal. Soil samples were subsequently collected from approximately two feet below each tank. No contaminants were reported at concentrations greater than the laboratory reporting limits.

In **October 1992**, an initial subsurface assessment was conducted at the site. Four soil borings (B-1 through B-4) were drilled to total depths of 45.5 feet (ft) below ground surface (bgs). Borings B-2, B-3, and B-4 were completed as monitoring wells MW-1, MW-2, and MW-3, respectively. Total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenzene and total xylenes (BTEX) were detected in the soil samples collected from boring B-3 (MW-2) at depths of 20.5 and 24.5 ft bgs. In MW-2 and MW-3, light non-aqueous phase liquid (LNAPL) was observed at thicknesses of up to 1.95 feet. In MW-1, TPH-g and BTEX were reported at concentrations of 180 and 5 micrograms per liter (µg/L), respectively, but no LNAPL was present.

In **June 1993**, four additional monitoring wells (MW-4 through MW-7) and one recovery well (RW-1) were installed to depths ranging 30 to 40 ft bgs as part of a supplemental site investigation. No TPH-g was detected in soil samples collected from these new wells. Adsorbed-phase BTEX compounds were detected in soil samples collected at 20.5 ft bgs and 30.5 ft bgs in boring RW-1.

Between **1992 and 1994**, approximately 20.69 gallons of LNAPL were removed from wells MW-2, MW-3, and RW-1.

In 1994, a remedial investigation and feasibility study (RI/FS) was performed for the site to further characterize the site and evaluate remedial alternatives. The RI/FS consisted of installing air sparge (AS) well SP-1 to a total depth of 42 ft bgs and conducting aquifer pumping, air sparging, and soil vapor extraction (SVE) pilot testing. An AS test was conducted on April 20, 1994 using well SP-1 as the injection point and wells MW-3 and RW-1 as observation points. Injection rates of up to 3.8 standard cubic feet per minute (scfm) and pressure up to 11 pounds per square inch (psi) were applied to SP-1. The test indicated an estimated radius of influence of 30 ft.

In **July 1994**, two SVE tests were conducted using wells RW-1 and MW-3. Various vapor extraction rates (up to 73 cubic feet per minute) and vacuum pressures (up to 105 inches of water) were applied separately to RW-1 and then MW-3, while observations on the influence in the opposite well were noted. Based on the pilot test results, the SVE radius of influence was estimated to be approximately 25 ft, and SVE and AS were determined to be viable remedial alternatives for the site.

In **May 1998**, the product dispenser lines were replaced. During the replacement activities, soil samples were collected beneath four product dispensers (PD-NE, PD-NW, PD-SW and PD-SE) and beneath product lines (PL-1 through PL-4). TPH-g, BTEX and MTBE were detected in soil sample PD-SE at 3.5 ft bgs at concentrations of 890 mg/kg, 12 mg/kg, 59 mg/kg,

22 mg/kg, 130 mg/kg and 61 mg/kg. The soil sample collected at 5 ft bgs did not yield any hydrocarbons with the exception of MTBE at 4.4 mg/kg. Xylenes were detected in sol sample PD-SW at concentrations of0.033 mg/kg, and MTBE was detected in soil samples PL-1 and PL-3 at concentrations of 0.090 mg/kg and 0.14 mg/kg, respectively.

In **April 2002**, sparge points SP-2 through SP-5 and monitoring well MW-8 were installed on the site. The sparge points and new monitoring well were installed to depths of up to 45 ft bgs. Low concentrations (up to 1.0 milligrams per kilogram [mg/kg]) of TPH-g were reported in soil samples collected and analyzed from the borings for SP-2 and SP-3. Toluene and methyl-tert-butyl ether (MTBE) were reported at concentrations of 0.062 and 0.13 mg/kg, respectively, in the sample collected from SP-2 at 25 to 25.5 ft bgs. Also in **April 2002**, seven vapor extraction wells (VW-1 to VW -7) were installed. Because of the close proximity of these borings to the air sparging points, no soil samples were retained for analysis. In **August 2002**, the additional sparge point, monitoring wells and soil vapor extraction wells were surveyed.

In **December 2003**, an AS and SVE remediation system was installed. The SVE system utilized the seven vapor extraction wells (VW-1 through VW-7), which were connected by means of subsurface piping to an aboveground SVE system. Vacuum was applied to the wells by means of a 25 horsepower (hp) regenerative thermal oxidizer (RETOX) that was mounted on a mobile trailer unit. The trailer mounted RETOX also consisted of a silica bed for heat recovery and a 50-gallon knockout pot along with a transfer pump. The air sparging system consisted of a rotary screw compressor conveying air to AS wells SP-1 through SP-5 via subsurface piping.

The remediation system was shut down for repairs on **October 20, 2005**, and it has remained down since that time. During its last three months of operation, the SVE system did not contain any detectable influent concentrations of TPH-g, benzene, or MTBE above laboratory reporting limits. Toluene was detected at concentrations ranging from 0.68 to 0.84 milligrams per cubic meter (mg/m3) and xylenes were detected at concentrations ranging from 0.97 to 2.10 mg/m3. Despite the reduced recovery in its last months of operation, the system reportedly extracted a calculated estimate of 3,266 lbs of TPH-g, 352 lbs of benzene, and 10 lbs of MTBE.

On **February 15, 2008**, SECOR submitted a draft public notification fact sheet and mailing list to the Regional Water Quality Control Board (RWQCB) as required by a regulatory directive dated December 28, 2007.

On **April 24, 2009**, Delta Consultants (Delta), assumed the lead consultant position. Since that time, quarterly groundwater monitoring has continued via the gauging of all wells and sampling of five monitoring wells (MW-1, MW-2, MW-3, RW-1, and MW-8), plus four additional wells (MW-4 through MW-7) sampled annually.

In **October 2010**, Delta submitted an *Investigation Work Plan* to further investigate soil and groundwater on and downgradient of the site, as well as potential soil vapor next to the site's building. RWQCB approved that work plan, and in **January/February 2011,** Antea Group (formerly Delta) installed one additional monitoring well (MW-9), two soil vapor monitoring wells (SV-1 and SV-2), and four soil borings (B-5, B-6, B-7, and B-10). In addition to soil samples, Antea Group collected a groundwater grab sample from boring B-5. Results from this investigation showed no soil vapor impacts in shallow (5-foot and 10-foot) samples, and very little impact (low levels of MTBE only) in downgradient, off-site well MW-9. In addition, Antea Group collected soil samples, and the on-site impacts were shown to be limited to soils at or below the groundwater table in the immediate vicinity of the UST complex near the center of the site. Antea Group

recommended a full year of quarterly monitoring following the installation of downgradient well MW-9, before re-evaluating the path forward based on the groundwater contaminant trending and plume stability in late 2011.

In **November 2012**, Antea Group submitted a Well Abandonment and Replacement Report which summarized the abandonment of six wells (MW-1, MW-3, MW-4, MW-5, MW-6 and MW-9) and one recovery well (RW-1). In addition, the report summarized the installation of replacement well MW-3R. From which, Antea Group retained soil samples for laboratory analysis from the upper four feet (4 feet bgs), near the estimated depth of the nearby tank pit (16.0 feet bgs), at the groundwater-soil interface (31.5 feet bgs) and at the highest PID interval (39.0 feet bgs). The laboratory did not report any analytes above the laboratory reporting limits (LRLs) in any of the soil samples collected from MW-3R.

On **May 3, 2013**, Antea Group submitted a *Soil Vapor Investigation and Well Replacement Work Plan* to the RWQCB. In this Work Plan, Antea Group proposes to destroy and replace MW-2 with MW-2R, as well as advance and install two soil vapor wells nested together (SV-3 S/D).

Antea Group completed the work outlined in the Work Plan in **August 2013**. Antea Group retained shallow soil samples at MW-2R and SVE-3S/D for characterization purposes, as well as soil at depths of 29.5 feet and 31 feet bgs in MW-2R to evaluate secondary source material just above and below the soil-groundwater interface. Laboratory analytical results indicate reportable concentrations of diesel range organics (DRO), total petroleum hydrocarbons – motor oil (TPH-MO), and a minor concentration of naphthalene in soil analyzed during this investigation. The DRO, TPH-MO, and naphthalene results were all below the respective San Francisco Bay-RWQCB Environmental Screening Levels (ESLs), with the exception of DRO at 4.5 feet bgs in MW-2R. On **December 5, 2013**, Antea Group submitted a *Monitoring Well Replacement and Soil Vapor Well Installation Report* to the RWQCB, detailing the August 2013 field activities.

SENSITIVE RECEPTORS

In **October 2010**, Delta submitted a *Sensitive Receptor Survey* consisting of an EDR records review, a well radius search, a site reconnaissance, and a web-based search for sensitive receptors which have the potential to be affected by the petroleum hydrocarbon release at the site. The results indicate that all of the identified sensitive receptors and wells within a 0.5-mile radius at the site do not appear to be affected by the soil, soil vapor, and/or groundwater impact due to the release at the site.

GEOCHEMICAL ANALYSES

Beginning third quarter 2011, Antea Group requested the laboratory analyze groundwater samples for certain geochemical and physical parameters that indicate groundwater quality and the general occurrence of natural attenuation processes. The third quarter 2012 marked the fifth consecutive quarterly monitoring for these parameters.

Dissolved oxygen (DO) measurements indicate whether conditions in groundwater are aerobic or anaerobic. DO readings under approximately 2 milligrams per liter (mg/L) indicate anaerobic conditions, and over 2 mg/L indicate aerobic conditions (ITRC 2002). DO concentrations are predominantly below 2 mg/L in site wells, indicating that conditions beneath the site are primarily anaerobic (reducing), especially in the core of the plume around the USTs.

Methane is produced under reducing conditions by microbial degradation using carbon dioxide as an electron receptor. Methanogenesis is most likely to occur in the plume core due to the abundance of organic carbon (ITRC 2002). Wells MW-2, MW-3 and RW-1 near the USTs reported the highest concentrations of methane, indicating methanogenesis may be occurring in the plume core.

Under slightly reducing conditions, nitrate can act as an electron acceptor during biodegradation, hence reduced nitrate levels with respect to background levels are anticipated during nitrate depletion (ITRC 2002). Nitrate levels in the upgradient and cross-gradient wells (MW-1, MW-4, MW-5, MW-6 and MW-8) and in downgradient well MW-7 are greater than 1,000 micrograms per liter (µg/L); nitrate concentrations in downgradient well MW-9 are greater than 100 µg/L but less than 1,000 µg/L and concentrations in wells MW-2, MW-3 and RW-1 are low (<100 µg/L) to non-detect. The nitrate results indicate that nitrate depletion may also be occurring within the contaminant plume.

Microbes utilize sulfate as a terminal electron acceptor in the process of hydrocarbon biodegradation in groundwater in anaerobic conditions. Soluble or dissolved ferrous (Fe2+) iron occurs when oxidized ferric iron (Fe3+) is reduced under anaerobic conditions. The result is that microbes utilize sulfate to consume hydrocarbons, and in the process convert ferric iron to ferrous iron, causing a depletion of sulfate and hydrocarbons, and an increase in ferrous iron (Stempvoort et al., 2001). Relatively low sulfate concentrations in wells MW-2, RW-1 and MW-9, and consistent ferric iron concentrations in wells MW-2, MW-3 and RW-1 as compared to other site wells suggest some ferric iron reduction may be occurring near and downgradient of the USTs.

Manganese (+4) is reduced to soluble manganese (+2) during microbial degradation (Wisconsin DNR). Manganese concentrations are highest in wells MW-3 and RW-1, which suggests manganese reduction is occurring in this area beneath the site.

In general, concentrations of electron acceptors (nitrate and sulfate) are lower and reaction end products (ferrous iron, methane and manganese) are higher at the center of the dissolved phase plume than at the outer edges indicating bioattenuation is likely occurring beneath the site.

Appendix B

Blaine Tech Services Groundwater Sampling Field Data Sheets

Well-Head Inspection & Well Gauging Form

Antea Group Project No: 2611147 **Site Address:** 690 Ygnacio Valley Rd, Walnut Creek, CA

Field Technician: Doug Whichard (Print Full Name & Company*) Blaine Tech Services **Date:** 2/6/14 **Weather:** Light Rain

Sample Order	Field Point	Well Condition: Bolts	Seal	Lid Secure	Lock	Expanding Cap	Water in Well Box	Well Casing Dia.	Time Gauged	Depth to Water (Feet)	Depth to Bottom (Feet)	Depth to LNAPL (Feet)	LNAPL Thickness (Feet)	Comments
11	MW-2R	G	G	G	G	G	N	2	1450	31.19	38.40			SEE NOTES
10	MW-3R	G	G	G	G	G	Y	4	1147	30.71	39.69			
2	MW-7	P	P	P	G	G	N	2	1122	27.65	34.48			-3/3 BOLTS
1	MW-8	G	G	G	G	G	Y	2	1120	29.45	40.11			
3	VW-1	G	G	G	G	G	N	4	1125	DRY	28.99			
4	VW-2	P	G	G	G	G	N	4	1127	DRY	29.32			-1/4 BOLTS
5	VW-3	P	P	P	G	G	N	4	1132	DRY	27.56			4/4 TABS STRIPPED
6	VW-4	P	G	G	G	G	N	4	1134	DRY	30.19			-1/4 BOLTS
7	VW-5	P	G	G	G	G	N	4	1137	DRY	28.98			-1/4 BOLTS
8	VW-6	P	G	G	G	G	Y	4	1140	DRY	29.61			-1/4 BOLTS BROKEN IN TABS
9	VW-7	P	G	G	G	G	Y	4	1144	DRY	29.02			-1/4 BOLTS BROKEN IN TABS

Notes: * MW-2R GAUGED OUT OF ORDER DUE TO ACCESS

** All well caps opened at least 15 minutes or longer before gauging wells:
CIRCLE ONE: (YES) or NO**

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*Form provided by Antea Group

Note: Use G=good and P=poor for well condition

Groundwater Sampling Form

Site Address:	690 YGNACIO VALLEY RD, WALNUT CREEK, CA		
Project No:	261147	Field Technician:	DC
Field Point:	MW-2R	Date:	2/6/14
Depth to Water (DTW) (ft bgs):	31.19	Well Diameter (in):	(2) 4 6 8 ___
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	38.40	Water Column Height (ft):	7.21

Purging Info and Calculations:

Purge Method: (Low-Flow, 3 casing volumes) Other:_____

Purge Equipment: (Disposable Bailer, Electric Submersible, ~~Peristaltic Pump~~, Bladder Pump) Other:_____

Sample Collection Method: (Disposable Bailer, Extraction Port, Dedicated Tubing, Disposable Tubing) Other:_____

Water Column Height (ft): 7.21 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.2

Casing Volume (gal): 1.2 X Specified Volumes: 3 = Calculated Purge (gal): 3.6

Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius^2 * 0.163

Purge: **Start Time:**_____ **Stop Time:**_____

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge						1.37		
1500	19.9	6.74	641	34.0	215	3.23	0.6	
1501	18.1	6.65	577	21.5	174	2.10	1.2	
1503	19.5	6.56	537	1.2	102	0.41	1.8	
1504	20.1	6.56	536	-5.1	73	0.42	2.4	
1505	20.4	6.56	534	-12.8	54	0.57	3.0	
1507	20.7	6.56	532	-17.1	42	0.69	3.6	
1508	20.8	6.55	529	-19.5	33	0.68	4.2	
							Fe^{2+}:	2.0 mg/L
Post-Purge				-20.3		0.71		

Did Well dewater? Yes No Total Purge volume (gal): 4.2

Other Comments: 80%: 32.63 DTW: 31.22 * PURGED THROUGH FLOW CELL

Sample Info:

Sample ID:	MW-2R-20140228	Sample Date and Time:	2/6/14 1512
Selected Analysis:	SEE COC		

This form was provided by Antea Group and completed by: (Print Full Name) DOUG WHICHARD, an employee of Blaine Tech Services, Inc.

Signature: _____ Date: 2/6/14

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Antea™Group, 1-800-477-7411

LNAPL= light non-aqueous phase liquids
bgs = below ground surface
ORP = Oxidation-Reduction Potential
D.O.= dissolved oxygen

gal = gallon/s
temp = temperature
NTU = Nephelometric Turbidity Units
mV = millivolts

Groundwater Sampling Form

Site Address:	690 IGNACIO VALLEY RD, WALNUT CREEK, CA		
Project No:	2611147	Field Technician:	DC
Field Point:	MW-3R	Date:	2/6/14
Depth to Water (DTW) (ft bgs):	30.71	Well Diameter (in):	2 (4) 6 8 ___
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	39.69	Water Column Height (ft):	8.98

Purging Info and Calculations:

Purge Method:
(Low-Flow)
(3 casing volumes)
Other:_____

Purge Equipment:
Disposable Bailer
(Electric Submersible)
Peristaltic Pump
Bladder Pump
Other:_____

Sample Collection Method:
(Disposable Bailer)
Extraction Port
Dedicated Tubing
Disposable Tubing
Other:_____

Water Column Height (ft): 8.98 X Conversion Factor (gal/ft): 0.66 = Casing Volume (gal): 5.9

Casing Volume (gal): 5.9 X Specified Volumes: 3 = Calculated Purge (gal): 17.7

Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius^2 * 0.163

Purge: **Start Time:**_____ **Stop Time:**_____

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge				55.3		1.37		
1402	19.6	6.81	685	45.1	18	0.91	3.0	
1405	20.9	6.80	687	37.8	14	0.82	6.0	
1408	21.4	6.79	685	33.4	12	0.61	9.0	
1411	21.7	6.79	681	29.0	11	0.49	12.0	
1414	21.9	6.77	668	24.8	10	0.48	15.0	
1417	21.9	6.73	652	29.3	10	0.50	18.0	
							Fe^{2+}:	1.4 mg/L
Post-Purge				26.0		0.51		

Did Well dewater? Yes (No) Total Purge volume (gal): 18.0

Other Comments:
80% : 32.51 * PURGED THROUGH FLOW CELL
DTW: 32.11 (SHORT WAIT)

Sample Info:

Sample ID:	MW-3R_20140228	Sample Date and Time:	2/6/14 1430
Selected Analysis:	SEE COC		

This form was provided by Antea Group and completed by: (Print Full Name) DOUGLAS MICHAELS, an employee of Blaine Tech Services, Inc.

Signature: _____ Date: 2/6/14

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Antea™Group, 1-800-477-7411

LNAPL= light non-aqueous phase liquids
bgs = below ground surface
ORP = Oxidation-Reduction Potential
D.O.= dissolved oxygen

gal = gallon/s
temp = temperature
NTU = Nephelometric Turbidity Units
mV = millivolts

Groundwater Sampling Form

Site Address:	6090 YGNACIO VALLEY RD, WALNUT CREEK, CA		
Project No:		Field Technician:	DC
Field Point:	MW-7	Date:	2/6/14
Depth to Water (DTW) (ft bgs):	27.65	Well Diameter (in):	(2) 4 6 8 ___
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	34.48	Water Column Height (ft):	6.83

Purging Info and Calculations:

Purge Method: (Low-Flow) / 3 casing volumes / Other:

Purge Equipment: Disposable Bailer / (Electric Submersible) / Peristaltic Pump / Bladder Pump / Other:

Sample Collection Method: (Disposable Bailer) / Extraction Port / Dedicated Tubing / Disposable Tubing / Other:

Water Column Height (ft): 6.83 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.2

Casing Volume (gal): 1.2 X Specified Volumes: 3 = Calculated Purge (gal): 3.6

Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius^2 * 0.163

Purge: **Start Time:** **Stop Time:**

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge				191		4.30		
1316	15.9	6.25	306	31.2	>1000	4.90	0.6	
1317	16.7	6.23	363	32.6	>1000	4.72	1.2	
1318	18.7	6.15	411	34.8	>1000	4.58	1.8	
1319	19.8	6.14	418	34.1	>1000	4.15	2.4	
1320	20.3	6.15	422	34.0	>1000	3.86	3.0	
1321	20.7	6.15	425	33.6	>1000	3.84	3.6	
							Fe^{2+}: 0.1 mg/L	
Post-Purge				56.3		3.85		

Did Well dewater? Yes (No) Total Purge volume (gal): 3.6

Other Comments: 80%: 29.02 # PURGED THROUGH FLOW CELL

DTW: 28.64 (SHORT WAIT)

Sample Info:

Sample ID:	MW-7_20140228	Sample Date and Time:	2/6/14 1340
Selected Analysis:	SEE COC		

This form was provided by Antea Group and completed by: (Print Full Name) DOUG WHICHARD, an employee of Blaine Tech Services, Inc.

Signature: Date: 2/6/14

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Antea™Group, 1-800-477-7411

LNAPL= light non-aqueous phase liquids
bgs = below ground surface
ORP = Oxidation-Reduction Potential
D.O.= dissolved oxygen

gal = gallon/s
temp = temperature
NTU = Nephelometric Turbidity Units
mV = millivolts

Groundwater Sampling Form

Site Address:	690 IGNACIO VALLEY RD, WALNUT CREEK, CA		
Project No:	261147	Field Technician:	DC
Field Point:	MW-8	Date:	2/6/14
Depth to Water (DTW) (ft bgs):	29.45	Well Diameter (in):	(2) 4 6 8 ___
Depth to LNAPL (ft bgs):	—	Thickness of LNAPL (ft):	
Total Depth of Well (ft bgs):	40.11	Water Column Height (ft):	10.66

Purging Info and Calculations:

Purge Method:
Low-Flow
(3 casing volumes)
Other:

Purge Equipment:
Disposable Bailer
(Electric Submersible)
Peristaltic Pump
Bladder Pump
Other:

Sample Collection Method:
(Disposable Bailer)
Extraction Port
Dedicated Tubing
Disposable Tubing
Other:

Water Column Height (ft): 10.66 X Conversion Factor (gal/ft): 0.17 = Casing Volume (gal): 1.8

Casing Volume (gal): 1.8 X Specified Volumes: 3 = Calculated Purge (gal): 5.4

Conversion Factors (gal/ft): 2" = 0.17 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius^2 * 0.163

Purge: **Start Time:** **Stop Time:**

Time	Temp (°C)	pH	Conductivity (µS/cm)	ORP (mV)	Turbidity (NTU)	D.O. (mg/L)	Volume Purged (gal)	Water Level (for Low-Flow only)
Pre-Purge						3.89		
1230	14.6	6.83	436	-9.8	20	4.02	0.9	
1231	14.9	6.74	392	-9.6	19	4.04	1.8	
1232	15.6	6.65	326	-9.7	17	3.93	2.7	
1233	16.4	6.48	318	-7.4	15	3.94	3.6	
1234	17.1	6.42	296	-3.2	15	4.04	4.5	
1235	17.3	6.43	299	-3.2	14	4.07	5.4	
							Fe^{2+}:	0.0 mg/L
Post-Purge				-3.0		4.		

Did Well dewater? Yes (No) Total Purge volume (gal): 5.4

Other Comments:
80%: 31.58
DTW: 31.42
*PURGED THROUGH FLOW CELL
TRIP BLANK @ 1035

Sample Info:

Sample ID:	MW-8_20140228	Sample Date and Time:	2/6/14 1250
Selected Analysis:	SEE COC		

This form was provided by Antea Group and completed by: (Print Full Name) DOUG WHICHARD, an employee of Blaine Tech Services, Inc.

Signature: Date: 2/6/14

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Antea™Group, 1-800-477-7411

LNAPL= light non-aqueous phase liquids
bgs = below ground surface
ORP = Oxidation-Reduction Potential
D.O.= dissolved oxygen
gal = gallon/s
temp = temperature
NTU = Nephelometric Turbidity Units
mV = millivolts

20140228.2611147.WG_Q_201402.BO

COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Page: 1 of 1
Cooler # ____ of ____

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1Q14 GW Event

Required Lab Information:

Lab Name:	Kiff Analtyical
Address:	2795 Second Street #300
	Davis, CA 95618
Lab PM:	Scott Forbes
Phone/Fax:	P: 530-297-4800 F: 530-297-4808
Lab PM email	SForbes@kiffanalytical.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	2611147
Task:	WG_Q_201402
AnteaGrp proj#	
Site Address	690 YGNACIO VALLEY RD
City	WALNUT CREEK
State	CA 94596
AG PM Name:	Doug Umland
Phone/Fax:	P: 408-606-4901 F: 408-225-8506
AG PM Email:	doug.umland@anteagroup.com

Required Invoice Information:

Send Invoice to:	Sandy Hayes
Address:	11050 White Rock Road, Suite 110
City/State	Rancho Cordova CA 95670
Phone #:	916-638-2085
Reimbursement project?	
Non-reimbursement project?	Y
Mark one	
Send EDD to	Agdataview.us@antegaroup.com
CC Hardcopy report to	Sara.sichley@anteagroup.com
CC Hardcopy report to	

Turn around time (days)	10
QC level Required: Standard	Special — Mark one
NJ Reduced Deliverable Package?	
MA MCP Cert?	CT RCP Cert? — Mark One
Lab Project ID (lab use)	

Valid Matrix Codes

MATRIX		MATRIX	
DRINKING WATER	WP	WATER	W
GROUND WATER	WG	SURFACE WATER	WS
WASTE WATER	WW	WATER QC	WQ
FREE PRODUCT	LF	SLUDGE	SL
SOIL	SO	RINSEATE	WR
OIL	OL	OTHER	OT
WIPE	SW	ANIMAL TISSUE	TA
AMBIENT AIR	AA		
SVE AIR	AE		
SOIL GAS	GS		

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analyses: 8260 GC/MS GRO	8260BTEXMTBE	Comments/Lab Sample I.D.
1	MW-2R_20140228	WG	G	2/6/14	1512	3	N				X					X	X	
2	MW-3R_20140228	WG	G	2/6/14	1430	3	N				X					X	X	
3	MW-7_20140228	WG	G	2/6/14	1340	3	N				X					X	X	
4	MW-8_20140228	WG	G	2/6/14	1250	3	N				X					X	X	
5	TB1_20140228	W	G	2/6/14	1035	2	N				X					X	X	
6																		
7																		
8																		
9																		
10																		
11																		
12																		

Additional Comments/Special Instructions:

Global ID: T0601300375

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
BTS	2/6/14	1645			

Sample Receipt Conditions

	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SHIPPING METHOD: (mark as appropriate) UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: DOUG WHICHARD

SIGNATURE of SAMPLER: DATE Signed 2/6/14 Time: 1645

Temp in °C | Samples on Ice? | Sample intact? | Trip Blank?

Final 11/13/06. AMTait

Inogen Environmental Alliance

Appendix C

Certified Laboratory Analytical Report and Data Validation Form

KIFF Analytical LLC

Report Number : 87348
Date : 02/13/2014

Laboratory Results

Douglas Umland
Antea Group
1155 North 1st Street, Suite 201
San Jose, CA 95112

Subject : 5 Water Samples
Project Name : 2611147
Project Number :

Dear Mr. Umland,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed. Testing procedures comply with the 2003 NELAC and TNI 2009 standards. Laboratory results relate only to the samples tested. This report may be freely reproduced in full, but may only be reproduced in part with the express permission of Kiff Analytical, LLC. Kiff Analytical, LLC is certified by the State of California under the Environmental Laboratory Accreditation Program (ELAP), lab # 08263CA.
If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

Troy G. Turpen

Troy Turpen

KIFF Analytical LLC

Analysis Summary

Report Number : 87348
Date : 02/13/14

Attention : Douglas Umland
Antea Group
1155 North 1st Street, Suite 201
San Jose, CA 95112

Project Name :2611147
Project Number :

			Sample Name	MW-2R_20140228	MW-3R_20140228		MW-7_20140228		MW-8_20140228		TB1_20140228	
			Sample Date	02/06/14	02/06/14		02/06/14		02/06/14		02/06/14	
Analyte	Method	Units		MRL	Results	MRL	Results	MRL	Results	MRL	Results	MRL	Results
Benzene	EPA 8260B	ug/L		0.50	**4.3**	0.50	ND	0.50	ND	0.50	ND	0.50	ND
Ethylbenzene	EPA 8260B	ug/L		0.50	**250**	0.50	ND	0.50	ND	0.50	ND	0.50	ND
Toluene	EPA 8260B	ug/L		0.50	ND	0.50	ND	0.50	ND	0.50	ND	0.50	ND
Total Xylenes	EPA 8260B	ug/L		0.50	**120**	0.50	ND	0.50	ND	0.50	ND	0.50	ND
Methyl-t-butyl ether (MTBE)	EPA 8260B	ug/L		0.50	**3.6**	0.50	ND	0.50	ND	0.50	ND	0.50	ND
TPH as Gasoline	EPA 8260B	ug/L		150	**5000**	50	**450**	50	ND	50	ND	50	ND
1,2-Dichloroethane-d4 (Surr)	EPA 8260B	%			96.5		100		101		99.0		102
Toluene - d8 (Surr)	EPA 8260B	%			96.8		102		102		99.0		100

MRL = Method Reporting Limit
ND = Not Detected

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800
ELAP # 2236

KIFF Analytical LLC

Report Number : 87348
Date : 02/13/14

Project Name : **2611147**
Project Number :

Sample : **MW-2R_20140228** Matrix : Water Lab Number : 87348-01
Sample Date :02/06/14

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	**4.3**	0.50	ug/L	EPA 8260B	02/12/14 12:07
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/12/14 12:07
Ethylbenzene	**250**	0.50	ug/L	EPA 8260B	02/12/14 12:07
Total Xylenes	**120**	0.50	ug/L	EPA 8260B	02/12/14 12:07
Methyl-t-butyl ether (MTBE)	**3.6**	0.50	ug/L	EPA 8260B	02/12/14 12:07
TPH as Gasoline	**5000**	150	ug/L	EPA 8260B	02/11/14 00:39
1,2-Dichloroethane-d4 (Surr)	96.5		% Recovery	EPA 8260B	02/12/14 12:07
Toluene - d8 (Surr)	96.8		% Recovery	EPA 8260B	02/12/14 12:07

Sample : **MW-3R_20140228** Matrix : Water Lab Number : 87348-02
Sample Date :02/06/14

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 19:41
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 19:41
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 19:41
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 19:41
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 19:41
TPH as Gasoline	**450**	50	ug/L	EPA 8260B	02/10/14 19:41
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	02/10/14 19:41
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	02/10/14 19:41

KIFF Analytical LLC

Report Number : 87348
Date : 02/13/14

Project Name : **2611147**
Project Number :

Sample : **MW-7_20140228** Matrix : Water Lab Number : 87348-03
Sample Date :02/06/14

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/11/14 00:04
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/11/14 00:04
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/11/14 00:04
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/12/14 12:41
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/11/14 00:04
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/11/14 00:04
1,2-Dichloroethane-d4 (Surr)	101		% Recovery	EPA 8260B	02/11/14 00:04
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	02/11/14 00:04

Sample : **MW-8_20140228** Matrix : Water Lab Number : 87348-04
Sample Date :02/06/14

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/12/14 13:16
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/12/14 13:16
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/12/14 13:16
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/12/14 13:16
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/12/14 13:16
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/12/14 13:16
1,2-Dichloroethane-d4 (Surr)	99.0		% Recovery	EPA 8260B	02/12/14 13:16
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	02/12/14 13:16

KIFF Analytical LLC

Report Number : 87348

Date : 02/13/14

Project Name : **2611147**

Project Number :

Sample : **TB1_20140228** Matrix : Water Lab Number : 87348-05

Sample Date :02/06/14

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date/Time Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 21:23
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 21:23
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 21:23
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 21:23
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/10/14 21:23
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/10/14 21:23
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	02/10/14 21:23
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	02/10/14 21:23

Report Number : 87348

Date : 02/13/14

QC Report : Method Blank Data

Project Name : **2611147**

Project Number :

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/10/14
1,2-Dichloroethane-d4 (Surr)	97.4		%	EPA 8260B	02/10/14
Toluene - d8 (Surr)	102		%	EPA 8260B	02/10/14
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/10/14
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/10/14
1,2-Dichloroethane-d4 (Surr)	103		%	EPA 8260B	02/10/14
Toluene - d8 (Surr)	100		%	EPA 8260B	02/10/14
Benzene	< 0.50	0.50	ug/L	EPA 8260B	02/12/14
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	02/12/14
Toluene	< 0.50	0.50	ug/L	EPA 8260B	02/12/14
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	02/12/14
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	02/12/14
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	02/12/14
1,2-Dichloroethane-d4 (Surr)	99.7		%	EPA 8260B	02/12/14
Toluene - d8 (Surr)	99.5		%	EPA 8260B	02/12/14

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 87348

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 02/13/14

Project Name : **2611147**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene														
	87348-02	<0.50	39.7	39.9	40.9	40.4	ug/L	EPA 8260B	2/10/14	103	101	1.66	70.0-130	25
Ethylbenzene														
	87348-02	<0.50	39.7	39.9	41.9	40.7	ug/L	EPA 8260B	2/10/14	106	102	3.45	70.0-130	25
Methyl-t-butyl ether														
	87348-02	<0.50	39.6	39.8	42.3	44.0	ug/L	EPA 8260B	2/10/14	107	110	3.19	70.0-130	25
P + M Xylene														
	87348-02	<0.50	39.7	39.9	40.3	39.4	ug/L	EPA 8260B	2/10/14	102	98.6	2.96	70.0-130	25
Toluene														
	87348-02	<0.50	39.7	39.9	42.3	41.7	ug/L	EPA 8260B	2/10/14	106	104	2.02	70.0-130	25
Benzene														
	87361-02	<0.50	40.0	40.0	42.9	40.3	ug/L	EPA 8260B	2/10/14	107	101	6.36	70.0-130	25
Ethylbenzene														
	87361-02	<0.50	40.0	40.0	39.4	37.8	ug/L	EPA 8260B	2/10/14	98.6	94.6	4.16	70.0-130	25
Methyl-t-butyl ether														
	87361-02	<0.50	39.9	39.9	42.7	41.1	ug/L	EPA 8260B	2/10/14	107	103	3.76	70.0-130	25
P + M Xylene														
	87361-02	<0.50	40.0	40.0	36.9	35.2	ug/L	EPA 8260B	2/10/14	92.3	87.9	4.83	70.0-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 87348

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 02/13/2014

Project Name : **2611147**

Project Number :

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Toluene														
	87361-02	<0.50	40.0	40.0	41.7	39.4	ug/L	EPA 8260B	2/10/14	104	98.6	5.50	70.0-130	25
Benzene														
	87352-05	6.5	40.0	40.0	45.8	42.3	ug/L	EPA 8260B	2/12/14	98.2	89.4	9.37	70.0-130	25
Ethylbenzene														
	87352-05	<0.50	40.0	40.0	42.3	38.8	ug/L	EPA 8260B	2/12/14	106	97.0	8.72	70.0-130	25
Methyl-t-butyl ether														
	87352-05	14	39.9	39.9	55.6	52.4	ug/L	EPA 8260B	2/12/14	104	96.2	7.92	70.0-130	25
P + M Xylene														
	87352-05	0.97	40.0	40.0	44.0	40.1	ug/L	EPA 8260B	2/12/14	108	97.9	9.43	70.0-130	25
Toluene														
	87352-05	<0.50	40.0	40.0	40.6	37.2	ug/L	EPA 8260B	2/12/14	101	93.0	8.74	70.0-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Laboratory Control Sample (LCS)

Project Name : **2611147**

Project Number :

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	2/10/14	101	70.0-130
Ethylbenzene	40.0	ug/L	EPA 8260B	2/10/14	99.5	70.0-130
Methyl-t-butyl ether	39.9	ug/L	EPA 8260B	2/10/14	116	70.0-130
P + M Xylene	40.0	ug/L	EPA 8260B	2/10/14	96.6	70.0-130
Toluene	40.0	ug/L	EPA 8260B	2/10/14	104	70.0-130
Benzene	39.8	ug/L	EPA 8260B	2/10/14	102	70.0-130
Ethylbenzene	39.8	ug/L	EPA 8260B	2/10/14	97.6	70.0-130
Methyl-t-butyl ether	39.7	ug/L	EPA 8260B	2/10/14	102	70.0-130
P + M Xylene	39.8	ug/L	EPA 8260B	2/10/14	92.9	70.0-130
TPH as Gasoline	486	ug/L	EPA 8260B	2/10/14	98.2	70.0-130
Toluene	39.8	ug/L	EPA 8260B	2/10/14	99.6	70.0-130
Benzene	39.9	ug/L	EPA 8260B	2/12/14	96.0	70.0-130
Ethylbenzene	39.9	ug/L	EPA 8260B	2/12/14	102	70.0-130
Methyl-t-butyl ether	39.8	ug/L	EPA 8260B	2/12/14	99.8	70.0-130
P + M Xylene	39.9	ug/L	EPA 8260B	2/12/14	106	70.0-130
TPH as Gasoline	489	ug/L	EPA 8260B	2/12/14	98.5	70.0-130
Toluene	39.9	ug/L	EPA 8260B	2/12/14	99.3	70.0-130

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

20140228.2611147.WG_Q_201402.BO

87348

anteagroup

COP ELT CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

1Q14 GW Event

Required Lab Information:

Lab Name:	Kiff Analtyical
Address:	2795 Second Street #300
Davis, CA 95618	
Lab PM:	Scott Forbes
Phone/Fax:	P: 530-297-4800 F: 530-297-4808
Lab PM email	SForbes@kiffanalytical.com
Applicable Lab Quote #:	

Required Project Information:

Site ID #:	2611147
Task:	WG_Q_201402
AnteaGrp proj#	
Site Address	690 YGNACIO VALLEY RD
City	WALNUT CREEK
State	CA 94596
AG PM Name:	Doug Umland
Phone/Fax:	P: 408-606-4901 F: 408-225-8506
AG PM Email:	doug.umland@anteagroup.com

Required Invoice Information:

Send Invoice to:	Sandy Hayes
Address:	11050 White Rock Road, Suite 110
City/State	Rancho Cordova CA 95670
Phone #:	916-638-2085
Reimbursement project?	
Non-reimbursement project?	Y
Mark one	
Send EDD to	Agdataview.us@anteagroup.com
CC Hardcopy report to	Sara.sichley@anteagroup.com
CC Hardcopy report to	

Turn around time (days)	10
QC level Required: Standard	Special — Mark one
NJ Reduced Deliverable Package?	
MA MCP Cert?	CT RCP Cert? — Mark One
Lab Project ID (lab use)	

Valid Matrix Codes

MATRIX		MATRIX	
DRINKING WATER	WP	WATER	W
GROUND WATER	WG	SURFACE WATER	WS
WASTE WATER	WW	WATER QC	WQ
FREE PRODUCT	LF	SLUDGE	SL
SOIL	SO	RINSEATE	WH
OIL	OL	OTHER	OT
WIPE	SW	ANIMAL TISSUE	TA
AMBIENT AIR	AA		
SVE AIR	AE		
SOIL GAS	GS		

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs MUST BE UNIQUE)	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED? (Y/N)	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analyses: 8260 GC/MS GRO	8260BlexMtbe									Comments/Lab Sample I.D.
1	MW-2R_20140228	WG	G	2/6/14	1512	3	N				X					X	X									01
2	MW-3R_20140228	WG	G	2/6/14	1430	3	N				X					X	X									02
3	MW-7_20140228	WG	G	2/6/14	1340	3	N				X					X	X									03
4	MW-8_20140228	WG	G	2/6/14	1250	3	N				X					X	X									04
5	TB1_20140228	W	G	2/6/14	1035	2	N				X					X	X									05
6																										
7																										
8																										
9																										
10																										
11																										
12																										

Additional Comments/Special Instructions:

Global ID: T0601300375

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
BTS	2/6/14	1645			
			Michelle Stevens Kiff Analytical	02/07/14	1057

Sample Receipt Conditions

	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
Temp in °C	Samples on Ice?	Sample intact?	Trip Blank?

SHIPPING METHOD (mark as appropriate): UPS COURIER FEDEX US MAIL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Doug WHICHARD

SIGNATURE of SAMPLER: DATE Signed: 2/6/14 Time: 1645

Inogen Environmental Alliance

KIFF Analytical LLC

SAMPLE RECEIPT CHECKLIST

SRG #: 87348

Sample Receipt	Initials/Date: MAS 020714	Storage Time: 1057	Sample Login	Initials/Date: TJB 020714

TAT: ☒ Standard ☐ Rush ☐ Split ☐ None

Method of Receipt: ☐ Courier ☐ Over-the-counter ☒ Shipped

Temp °C 2.8 ☐ N/A	Therm ID IR-3	Time 1007	Coolant present ☒ Yes ☐ No ☐ Water	☐ Temp Excursion

For Shipments Only:	Cooler Receipt Initials/Date/Time: MAS 020714 1007	Custody Seals ☒ N/A ☐ Intact ☐ Broken

Chain-of-Custody:	Yes	No
Is COC present?	X	
Is COC signed by relinquisher?	X	
Is COC dated by relinquisher?	X	
Is the sampler's name on the COC?	X	
Are there analyses or hold for all samples?	X	

Documented on	COC	Labels	Discrepancies:
Sample ID	X	X	
Project ID	X	X	
Sample Date	X	X	
Sample Time	X	X	
Does COC match project history?	☐ N/A	☒ Yes ☐ No	

Samples:	N/A	Yes	No
Are sample custody seals intact?	X		
Are sample containers intact?		X	
Is preservation documented?		X	
In-house Analysis:	**N/A**	**Yes**	**No**
Are preservatives acceptable?		X	
Are samples within holding time?		X	
Are sample container types correct?		X	
Is there adequate sample volume?		X	

Comments:

Receipt Details:

Matrix	Container Type	# of Containers
WA	VOA	14

CS Required: ☐

Proceed With Analysis: ☐ YES ☐ NO Init/Date:

Client Communication:

Is the Data Set Valid?	Preservation Temperature
(circle)	*(if Known)*: 2.8 ºC
Yes / No	

Antea™Group Laboratory Data Validation Sheet

Project/Client: ELT

Project #: I42611147

Date of Validation: 02/18/2014 **Date of Analysis:** 2/10 - 2/12/14

Sample Date: 2/6/2014 **Completed By:** Angela Barillas

Signature:

Circle or Highlight Yes / No (below)

Analytical Lab Used and Report # (if any): Kiff 87348

1.	Were the analyses the ones requested?	Yes / No
2.	Do the sample number(s) on the chain-of-custody (COC) match the one(s) that appear on the laboratory data sheet?	Yes / No
3.	Were samples prepared (extracted, filtered, etc.) within EPA holding times?	Yes / No
4.	Once prepared/extracted, were the samples analyzed within the EPA holding times?	Yes / No
5.	Were Laboratory blanks performed, if so, were they non-detect?	Yes / No
6.	Are the units correct? (i.e., soil samples in mg/kg or ug/g, water samples mg/L, ug/L, and air samples in volume mg/m^3,etc.)	Yes / No
7.	Were appropriate Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples included in the laboratory batch sample?	Yes / No
8.	Were blank spike (SS or LCS) or blank spike duplicate (SSD or LCSD) samples included in the laboratory batch samples?	Yes / No
9.	Were QA/QC samples (MS/MSD, SS/SSD, LCS/LCSD) within the shown acceptable range of % recovery?	Yes / No
10.	Were MS/MSD (or SS/SSD, LCS/LCSD) values used to calculate Relative Percent Difference (RPD)?	Yes / No
11.	Were Relative Percent Difference values within the acceptable range (i.e. ±25%)?	Yes / No

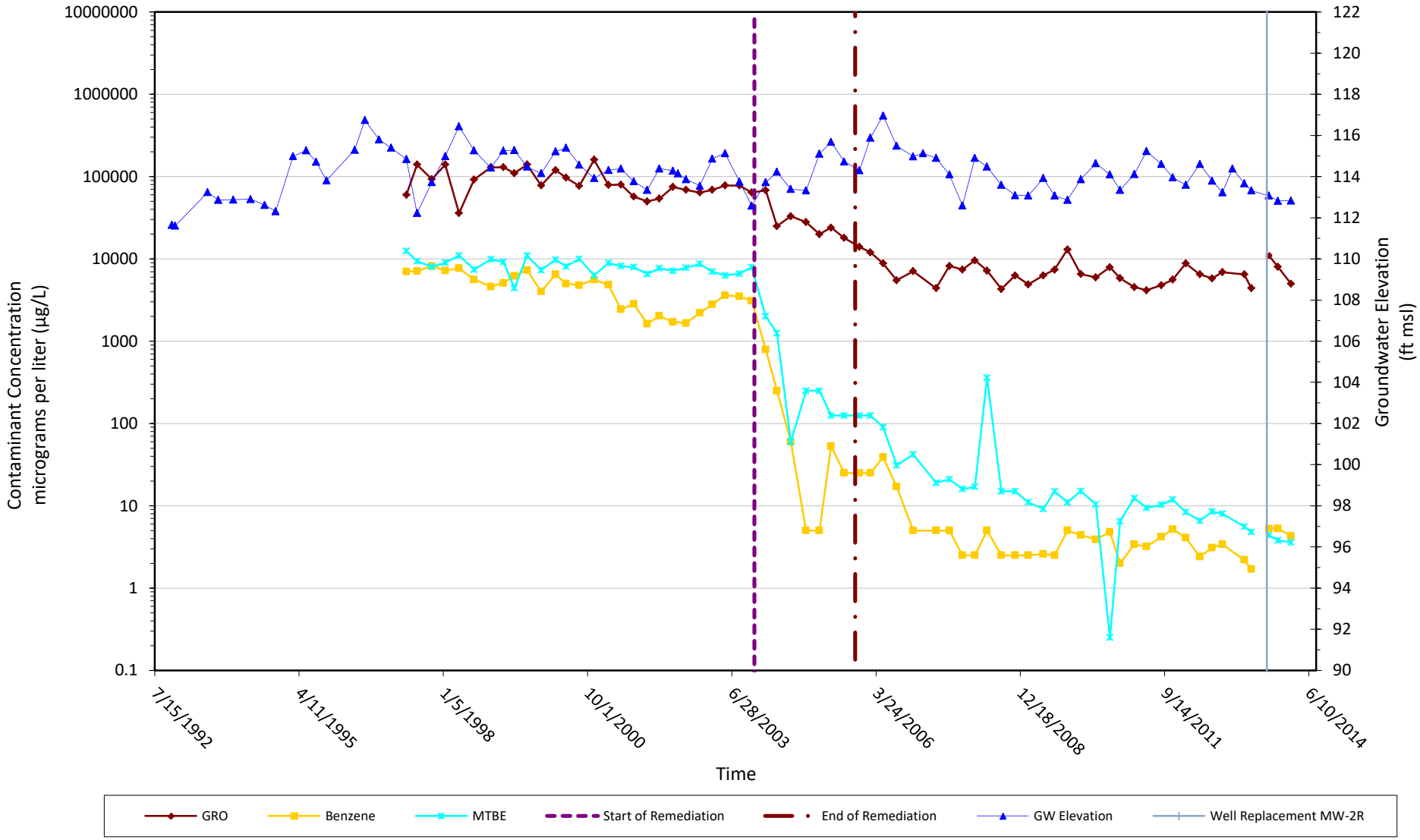
For a 'no' answer, explain why and what corrective action was taken (use additional sheet(s), as necessary:

Data-Qualifiers÷

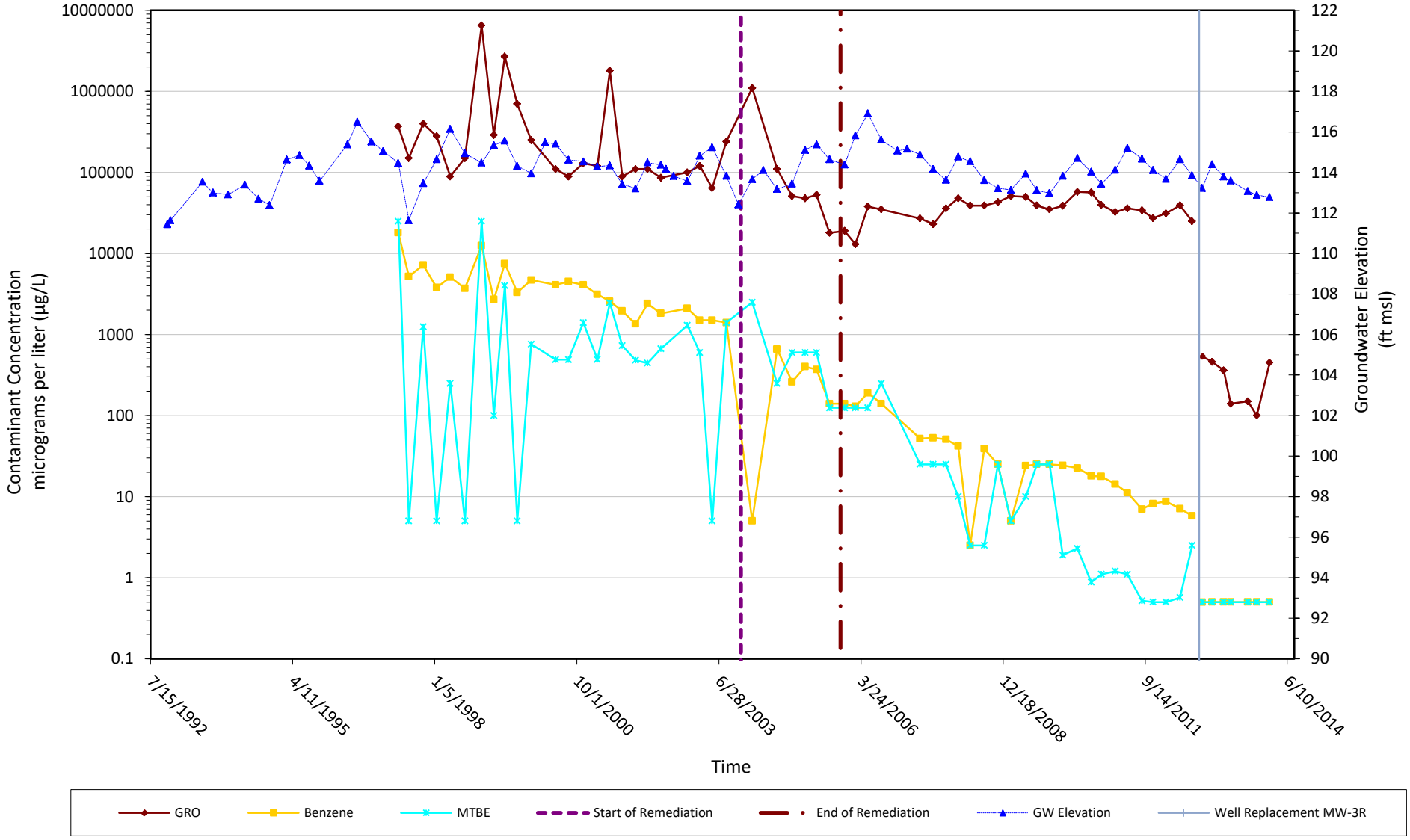
Appendix D

Time Series Graphs

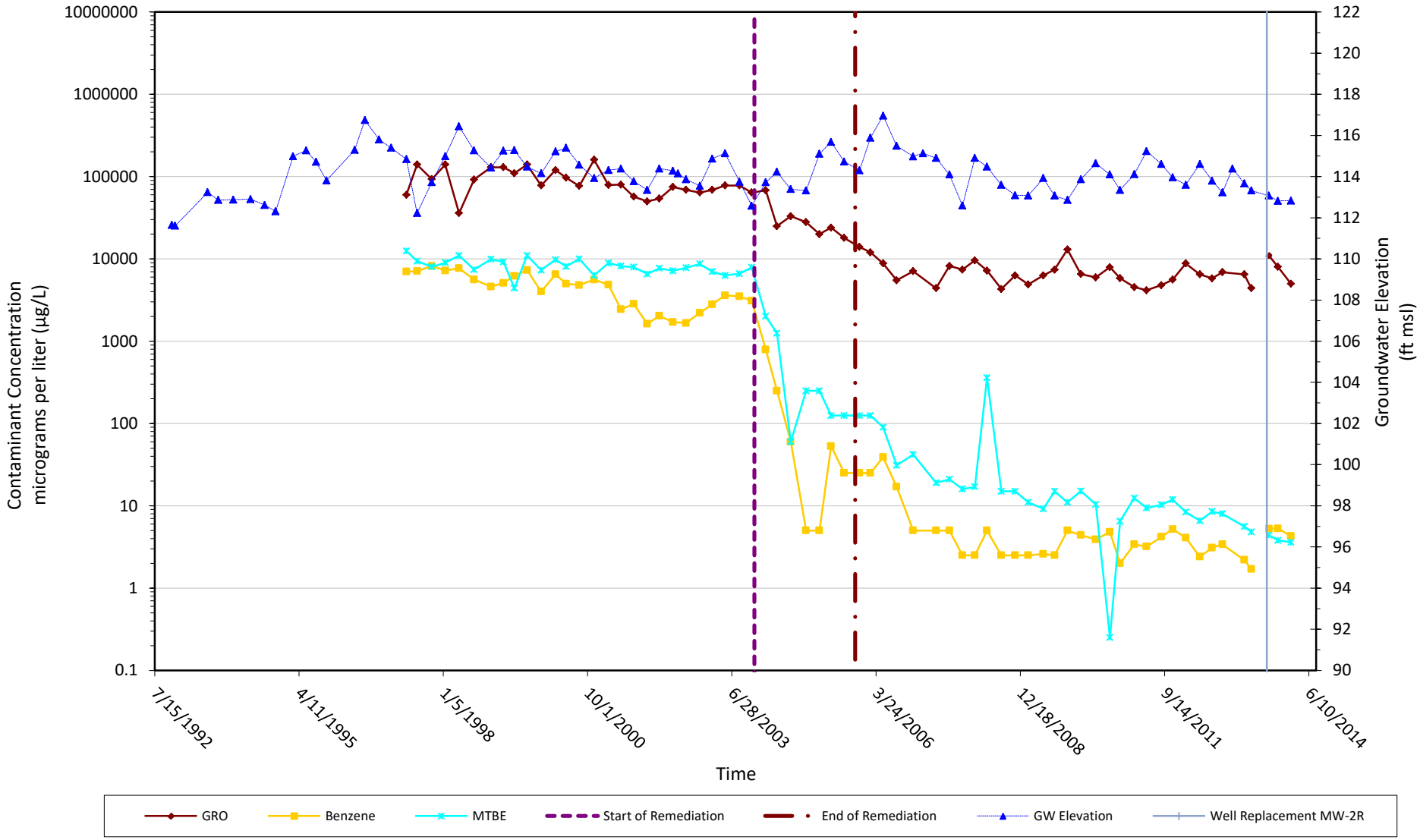
WELL MW-2/MW-2R
GRO, BENZENE, MTBE CONCENTRATIONS AND GROUNDWATER ELEVATION VERSUS TIME
76 (FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA



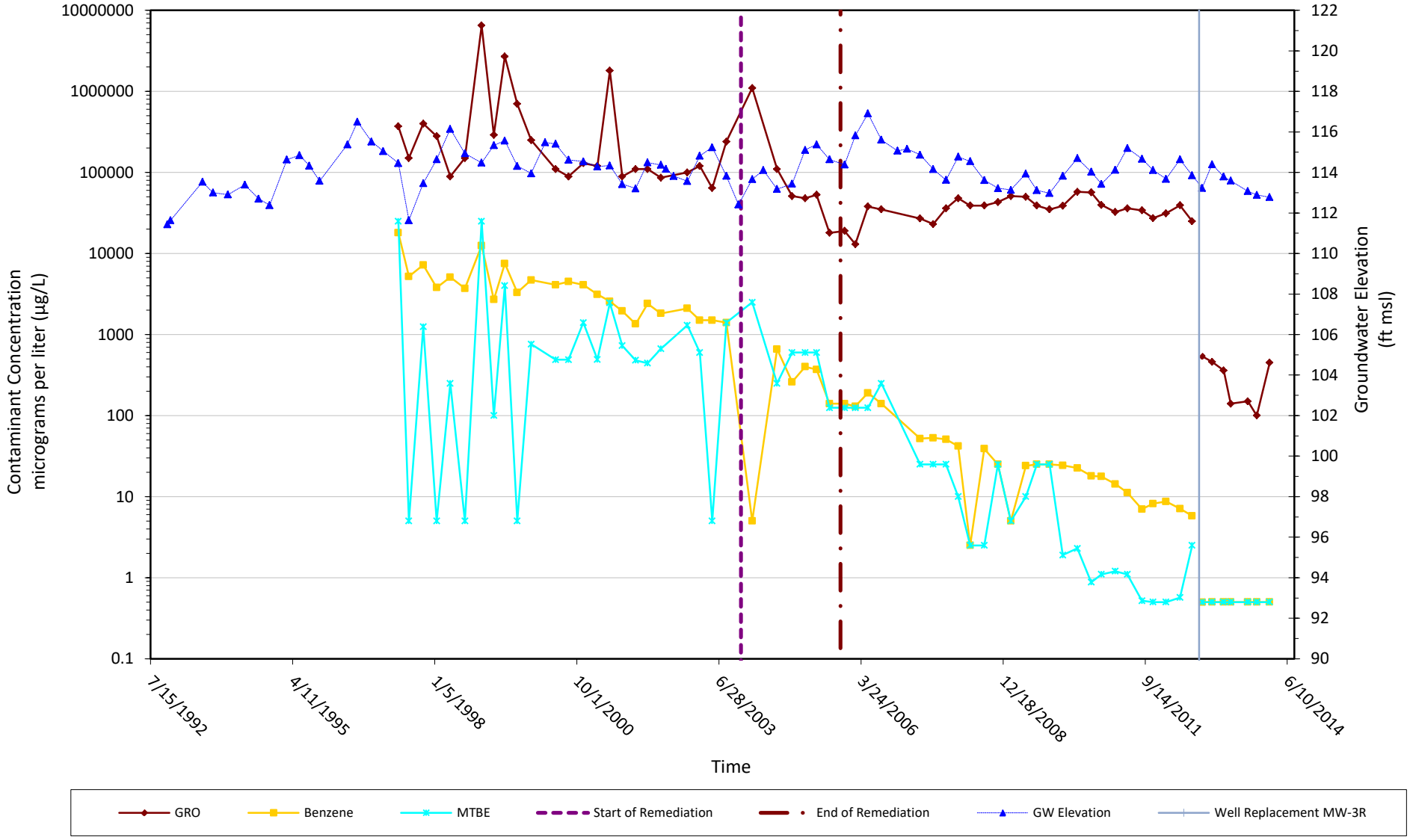
WELL MW-3/MW-3R
GRO, BENZENE, MTBE CONCENTRATIONS AND GROUNDWATER ELEVATION VERSUS TIME
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690 YGNACIO VALLEY ROAD
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690 YGNACIO VALLEY ROAD
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WELL MW-3/MW-3R
GRO, BENZENE, MTBE CONCENTRATIONS AND GROUNDWATER ELEVATION VERSUS TIME
76 (FORMER BP) SERVICE STATION NO. 11147
690 YGNACIO VALLEY ROAD
WALNUT CREEK, CALIFORNIA



Quarterly Monitoring Report - First Quarter 2014

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board
Case No. 1TSR196

Antea Group Project No. UPR8248
April 17, 2014

Prepared for:
Janice Goebel
California Water Quality Control Board
North Coast Region
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

Prepared by:
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San Jose, CA 95112 USA
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Inogen Environmental Alliance

Antea USA, Inc.

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Appendix B Blaine Tech Services' Groundwater Sampling Procedures
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Appendix D Groundwater Gradient and Flow Direction Data (Rose Diagram)
Appendix E Certified Laboratory Analytical Report and Validation Memo

Quarterly Monitoring Report - First Quarter 2014

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board
Case No. 1TSR196

1.0 INTRODUCTION

On behalf of Union Pacific Railroad (UPRR), Antea®Group has prepared this *Quarterly Monitoring Report – First Quarter 2014* for the referenced site located at 2 Fourth Street and 34 Sixth Street in Santa Rosa, California (**Figure 1**). The site is currently owned by Sonoma Marin Area Rail Transit (SMART) and is used as an equipment and supply storage area for SMART construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the "3 West Third Street and 60 West Sixth Street Warehouses", to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties (**Figure 2**). For a summary of the site's background and a history of previous environmental investigations that have been conducted at the subject site, refer to **Appendix A**.

The current well network consists of four groundwater monitoring wells (MW-1 through MW-4) that were installed at the site in May 2013. This report summarizes the data obtained from the first quarter 2014 groundwater monitoring event completed on February 27, 2014. Included herein are groundwater flow contours and trends, contaminant concentration maps, and historical data tables. This report has received a technical review by Ms. Lia Holden, California Professional Geologist #8584.

1.1 Work Performed in the First Quarter 2014

1. Antea Group submitted the *Quarterly Monitoring Report – Fourth Quarter 2013* to the North Coast Regional Water Quality Control Board (NCRWQCB) on January 16, 2014.
2. Antea Group's subcontractor Blaine Tech Services, Inc. (Blaine Tech) conducted quarterly groundwater gauging and sampling activities on February 27, 2014.

1.2 Work Proposed for the Second Quarter 2014

1. Antea Group will submit the *Quarterly Monitoring Report – First Quarter 2014* to the NCRWQCB (contained herein).
2. Antea Group will prepare a report requesting environmental case closure.

2.0 CURRENT PROJECT STATUS

Current phase of project:	Quarterly Groundwater Monitoring
Lead agency for cleanup oversight:	North Coast Regional Water Quality Control Board (Case No. 1TSR196)
Monitoring well gauging and sampling schedule:	Quarterly: MW-1, MW-2, MW-3, and MW-4
Total number of monitoring wells (**Table 1**):	Onsite: 4 wells (MW-1, MW-2, MW-3, MW-4)
Range of well depths (total depth below ground surface, bgs):	18.5 to 20.0 feet bgs
Historical depth to water range, in feet below top of casing (BTOC):	Min: 7.78 (MW-4, 2/27/14) Max: 15.53 (MW-1, 11/20/13)
Historical groundwater elevation range (ft):	Min: 136.33 (MW-1, 11/20/13) Max: 144.19 (MW-4, 2/27/14)

2.1 Regulatory Correspondence

No correspondence was exchanged during the first quarter 2014.

2.2 Groundwater Monitoring

For this groundwater monitoring event, all four onsite monitoring wells were gauged, purged, and sampled by subcontractor Blaine Tech per standard sampling protocol (**Appendix B**). Copies of Blaine Tech's field data sheets are included in **Appendix C**. The recent gauging and sampling data are summarized below.

Well gauging and sampling date:	February 27, 2014
Wells gauged and sampled:	MW-1, MW-2, MW-3 and MW-4
Purge method:	Peristaltic pump
Sample collection method:	Dedicated equipment (tubing)
Groundwater parameters measured (**Appendix C; Table 2**):	Depth to water, temperature, pH, conductivity, oxidation-reduction potential (ORP), turbidity, and dissolved oxygen (DO)
Current depth to water range of wells (ft BTOC):	Min: 7.78 (MW-4) Max: 10.95 (MW-3)
Current groundwater elevation range of wells (ft):	Min: 142.36 (MW-1) Max: 144.19 (MW-4)
Groundwater flow direction and gradient:	West-northwest with a hydraulic gradient of 0.012 feet/foot

2.2.1 Groundwater Flow Gradient and Directional Trends

Using the well gauging data from February 27, 2014 and the surveyed well casing elevations (**Table 1**), Antea Group calculated the groundwater table elevation at each monitoring well location (**Table 3**). These elevations were used to calculate and plot the groundwater flow direction and gradient across the site (**Figure 3**).

Based on the first quarter 2014 data, the groundwater flow direction at the site is to the west-northwest with a general hydraulic gradient of 0.012 feet/foot. The groundwater flow during the first quarter 2014 is similar to the

three previous sampling events, but there appears to be localized variation in the groundwater elevation in the eastern portion of the site. In historic reports, groundwater elevation contours prepared with the site's former (larger) well network showed somewhat variable localized flow patterns across the site with an overall flow toward the west-southwest, which is more directly toward Santa Rosa Creek. **Appendix D** includes flow and gradient data from both monitoring events tabulated and plotted on a rose diagram.

2.2.2 Groundwater Quality Data and Contaminant Trends

Groundwater samples collected during the first quarter 2014 sampling event were submitted under chain of custody protocol to TestAmerica Laboratories, Inc. (TestAmerica), a state of California certified laboratory (California Certification No. 2496). The submitted groundwater samples were analyzed for the following:

- Diesel range organics (DRO) by Environmental Protection Agency (EPA) Method 8015 with and without silica gel cleanup,
- Motor oil range organics (MORO) by EPA Method 8015 with and without silica gel cleanup, and
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM.

The complete laboratory analytical report is included in **Appendix E**. Groundwater analytical results are presented in **Table 3** (current) and **Table 4** (historical); a groundwater concentration map is presented as **Figure 4**.

The laboratory reported three detections above the laboratory reporting limit (LRL). DRO was detected in monitoring wells MW-1 and MW-4 without silica gel cleanup at concentrations of 56 micrograms per liter (µg/L) and 57 µg/L, respectively. MORO was detected in monitoring well MW-4 at a concentration of 110 µg/L. DRO and MORO with silica gel cleanup were not reported above the LRL in any of the wells, indicating that the DRO and MORO detections may be attributed to heavily weathered residual hydrocarbons or naturally occurring carbon from organic material decomposition. PAHs were not detected above the LRL in any of the groundwater samples during the first quarter 2014 event.

2.2.3 Waste Disposal Summary

Well purge water generated during the first quarter 2014 sampling event was contained in a single Department of Transportation (DOT) approved 55-gallon drum and was temporarily stored at the site. Antea Group is currently coordinating drum pickup and removal with subcontractor United Pumping Services Antea Group will include the fully executed manifest in the next quarterly monitoring report.

2.2.4 Quality Assurance / Quality Control (QA/QC)

QA/QC measures included use of a field duplicate sample and a detailed QA/QC data validation check on the TestAmerica laboratory analytical results for the February 2014 sampling event performed by Conestoga-Rovers and Associates (CRA). The TestAmerica laboratory report and CRA validation memo is included as **Appendix E**. A summary of QA/QC information follows.

Duplicate (WG-2344-DUP1-20140227) collected at parent sample MW-4:	Contaminant concentrations were not detected above the LRL for both the parent and duplicate sample (See validation memo in **Appendix E**)
Laboratory QA/QC Performed:	Yes (memo provided by CRA)
Laboratory Data Qualifiers:	No data qualifiers were indicated in the laboratory report
Are the data valid for their intended purpose?	Yes, the data are valid

After review of the laboratory validation provided by CRA, Antea Group concludes that the laboratory data obtained during this groundwater sampling event are valid for their intended purpose.

3.0 CONCLUSIONS AND RECOMMENDATIONS

All site monitoring wells were sampled during the first quarter 2014 monitoring event. The only detections in groundwater were DRO without silica gel cleanup in monitoring wells MW-1 and MW-4, and MORO without silica gel cleanup in MW-4 only. Groundwater samples were also analyzed using silica gel cleanup, and MORO and DRO were below the respective laboratory reporting limits. An evaluation of current analytical data indicates minimal weathered hydrocarbon impact in groundwater; site conditions are comparable to those known at the time of the site's 2007 case closure.

One year of groundwater monitoring was proposed for the site. The first quarter 2014 sampling event marks the fourth consecutive sampling event. Conditions at the site continue to remain stable and consistent with those at the time of the previous case closure. Antea Group will prepare a request for case closure during the second quarter 2014. Antea Group requests to discontinue groundwater monitoring during closure request preparation and while the NCRWQCB reviews the request for environmental case closure.

4.0 LIMITATIONS

The findings contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc. does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

Prepared by:

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Antea Group

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Project Professional
Antea Group

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



Lia N. Holden
Senior Project Manager
California Registered Professional Geologist No. 8584
Antea Group

cc: GeoTracker (upload)

Figures

Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3 Groundwater Elevation Contour Map – February 27, 2014
Figure 4 Groundwater Concentration Map – February 27, 2014





North

0 1000 2000 FT

SCALE

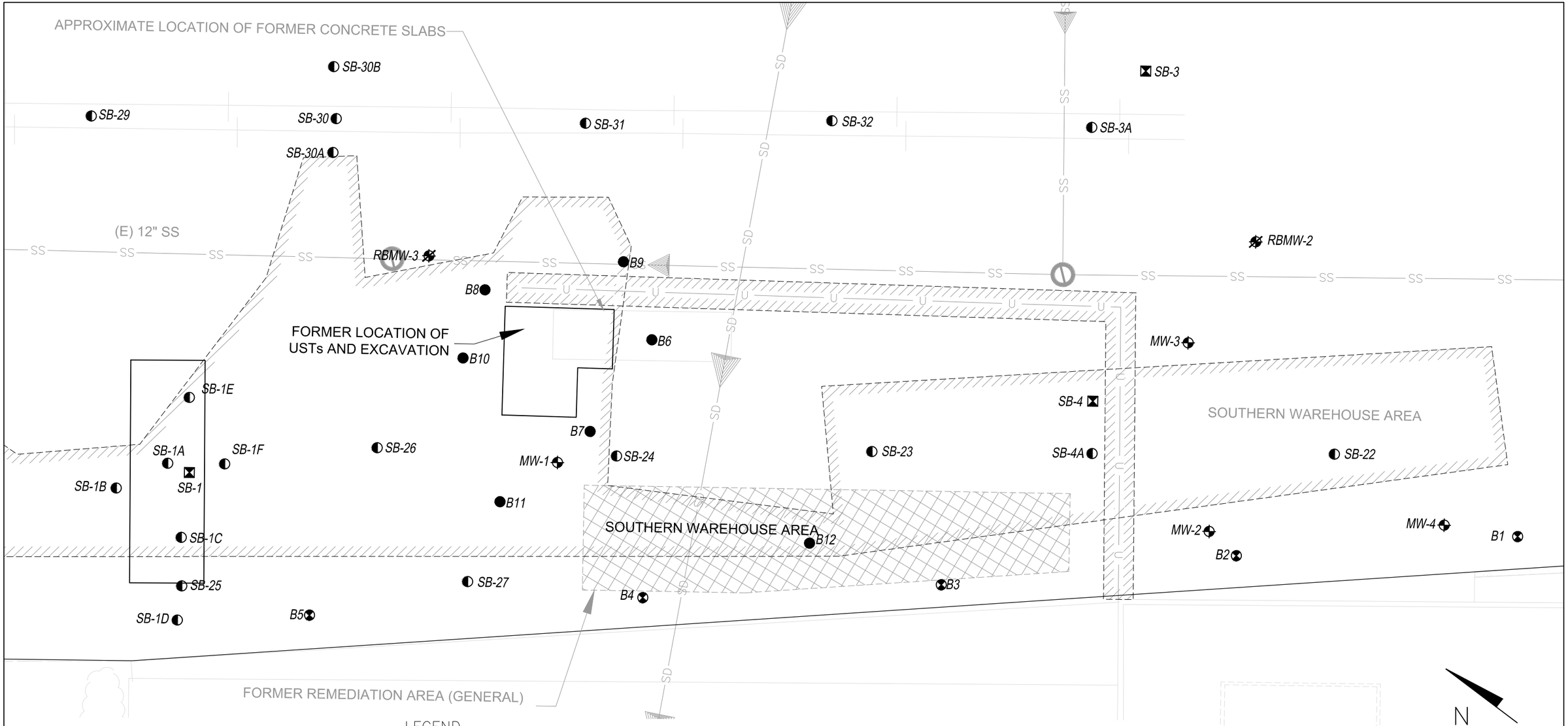
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup



LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- MONITORING WELL
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DS	JH
DATE	REVIEWED BY	FILE NAME
3/27/14	LH	UPR8248-Site

antea group

APPROXIMATE LOCATION OF FORMER CONCRETE SLABS

SB-30B
SB-29
SB-30
SB-31
SB-32
SB-3
SB-3A
SB-30A
(E) 12" SS
RBMW-3
RBMW-2
B9
B8
FORMER LOCATION OF USTs AND EXCAVATION
B10
B6
SB-1E
B7
SB-4
SB-1A
SB-1F
SB-26
MW-1 (142.36)
SB-24
SB-23
SB-1A
SB-22
SB-1B
SB-1
B11
SOUTHERN WAREHOUSE AREA
B12
MW-2 (143.06)
MW-4 (144.19)
B1
B2
SB-1C
SB-25
SB-27
B4
B3
SB-1D
B5
FORMER REMEDIATION AREA (GENERAL)

142.5
143.0
143.5
144.0
(142.49) MW-3
0.012 ft/ft

GROUNDWATER

(142.49) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

142.5 GROUNDWATER ELEVATION CONTOUR LINE (ft/msl)

0.012 ft/ft GENERAL DIRECTION OF GROUNDWATER FLOW AND HYDRAULIC GRADIENT (ft/ft)

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
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- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

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- CMP CORRUGATED METAL PIPE

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP FEBRUARY 27, 2014

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DS	JH
DATE	REVIEWED BY	FILE NAME
3/27/14	LH	UPR8248-Site

anteagroup

APPROXIMATE LOCATION OF FORMER CONCRETE SLABS

SB-30B

SB-29

SB-30

SB-31

SB-32

SB-3

SB-3A

SB-30A

(E) 12" SS

RBMW-3

B9

B8

FORMER LOCATION OF USTs AND EXCAVATION

B10

B6

B7

MW-1

SB-24

SB-1E

SB-1A

SB-1F

SB-26

SB-1B

SB-1

B11

SB-1C

SB-25

SB-27

SB-1D

B5

SOUTHERN WAREHOUSE AREA

B12

B4

B3

SB-4

SB-4A

SB-23

SOUTHERN WAREHOUSE AREA

SB-22

RBMW-2

MW-3

MW-2

B2

MW-4

B1

FORMER REMEDIATION AREA (GENERAL)

MW-1	DRO	DRO(SG)	MORO	MORO(SG)
2/27/14	56	<53	<110	<110

MW-3	DRO	DRO(SG)	MORO	MORO(SG)
2/27/14	<53	<53	<110	<110

MW-2	DRO	DRO(SG)	MORO	MORO(SG)
2/27/14	<55	<55	<110	<110

MW-4	DRO	DRO(SG)	MORO	MORO(SG)
2/27/14	57	<53	110	<110

GROUNDWATER

NOTES:
DRO = DIESEL RANGE ORGANICS
MORO = MOTOR OIL RANGE ORGANICS
SG = SILICA GEL
< = LESS THAN LABORATORY INDICATED REPORTING LIMITS

CONCENTRATIONS N MICROGRAMS PER LITER (µg/L).

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
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- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

FIGURE 4
GROUNDWATER CONCENTRATION MAP
FEBRUARY 27, 2014

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DS	JH
DATE	REVIEWED BY	FILE NAME
3/27/14	LH	UPR8248-Site

anteagroup

Tables

Table 1 Soil Boring and Monitoring Well Construction Details
Table 2 Field Parameter Data
Table 3 Current Groundwater Gauging and Analytical Data
Table 4 Historical Groundwater Gauging and Analytical Data

TABLE 1
SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Updated 10/2/2013

Well ID	Well/Boring Completion Date	TOC Elevation[1] (ft)	Well/Boring Depth (ft bgs)	Well Casing Diameter (in)	Well Casing Material	Well Screen Slot Size (in)	Well Screen Interval (ft bgs)	Cement Grout Seal Interval (ft bgs)	Bentonite Seal Interval (ft bgs)	Filter Pack Interval (ft bgs)	Comments
Soil Borings											
B1	Apr-12	NA	20.0	NA	PVC	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B2	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B3	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B4	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B5	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B6	Apr-12	NA	20.2	NA	NA	NA	NA to NA	NA to 20.2	NA to NA	NA to NA	COT/UVOST Boring
B7	Apr-12	NA	22.1	NA	NA	NA	NA to NA	NA to 22.1	NA to NA	NA to NA	COT/UVOST Boring
B8	Apr-12	NA	22.3	NA	NA	NA	NA to NA	NA to 22.3	NA to NA	NA to NA	COT/UVOST Boring
B9	Apr-12	NA	23.2	NA	NA	NA	NA to NA	NA to 23.2	NA to NA	NA to NA	COT/UVOST Boring
B10	Apr-12	NA	22.1	NA	NA	NA	NA to NA	NA to 22.1	NA to NA	NA to NA	COT/UVOST Boring
B11	Apr-12	NA	20.2	NA	NA	NA	NA to NA	NA to 20.2	NA to NA	NA to NA	COT/UVOST Boring
B12	Apr-12	NA	20.3	NA	NA	NA	NA to NA	NA to 20.3	NA to NA	NA to NA	COT/UVOST Boring
Groundwater Monitoring Wells											
MW-1	May-13	151.86	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-2	May-13	152.79	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-3	May-13	153.44	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	
MW-4	May-13	151.97	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	

Notes:

ft = feet

in = inches

TOC = Top of Casing

bgs = below ground surface

--- = information not available

B = Boring

MW = Monitoring Well

[1] = TOC Elevations were surveyed to the North American Vertical Datum of 1988 (NAVD 88).

NA - Not Applicable

CPT = Cone Penetration Test

UVOST = Ultra-Violet Optical Screening Tool

TABLE 2
FIELD PARAMETER DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Field Parameters						
						Temperature, ambient (°C)	Temperature, sample (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	Oxidation reduction potential (mV)	pH	Conductivity (uS/cm)
MW1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	20	18.5	54	3.03	131.9	6.6	487
	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	25	18.1	10	1.11	59	6.49	555
	WG-2344-MW1-201113	11/20/2013	151.86	15.53	136.33	15	13.6	17	1.18	213.9	6.66	673
	WG-2344-MW1-20140227	02/27/2014	151.86	9.50	142.36	15	16.73	8	0.90	70.1	6.70	397
MW2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	20	17.1	8	0.58	85.2	6.6	386
	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	25	17.6	7	0.4	47.5	6.83	462
	WG-2344-MW2-201113	11/20/2013	152.79	11.05	141.74	18	14.3	10	1.02	167.4	6.62	385.1
	WG-2344-MW2-20140227	02/27/2014	152.79	9.73	143.06	15	16.45	8	1.31	60.1	6.60	200
MW3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	20	18.9	5	0.18	44	6.7	462
	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	25	18.8	8	0.81	44.1	6.81	547
	WG-2344-MW3-201113	11/20/2013	153.44	11.92	141.52	18.3	13.8	14	1.06	179.7	6.7	580.1
	WG-2344-MW3-20140227	02/27/2014	153.44	10.95	142.49	15	18.50	7	0.59	77.5	6.69	425
MW4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	20	16.5	10	0.41	60.5	7	511
	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	25	17.1	9	0.3	-68.3	7	409
	WG-2344-MW4-201113	11/20/2013	151.97	10.48	141.49	18	12.4	11	1.1	91.8	7.02	501.9
	WG-2344-MW4-20140227	02/27/2014	151.97	7.78	144.19	15	16.00	7	0.57	85.6	6.67	572

Notes:
NTU = Nephelometric Turbidity Unit
uS/cm = microsiemens per centimeter
mg/l = milligrams per liter
mV = millivolts
°C = Degrees Celsius
ft= feet
amsl= above mean sea level
bgs = below ground surface

TABLE 3
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	Petroleum Compounds[1]				PAHs[2]															
						DRO (µg/L)	DRO (Silica Gel) (µg/L)	MORO (µg/L)	MORO (Silica Gel) (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno(1,2,3-cd) pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
MW1	WG-2344-MW1-20140227	02/27/2014	151.86	9.50	142.36	**56**	< 53	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW2	WG-2344-MW2-20140227	02/27/2014	152.79	9.73	143.06	< 55	< 55	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW3	WG-2344-MW3-20140227	02/27/2014	153.44	10.95	142.49	< 53	< 53	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW4	WG-2344-MW4-20140227	02/27/2014	151.97	7.78	144.19	**57**	< 53	**110**	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
DUP-1	WG-2344-DUP1-20140227	02/27/2014	--	--	--	--	< 53	--	< 110	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

µg/L = micrograms per liter

NA = Not Applicable

< Analyte not detected at the laboratory indicated reporting limit

Bolded Value = Indicates result of analysis is above the laboratory reporting limit

-- = Not Analyzed

a. DUP-1 collected from MW-4.

Analyte Definitions:

DRO = Diesel Range Organics, carbon range C10 - C28

MORO = Motor Oil Range Organics, carbon range C_{24} - C_{36}

SGC = Silica Gel Cleanup

PAHs = Polycylic Aromatic Hydrocarbons

Analytical Notes:

[1] - Analyzed by Environmental Protection Agency (EPA) Method 8015B

[2] - Analyzed by EPA Method 8270C SIM

TABLE 4
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	Petroleum Compounds[1]				PAHs[2]														
						DRO (µg/L)	DRO (Silica Gel) (µg/L)	MORO (µg/L)	MORO (Silica Gel) (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h)anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno(1,2,3-cd)pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
MW1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	<55	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW1-201113	11/20/2013	151.86	15.53	136.33	<50	<51	<99	<100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	WG-2344-MW1-20140227	02/27/2014	151.86	9.50	142.36	**56**	< 53	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	<54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-201113	11/20/2013	152.79	11.05	141.74	**68**	<51	**140**	<100	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-20140227	02/27/2014	152.79	9.73	143.06	< 55	< 55	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	<54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW3-201113	11/20/2013	153.44	11.92	141.52	<51	<50	<100	<99	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	WG-2344-MW3-20140227	02/27/2014	153.44	10.95	142.49	< 53	< 53	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	**150**	< 110	< 110	< 210	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-201113	11/20/2013	151.97	10.48	141.49	**210**	<52	**110**	<100	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-20140227	02/27/2014	151.97	7.78	144.19	**57**	< 53	**110**	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11

Notes:

ug/L	micrograms per liter
<	Analyte not detected at the laboratory indicated reporting limit
Bolded Value	Indicates result of analysis is above the laboratory reporting limit
--	Not Analyzed

Analyte Definitions:

DRO - Diesel Range Organics, carbon range C_{10} - C_{28}
MORO - Motor Oil Range Organics, carbon range C_{24} - C_{36}
SGC - Silica Gel Cleanup
PAHs - Polycyclic Aromatic Hydrocarbons

Analytical Notes

1 - Analyzed by Environmental Protection Agency (EPA) Method 8015B
2 - Analyzed by EPA Method 8270C SIM

Appendix A

Site Details and Summary of Previous Environmental Investigations

SITE DETAILS

Currently, the site is being used as a construction equipment supply storage area for Sonoma Marin Area Rail Transit (SMART) construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the 3 West Third Street and 60 West Sixth Street Warehouses, to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties.

There are currently four groundwater monitoring wells (MW-1 through MW-4) at the site; quarterly groundwater sampling and monitoring is underway.

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

Over the history of environmental activities at the site, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by Environmental Protection Agency (EPA) method 8015B or 8260B. Antea Group uses the designation GRO for total petroleum hydrocarbons as gasoline within the C_5 to C_{10} carbon range, DRO for total petroleum hydrocarbons as diesel within the C_{10} to C_{28} carbon range, and RRO for total petroleum hydrocarbons as residual range organics (oil) within the C_{24} to C_{40} carbon range.

Terms from previous reports may include total recoverable petroleum hydrocarbons (TRPH), total purgeable petroleum hydrocarbons (TPPH) for GRO, total extractable petroleum hydrocarbons (TEPH) for DRO, and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific historical terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO. Antea Group has left the original designation when summarizing historic data and the current designations when applied to recent investigations and summary discussions.

SITE HISTORY

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site. These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs (Industrial Compliance [IC], 1992).

In April 1990, the North Coast Regional Water Quality Control Board (RWQCB) drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (MW-2 and MW-3). Monitoring well MW-3 was located approximately 100 feet down gradient (to the southwest) of the former fuel oil UST. Based on

information presented in a July 1992 report by IC, analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1. However, oil and grease was present in the soil sample collected from boring B-1 at 12 feet bgs at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PAHs). Soil samples collected at depths of 6 and 16 feet below ground surface (bgs) from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively. No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3 (Geomatrix Consultants, Inc. [Geomatrix], 2000).

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes (BTEX compounds), or PAHs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX compounds were detected in the grab groundwater sample collected from IC-B6 (Geomatrix, 2000).

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995. In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHmo), PAHs, metals, and volatile organic compounds (VOCs). Soil samples collected for analyses of TPHd, PAHs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHmo at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHmo at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHmo was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHmo was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs (Geomatrix, 2000).

PAHs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure. Concentrations of PAHs detected at this time are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a

depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PAH concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)4 in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs. No TPHd, TPHmo, or VOCs were detected in groundwater above laboratory reporting limits. The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These items, which are the focus of the work described herein, include additional evaluation of historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations (Geomatrix, 2000).

In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An up-gradient, single-screen monitoring well was installed on the eastern portion of the property in vicinity of the main line railroad tracks.

Extensive investigative activities were performed in 2002 on the northwest area of the project site at the historical location of the Santa Rosa Woolen Mills Facility. Soil samples collected as part of an investigation within this area reported significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former above ground fuel storage tank (AST), and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons. From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil (EBA, 2008b).

In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed, whereupon the excavation was advanced to a total depth of approximately 18 feet bgs. A significant amount of free-phase petroleum hydrocarbon product was encountered on the groundwater surface during the excavation activities. The product and water was subsequently pumped, treated, and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently terminated due to concerns of structure stability. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in the excavation sidewalls and groundwater in this area (EBA, 2008b).

Excavation activities in the northwestern portion of the property also included the removal off a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 350 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths below first encountered groundwater, which was encountered at approximately 19 feet bgs. The maximum depth attained by the excavation was approximately 22 feet bgs. Impacted groundwater encountered within the excavation pit, which included free-phase petroleum hydrocarbon product, was subsequently removed using pumps, treated, and disposed of to the sanitary sewer (EBA, 2008b).

Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area. Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the "southern warehouse area" (EBA, 2008b).

Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in a monitoring well identified as SRMW-13 located in the northwest corner of the property. In addition, the fuel oxygenate methyl tert-butyl ether (MTBE) was detected in SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored (EBA, 2008b).

The RWQCB issued a *No Further Action* (NFA) letter for the previous case at the site on August 31, 2007. In 2008, Sonoma Marin Area Rail Transit District (SMART) granted an option to purchase the site, formerly owned by Northwestern Pacific Railroad Authority (NWRPA) to New Railroad Square Associates, LLC for transit-oriented development purposes. In anticipation of property ownership for the site, New Railroad Square Associates, LLC (with consent from SMART) contracted the services of EBA Engineering (EBA) to perform environmental assessment activities. EBA's November 2008 *Comprehensive Report on Findings* concluded that on-site hazardous materials presently exist at various locations on the property. These materials include an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and impacted shallow soil across the site. The RWQCB reopened the environmental case for the site on January 16, 2009 based on EBA's findings.

In a letter dated February 4, 2011, the RWQCB directed UPRR to remove the oil UST on the property due to SMARTs site improvement activities planned for the site. Another letter, dated July 22, 2011, was submitted to UPRR from the RWQCB which directed them to remove "known shallow impacts", soil impacts encountered during property development and removal of impacted soil in the vicinity of SB-1 in addition to the removal of the oil UST. In November 2011, United Pumping Services (UPS) removed the UST as directed. However, during the initial day-lighting activities of the oil UST, an additional 500-gallon UST containing oil was discovered adjacent and west of the known tank. UPS evacuated, cleaned and removed the second UST in conjunction with the known UST. UPS

excavated and disposed of approximately 213.03 tons of impacted soil surrounding the USTs, and pumped approximately 500 gallons of oil impacted groundwater from the excavation. Antea Group collected 16 soil samples and one grab groundwater sample from within the excavation. Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears that a release from the removed USTs only affected the immediate soils surrounding the USTs. Sidewall samples NWB and SWB collected at 15 feet bgs reported concentrations of VOCs and PAHs not found in any other (shallower) samples collected. From the available data, soil VOCs and PAHs impacts appear to be the result of impacted groundwater within the capillary fringe, originating from outside of the excavated area, and not due to a release from the USTs at that location.

In a letter dated January 19, 2012, the RWQCB directed UPRR to address their remaining concerns from their July 22, 2011 directive letter. The remaining concerns included the removal of known shallow impacts and removal of impacted soil in the vicinity of SB-1. In addition, further investigation around the UST tank pit was directed since evidence of discharge was noted during the removal of the UST in November 2011. In April 2012, Antea Group advanced five soil borings (B1 through B5) on the southwestern boundary of the site and seven qualitative borings (B6 through B12) utilizing cone penetration testing (CPT) tip and Ultra-Violet Optical Screening Tool (UVOST) technology around the tank pit area. The borings were advanced to further investigate impacts of the UST removal and determine any contamination near the site boundaries and their origin. Soil samples were collected and submitted for laboratory analysis. Of the detection above the LRLs, only two concentrations are above their San Francisco Bay RWQCB environmental screening levels (ESLs). The DRO concentration in sample B2-11' [240 milligrams per kilogram (mg/kg)] and the concentration of DRO (810 mg/kg) detected in B4-12' exceeded the ESL of 83 mg/kg. Analysis of the UVOST data suggests that the only boring displaying minor indications of hydrocarbon impacts is boring B7 at approximately 5 to 10 feet bgs.

On July 9 through July 13, 2012 UPS and Antea Group conducted soil excavation in the area of former EBA soil boring SB-1. The results of the sidewall and base samples of the excavation in the vicinity of EBA boring SB-1 indicate that only samples from the southwest portion of the excavation exceed commercial/industrial ESLs for DRO and MORO.

On February 26, 2013, the RWQCB directed UPRR to install four monitoring wells on the site to further investigate groundwater impacts on their origin (potentially from off-site sources). Antea Group had proposed this work in their Site Remedial Action and Investigation Report dated October 16, 2012 and the RWQCB concurred. On May 5 and 6, 2013, Antea Group installed four groundwater monitoring wells (MW-1 through MW-4).

SENSITIVE RECEPTORS

Geomatrix performed a well survey in 2000. Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which is

fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use (Geomatrix, 2003).

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site. Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically down-gradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately up gradient and two approximately down gradient. Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use (Geomatrix, 2003).

Information about the possible presence of an additional water-producing well located near the site was provided by the RWQCB. This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek; its actual location has not been field-verified. At this time the well is not in use, and based on a conversation with the site redeveloper, the well will not be used in the future and will be appropriately destroyed (Geomatrix, 2003).

Appendix B

Blaine Tech Services' Groundwater Sampling Procedures

Blaine Tech Services, Inc.
Standard Operating Procedure

LOW-FLOW SAMPLING

1. Calibrate YSI Flow Cell as per manufacturer's specifications. Thoroughly rinse probe and cup between parameters. Calibration order as follows:

    A. pH (use 3-point calibration of 7, 4, 10)
    B. Oxygen Reduction Potential (ORP)
    C. Specific Conductance
    D. Dissolved Oxygen (DO) (calibrate simulating 100% oxygen saturation)

2. Remove dedicated PE tubing from the well or start with new PE tubing cut to the required length.
3. Gently lower the PE tubing into the well, placing the intake at the center of the screened interval. Take care to minimize disturbance to the water column.
4. Attach the PE tubing to the Peristaltic Pump.
5. Direct effluent line into YSI 556 Flow Cell.
6. Set Peristaltic Pump speed at 100 - 500 ml/min.
7. Collect water quality parameter measurements for temperature, pH, conductivity, turbidity, DO and ORP every 3-5 minutes.
8. Monitor drawdown during purging with electronic water level meter. Record water level with each parameter measurement. MAXIMUM DRAWDOWN IS 0.33 FEET.
9. Collect parameter measurements until stability is achieved. Stability is defined as three consecutive measurements where:

Temp	± 1° Celsius
pH	± 0.1
Conductivity	± 3%
Turbidity	± 10% NTU
DO	± 0.3 mg/l
ORP	± 10 Mv

10. Disconnect effluent line from YSI 556 Flow Cell.
11. Sample through effluent line while maintaining constant flow rate.

Appendix C

Blaine Tech Services' Quarterly Groundwater Sampling Field Data Sheets

WELL GAUGING DATA

Project # 140227-Pw1 Date 2/27/14 Client Antea

Site UPRR Santa Rosa 24th St & 34 (6th St)

Well ID	Well Size (in.)	Time Gauged	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or (TOC)
MW-1	2	0955					9.50	19.80	
MW-2	2	0959					9.73	19.60	
MW-3	2	0957					10.95	18.22	
MW-4	2	1002					7.78	18.20	↓

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344-MW1-20140227	Sample Date: (mm/dd/yy)	2/27/14
Sampler Name:	Daniel Allen	Sample Time (hhmm):	1045
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-1

Name of Duplicate Sample: _____ MS/MSD collected (yes/no)?: NO

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

	2"	4"	6"	8"
Well Diameter:	X			
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 1026 @ 200 ml/min Depth to Water When Sampled: 9.49

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: uS/cm	Turbidity Unit: NTU	ORP Unit: mV	DO Unit:	Volume Unit: ml
1029	6.89	16.17	419	14	85.6	1.25	600
1032	6.76	16.57	408	11	79.5	0.96	1200
1035	6.73	16.64	402	10	73.0	0.93	1800
1038	6.72	16.70	400	10	71.5	0.92	2400
1041	6.70	16.73	397	8	70.1	0.90	3000

Lock Present (yes/no): ~~NO~~ Yes

Fixtures Replaced: NO

Weather Conditions/Ambient Temperature: Overcast

Comments: Fe^{2+} = 0.0 mg/L

Signature of Sampler: [signature]

anteagroup

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344-MW2-20140227	Sample Date: (mm/dd/yy)	2/27/14
Sampler Name:	Daniel Allen	Sample Time (hhmm):	1150
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-2

Name of Duplicate Sample: _____ MS/MSD collected (yes/no)?: NO

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter: 2" X 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier (gal/ft.): 0.16 0.65 1.47 2.61

Start purge: 1137 @ 200 ml/min Depth to Water When Sampled: 9.85

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp	Cond.	Turbidity	ORP	DO	Volume
	6.69	Unit: C°	Unit: uS/cm	Unit: NTU	Unit: mV	Unit:	Unit: ml
1140	16.55	16.55	217	11	49.5	2.97	600
1143	6.64	16.47	205	10	54.8	1.36	1200
1146	6.63	16.45	202	8	58.2	1.33	1800
1149	6.60	16.45	200	8	60.1	1.31	2400

Lock Present (yes/no)?: Yes

Fixtures Replaced: NO

Weather Conditions/Ambient Temperature: Overcast

Comments: Fe^{2+} = 0.0 mg/L

Signature of Sampler: [signature]

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Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344- MW3-20140227	Sample Date: (mm/dd/yy)	2/27/14
Sampler Name:	Daniel Allen	Sample Time (hhmm):	1120
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-3

Name of Duplicate Sample: _____ MS/MSD collected (yes/no)?: NO

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter: 2" X 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier (gal/ft.): 0.16 0.65 1.47 2.61

Start purge: 1104 @ 200 ml/min Depth to Water When Sampled: 10.97

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp	Cond.	Turbidity	ORP	DO	Volume
	6.76	Unit: C°	Unit: us/cm	Unit: NTU	Unit: mV	Unit:	Unit: ml
1107	~~15.38~~	18.38	439	8	91.0	2.74	600
1110	6.72	18.53	431	6	86.0	0.70	1200
1113	6.70	18.49	428	6	81.5	0.62	1800
1116	6.70	18.47	427	6	79.3	0.60	2400
1119	6.69	18.50	425	7	77.5	0.59	3000

Lock Present (yes/no)?: Yes

Fixtures Replaced: NO

Weather Conditions/Ambient Temperature: Overcast

Comments: Fe^{2+} = 0.0 mg/L

Signature of Sampler: Daniel Allen

anteagroup

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344- MW4-20140227	Sample Date: (mm/dd/yy)	2/27/14
Sampler Name:	Daniel Allen	Sample Time (hhmm):	1222
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-4

Name of Duplicate Sample: WG-2344-DUP1-20140227 @ 1223 MS/MSD collected (yes/no)?: NO

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter:	2"	4"	6"	8"
Purge Vol. Multiplier: (gal/ft.)	X 0.16	0.65	1.47	2.61

Start purge: 1209 @200 mL/min Depth to Water When Sampled: 7.84

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: C°	Cond. Unit: uS/cm	Turbidity Unit: NTU	ORP Unit: mV	DO Unit:	Volume Unit: ml
1212	6.75	16.11	576	13	78.9	0.81	600
1215	6.70	16.07	574	8	80.0	0.60	1200
1218	6.69	16.03	574	8	83.2	0.59	1800
1221	6.67	16.00	572	7	85.6	0.57	2400

Lock Present (yes/no)?: Yes

Fixtures Replaced: NO

Weather Conditions/Ambient Temperature: Overcast

Comments: Fe^{2+} 0.0 mg/L

Signature of Sampler: [signature]

anteagroup

Test America- Pleasanton

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 1155 North 1st Street, Suite 201 San Jose, CA 95112	Santa, Rosa - 2 Fourth Street and 24 Sixth Street PEDD_2344-8-Rev0
Project Manager/Phone Number: Lia Holden / 408-606-4919 Sampler: Blaine Tech Services	**Phone Number:** Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO & MORO (SW8015)	PAHs (8270C SIM)								Special Instructions
WG-2344-MW1-20140227	WG	Various	5	2/27/14 1045	Various	X	X								With and Without Silica Gel Clean-up
WG-2344-MW2-20140227	WG	Various	5	2/27/14 1150	Various	X	X								
WG-2344-MW3-20140227	WG	Various	5	2/27/14 1120	Various	X	X								
WG-2344-MW4-20140227	WG	Various	5	2/27/14 1222	Various	X	X								
WG-2344-DUP1-20140227	WG	Various	3	2/27/14 1227	Various	X									With Silica Gel only

Relinquished By: Date/Time: 2/27/14@1600	Received by: Date/Time: 2/27/14@1600	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time:	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Date/Time:	Sample Integrity: (Check) Intact _____ On Ice: _____ Custody Seal: _____

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

WELLHEAD INSPECTION CHECKLIST

Client Antea Date 2/27/14

Site Address UPRR Santa Rosa 2 4th St & 34 6th St.

Job Number 140227-DW1 Technician Daniel Allen

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	X	X						
MW-2	X							
MW-3	X							
MW-4	X							

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME	URRR Santa Rosa			PROJECT NUMBER	140227-pw1		
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. C°	INITIALS
YSI 556	05161484AC	2/27/14 @ 0635	DO 100%	100.4	Y	15	PW
			ph 7, 10, 4	7.00 10.00 4.02	Y	15	DW
			3900 us/cm	3915	Y	15	DW
			244 mv	243.2	Y	15	DW

Appendix D

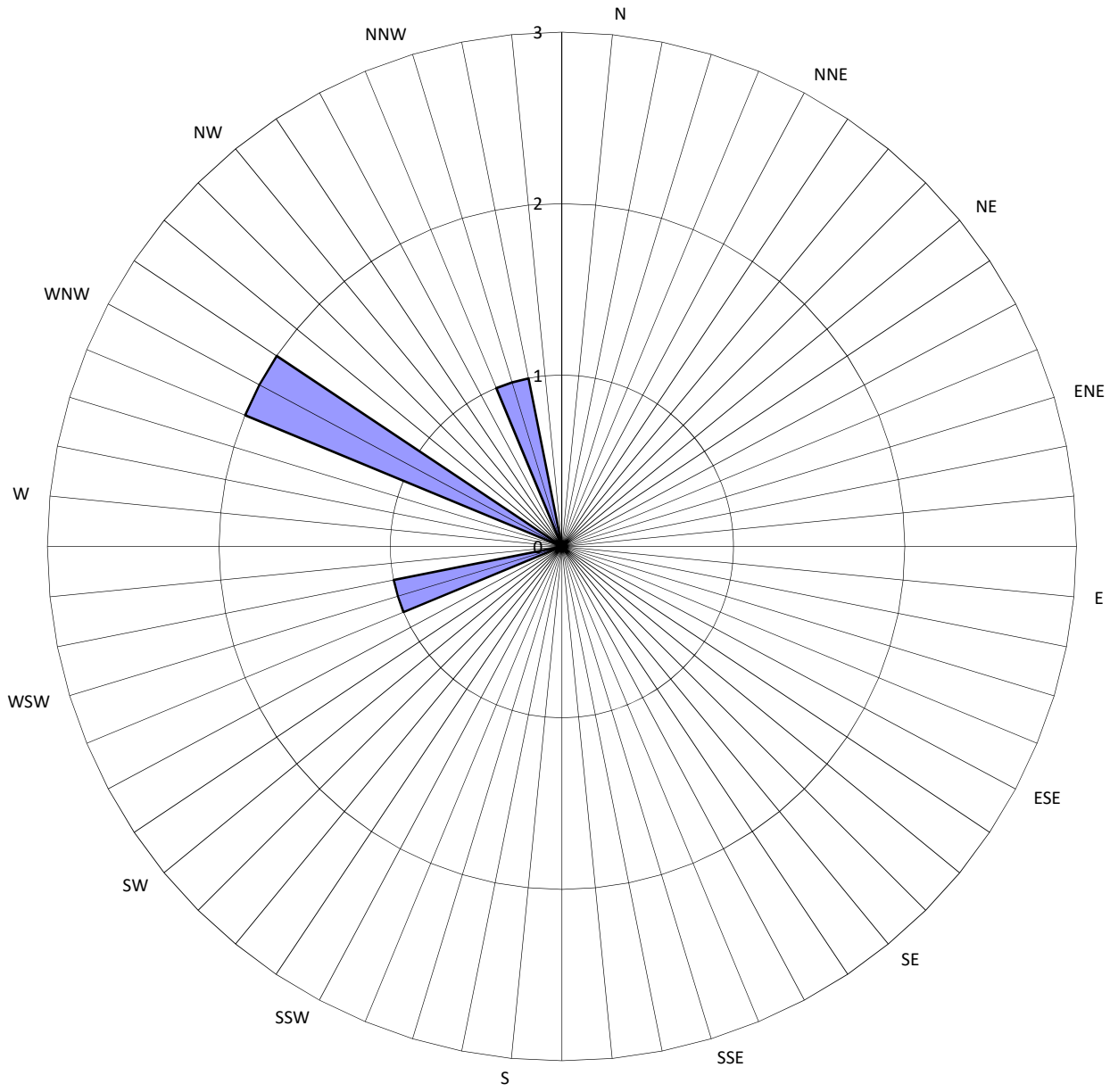
Groundwater Gradient and Flow Direction Data (Rose Diagram)

GROUNDWATER GRADIENT AND FLOW DIRECTION DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Monitoring Date	Groundwater Flow Direction	Groundwater Gradient (foot per foot)
May-13	West-Southwest	0.031
Aug-13	West-Northwest	0.035
Nov-13	West-Northwest	0.042
Feb-14	North-Northwest	0.012
		Average: 0.030

Notes:
Number of monitoring events = 2
- Data included in this table are from current and historical monitoring reports.

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA



Legend:
Each concentric gridline represents the number of monitoring events.
The diagram includes data from the Second Quarter 2013 through the First Quarter 2014.

Appendix E

Certified Laboratory Analytical Report and Lab Validation Memo

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



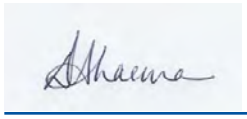
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-55806-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
1155 North 1st Street
Suite 201
San Jose, California 95112

Attn: Ms. Lia Holden



Authorized for release by:
3/7/2014 3:40:26 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-55806-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-55806-1

Comments
No additional comments.

Receipt
The samples were received on 2/28/2014 1:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperatures of the 2 coolers at receipt time were 1.3º C and 1.9º C.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Client Sample ID: WG-2344-MW1-20140227 — Lab Sample ID: 720-55806-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	56		53		ug/L	1		8015B	Total/NA

Client Sample ID: WG-2344-MW2-20140227 — Lab Sample ID: 720-55806-2

No Detections.

Client Sample ID: WG-2344-MW3-20140227 — Lab Sample ID: 720-55806-3

No Detections.

Client Sample ID: WG-2344-MW4-20140227 — Lab Sample ID: 720-55806-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	57		53		ug/L	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	110		110		ug/L	1		8015B	Total/NA

Client Sample ID: WG-2344-DUP1-20140227 — Lab Sample ID: 720-55806-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Client Sample ID: WG-2344-MW1-20140227
Date Collected: 02/27/14 10:45
Date Received: 02/28/14 13:25

Lab Sample ID: 720-55806-1
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Acenaphthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Acenaphthylene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Fluorene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Phenanthrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Benzo[a]anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Chrysene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Benzo[a]pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Benzo[b]fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Benzo[k]fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*29 - 120*	*03/05/14 11:24*	*03/05/14 17:38*	*1*
Terphenyl-d14	*69*		*45 - 120*	*03/05/14 11:24*	*03/05/14 17:38*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**56**		53		ug/L		03/05/14 12:49	03/05/14 23:11	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		03/05/14 12:49	03/05/14 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*88*		*23 - 156*	*03/05/14 12:49*	*03/05/14 23:11*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		03/05/14 12:53	03/05/14 23:11	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		03/05/14 12:53	03/05/14 23:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 5*	*03/05/14 12:53*	*03/05/14 23:11*	*1*
p-Terphenyl	*82*		*31 - 150*	*03/05/14 12:53*	*03/05/14 23:11*	*1*

Client Sample ID: WG-2344-MW2-20140227
Date Collected: 02/27/14 11:50
Date Received: 02/28/14 13:25

Lab Sample ID: 720-55806-2
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Acenaphthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Acenaphthylene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Fluorene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Phenanthrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Benzo[a]anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Chrysene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Benzo[a]pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Benzo[b]fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Benzo[k]fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*47*		*29 - 120*	*03/05/14 11:24*	*03/05/14 18:01*	*1*
Terphenyl-d14	*62*		*45 - 120*	*03/05/14 11:24*	*03/05/14 18:01*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		55		ug/L		03/05/14 12:49	03/05/14 23:40	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		03/05/14 12:49	03/05/14 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*87*		*23 - 156*	*03/05/14 12:49*	*03/05/14 23:40*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		55		ug/L		03/05/14 12:53	03/05/14 23:40	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		03/05/14 12:53	03/05/14 23:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.01*		*0 - 5*	*03/05/14 12:53*	*03/05/14 23:40*	*1*
p-Terphenyl	*74*		*31 - 150*	*03/05/14 12:53*	*03/05/14 23:40*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Client Sample ID: WG-2344-MW3-20140227
Date Collected: 02/27/14 11:20
Date Received: 02/28/14 13:25

Lab Sample ID: 720-55806-3
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Acenaphthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Acenaphthylene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Fluorene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Phenanthrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Benzo[a]anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Chrysene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Benzo[a]pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Benzo[b]fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Benzo[k]fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*29 - 120*	*03/05/14 11:24*	*03/05/14 18:25*	*1*
Terphenyl-d14	*67*		*45 - 120*	*03/05/14 11:24*	*03/05/14 18:25*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		03/05/14 12:49	03/06/14 00:09	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		03/05/14 12:49	03/06/14 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*99*		*23 - 156*	*03/05/14 12:49*	*03/06/14 00:09*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		03/05/14 12:53	03/06/14 00:09	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		03/05/14 12:53	03/06/14 00:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.01*		*0 - 5*	*03/05/14 12:53*	*03/06/14 00:09*	*1*
p-Terphenyl	*81*		*31 - 150*	*03/05/14 12:53*	*03/06/14 00:09*	*1*

Client Sample ID: WG-2344-MW4-20140227
Date Collected: 02/27/14 12:22
Date Received: 02/28/14 13:25

Lab Sample ID: 720-55806-4
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Acenaphthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Acenaphthylene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Fluorene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Phenanthrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Benzo[a]anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Chrysene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Benzo[a]pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Benzo[b]fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Benzo[k]fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Fluoranthene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Pyrene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		03/05/14 11:24	03/05/14 18:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*29 - 120*	*03/05/14 11:24*	*03/05/14 18:48*	*1*
Terphenyl-d14	*69*		*45 - 120*	*03/05/14 11:24*	*03/05/14 18:48*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**57**		53		ug/L		03/05/14 12:49	03/06/14 00:38	1
Motor Oil Range Organics [C24-C36]	**110**		110		ug/L		03/05/14 12:49	03/06/14 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*84*		*23 - 156*	*03/05/14 12:49*	*03/06/14 00:38*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		03/05/14 12:53	03/06/14 00:38	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		03/05/14 12:53	03/06/14 00:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 5*	*03/05/14 12:53*	*03/06/14 00:38*	*1*
p-Terphenyl	*76*		*31 - 150*	*03/05/14 12:53*	*03/06/14 00:38*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Client Sample ID: WG-2344-DUP1-20140227
Date Collected: 02/27/14 12:27
Date Received: 02/28/14 13:25

Lab Sample ID: 720-55806-5
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		03/05/14 12:53	03/06/14 01:07	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		03/05/14 12:53	03/06/14 01:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.008*		*0 - 5*	*03/05/14 12:53*	*03/06/14 01:07*	*1*
p-Terphenyl	*91*		*31 - 150*	*03/05/14 12:53*	*03/06/14 01:07*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-154634/1-A
Matrix: Water
Analysis Batch: 154635

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154634

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Acenaphthene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Acenaphthylene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Fluorene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Phenanthrene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Anthracene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Benzo[a]anthracene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Chrysene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Benzo[a]pyrene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Benzo[b]fluoranthene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Benzo[k]fluoranthene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Fluoranthene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Pyrene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		03/05/14 11:24	03/05/14 17:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*50*		*29 - 120*	*03/05/14 11:24*	*03/05/14 17:15*	*1*
Terphenyl-d14	*73*		*45 - 120*	*03/05/14 11:24*	*03/05/14 17:15*	*1*

Lab Sample ID: LCS 720-154634/2-A
Matrix: Water
Analysis Batch: 154635

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154634

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	4.79		ug/L		48	19 - 120
Acenaphthene	10.0	5.38		ug/L		54	24 - 120
Acenaphthylene	10.0	5.28		ug/L		53	24 - 120
Fluorene	10.0	5.49		ug/L		55	27 - 120
Phenanthrene	10.0	5.33		ug/L		53	31 - 120
Anthracene	10.0	5.84		ug/L		58	44 - 120
Benzo[a]anthracene	10.0	6.44		ug/L		64	48 - 120
Chrysene	10.0	6.21		ug/L		62	47 - 120
Benzo[a]pyrene	10.0	6.26		ug/L		63	43 - 120
Benzo[b]fluoranthene	10.0	6.41		ug/L		64	42 - 120
Benzo[k]fluoranthene	10.0	5.88		ug/L		59	42 - 120
Benzo[g,h,i]perylene	10.0	5.86		ug/L		59	35 - 120
Indeno[1,2,3-cd]pyrene	10.0	5.92		ug/L		59	36 - 120
Fluoranthene	10.0	6.54		ug/L		65	43 - 120
Pyrene	10.0	6.08		ug/L		61	47 - 120
Dibenz(a,h)anthracene	10.0	5.96		ug/L		60	33 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*49*		*29 - 120*
Terphenyl-d14	*68*		*45 - 120*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-154634/3-A
Matrix: Water
Analysis Batch: 154635

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154634

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			10.0	4.32		ug/L		43	19 - 120	10	35
Acenaphthene			10.0	4.64		ug/L		46	24 - 120	15	35
Acenaphthylene			10.0	4.63		ug/L		46	24 - 120	13	35
Fluorene			10.0	4.69		ug/L		47	27 - 120	16	35
Phenanthrene			10.0	4.71		ug/L		47	31 - 120	12	35
Anthracene			10.0	5.43		ug/L		54	44 - 120	7	35
Benzo[a]anthracene			10.0	5.80		ug/L		58	48 - 120	10	35
Chrysene			10.0	5.70		ug/L		57	47 - 120	8	35
Benzo[a]pyrene			10.0	5.74		ug/L		57	43 - 120	9	35
Benzo[b]fluoranthene			10.0	6.21		ug/L		62	42 - 120	3	35
Benzo[k]fluoranthene			10.0	5.28		ug/L		53	42 - 120	11	35
Benzo[g,h,i]perylene			10.0	5.35		ug/L		54	35 - 120	9	35
Indeno[1,2,3-cd]pyrene			10.0	5.29		ug/L		53	36 - 120	11	35
Fluoranthene			10.0	5.86		ug/L		59	43 - 120	11	35
Pyrene			10.0	5.47		ug/L		55	47 - 120	11	35
Dibenz(a,h)anthracene			10.0	5.43		ug/L		54	33 - 120	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*42*		*29 - 120*
Terphenyl-d14	*61*		*45 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-154641/1-A
Matrix: Water
Analysis Batch: 154608

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 154641

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		03/05/14 12:49	03/06/14 03:33	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		03/05/14 12:49	03/06/14 03:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*101*		*23 - 156*	*03/05/14 12:49*	*03/06/14 03:33*	*1*

Lab Sample ID: LCS 720-154641/2-A
Matrix: Water
Analysis Batch: 154608

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 154641

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1970		ug/L		79	34 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*120*		*23 - 156*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-154641/3-A
Matrix: Water
Analysis Batch: 154608

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 154641

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	2170		ug/L		87	34 - 115	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*125*		*23 - 156*

Lab Sample ID: MB 720-154642/1-A
Matrix: Water
Analysis Batch: 154609

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 154642

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		03/05/14 12:53	03/06/14 03:33	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		03/05/14 12:53	03/06/14 03:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.007*		*0 - 5*	*03/05/14 12:53*	*03/06/14 03:33*	*1*
p-Terphenyl	*85*		*31 - 150*	*03/05/14 12:53*	*03/06/14 03:33*	*1*

Lab Sample ID: LCS 720-154642/2-A
Matrix: Water
Analysis Batch: 154609

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 154642

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1370		ug/L		55	32 - 119		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*90*		*31 - 150*

Lab Sample ID: LCSD 720-154642/3-A
Matrix: Water
Analysis Batch: 154609

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 154642

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1580		ug/L		63	32 - 119	14	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*103*		*31 - 150*

GC/MS Semi VOA

Prep Batch: 154634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55806-1	WG-2344-MW1-20140227	Total/NA	Water	3510C	
720-55806-2	WG-2344-MW2-20140227	Total/NA	Water	3510C	
720-55806-3	WG-2344-MW3-20140227	Total/NA	Water	3510C	
720-55806-4	WG-2344-MW4-20140227	Total/NA	Water	3510C	
LCS 720-154634/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-154634/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-154634/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 154635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55806-1	WG-2344-MW1-20140227	Total/NA	Water	8270C SIM	154634
720-55806-2	WG-2344-MW2-20140227	Total/NA	Water	8270C SIM	154634
720-55806-3	WG-2344-MW3-20140227	Total/NA	Water	8270C SIM	154634
720-55806-4	WG-2344-MW4-20140227	Total/NA	Water	8270C SIM	154634
LCS 720-154634/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	154634
LCSD 720-154634/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	154634
MB 720-154634/1-A	Method Blank	Total/NA	Water	8270C SIM	154634

GC Semi VOA

Analysis Batch: 154608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55806-1	WG-2344-MW1-20140227	Total/NA	Water	8015B	154641
720-55806-2	WG-2344-MW2-20140227	Total/NA	Water	8015B	154641
720-55806-3	WG-2344-MW3-20140227	Total/NA	Water	8015B	154641
720-55806-4	WG-2344-MW4-20140227	Total/NA	Water	8015B	154641
LCS 720-154641/2-A	Lab Control Sample	Total/NA	Water	8015B	154641
LCSD 720-154641/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	154641
MB 720-154641/1-A	Method Blank	Total/NA	Water	8015B	154641

Analysis Batch: 154609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55806-1	WG-2344-MW1-20140227	Silica Gel Cleanup	Water	8015B	154642
720-55806-2	WG-2344-MW2-20140227	Silica Gel Cleanup	Water	8015B	154642
720-55806-3	WG-2344-MW3-20140227	Silica Gel Cleanup	Water	8015B	154642
720-55806-4	WG-2344-MW4-20140227	Silica Gel Cleanup	Water	8015B	154642
720-55806-5	WG-2344-DUP1-20140227	Silica Gel Cleanup	Water	8015B	154642
LCS 720-154642/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	154642
LCSD 720-154642/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	154642
MB 720-154642/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	154642

Prep Batch: 154641

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55806-1	WG-2344-MW1-20140227	Total/NA	Water	3510C	
720-55806-2	WG-2344-MW2-20140227	Total/NA	Water	3510C	
720-55806-3	WG-2344-MW3-20140227	Total/NA	Water	3510C	
720-55806-4	WG-2344-MW4-20140227	Total/NA	Water	3510C	
LCS 720-154641/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-154641/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-154641/1-A	Method Blank	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Prep Batch: 154642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-55806-1	WG-2344-MW1-20140227	Silica Gel Cleanup	Water	3510C SGC	
720-55806-2	WG-2344-MW2-20140227	Silica Gel Cleanup	Water	3510C SGC	
720-55806-3	WG-2344-MW3-20140227	Silica Gel Cleanup	Water	3510C SGC	
720-55806-4	WG-2344-MW4-20140227	Silica Gel Cleanup	Water	3510C SGC	
720-55806-5	WG-2344-DUP1-20140227	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-154642/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-154642/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-154642/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Client Sample ID: WG-2344-MW1-20140227

Lab Sample ID: 720-55806-1

Date Collected: 02/27/14 10:45
Matrix: Water
Date Received: 02/28/14 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			154634	03/05/14 11:24	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	154635	03/05/14 17:38	MQL	TAL PLS
Total/NA	Prep	3510C			154641	03/05/14 12:49	DFR	TAL PLS
Total/NA	Analysis	8015B		1	154608	03/05/14 23:11	JL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			154642	03/05/14 12:53	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	154609	03/05/14 23:11	DCH	TAL PLS

Client Sample ID: WG-2344-MW2-20140227

Lab Sample ID: 720-55806-2

Date Collected: 02/27/14 11:50
Matrix: Water
Date Received: 02/28/14 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			154634	03/05/14 11:24	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	154635	03/05/14 18:01	MQL	TAL PLS
Total/NA	Prep	3510C			154641	03/05/14 12:49	DFR	TAL PLS
Total/NA	Analysis	8015B		1	154608	03/05/14 23:40	JL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			154642	03/05/14 12:53	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	154609	03/05/14 23:40	DCH	TAL PLS

Client Sample ID: WG-2344-MW3-20140227

Lab Sample ID: 720-55806-3

Date Collected: 02/27/14 11:20
Matrix: Water
Date Received: 02/28/14 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			154634	03/05/14 11:24	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	154635	03/05/14 18:25	MQL	TAL PLS
Total/NA	Prep	3510C			154641	03/05/14 12:49	DFR	TAL PLS
Total/NA	Analysis	8015B		1	154608	03/06/14 00:09	JL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			154642	03/05/14 12:53	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	154609	03/06/14 00:09	DCH	TAL PLS

Client Sample ID: WG-2344-MW4-20140227

Lab Sample ID: 720-55806-4

Date Collected: 02/27/14 12:22
Matrix: Water
Date Received: 02/28/14 13:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			154634	03/05/14 11:24	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	154635	03/05/14 18:48	MQL	TAL PLS
Total/NA	Prep	3510C			154641	03/05/14 12:49	DFR	TAL PLS
Total/NA	Analysis	8015B		1	154608	03/06/14 00:38	JL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			154642	03/05/14 12:53	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	154609	03/06/14 00:38	DCH	TAL PLS

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Client Sample ID: WG-2344-DUP1-20140227
Date Collected: 02/27/14 12:27
Date Received: 02/28/14 13:25

Lab Sample ID: 720-55806-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3510C SGC			154642	03/05/14 12:53	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	154609	03/06/14 01:07	DCH	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-55806-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-55806-1	WG-2344-MW1-20140227	Water	02/27/14 10:45	02/28/14 13:25
720-55806-2	WG-2344-MW2-20140227	Water	02/27/14 11:50	02/28/14 13:25
720-55806-3	WG-2344-MW3-20140227	Water	02/27/14 11:20	02/28/14 13:25
720-55806-4	WG-2344-MW4-20140227	Water	02/27/14 12:22	02/28/14 13:25
720-55806-5	WG-2344-DUP1-20140227	Water	02/27/14 12:27	02/28/14 13:25

Test America- Pleasanton

152131

720-55806

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 1155 North 1st Street, Suite 201 San Jose, CA 95112	Santa, Rosa - 2 Fourth Street and 24 Sixth Street PEDD_2344-8-Rev0
Project Manager/Phone Number: Lia Holden / 408-606-4919 Sampler: Blaine Tech Services	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO & MORO (SW8015)	PAHs (8270C SIM)								Special Instructions
WG-2344-MW1-20140227	WG	Various	5	2/27/14 1045	Various	X	X								With and Without Silica Gel Clean-up
WG-2344-MW2-20140227	WG	Various	5	2/27/14 1150	Various	X	X								
WG-2344-MW3-20140227	WG	Various	5	2/27/14 1120	Various	X	X								
WG-2344-MW4-20140227	WG	Various	5	2/27/14 1222	Various	X	X								
WG-2344-DUP1-20140227	WG	Various	3	2/27/14 1227	Various	X									With Silica Gel only

720-55806 Chain of Custody

Relinquished By: Date/Time: 2/27/14 @ 1600	Received by: Date/Time: 2/27/14 @ 1600	Turnaround Time. (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time: 2/28/14 @ 1000 Sample Custody BTS	Received by: Date/Time: 02/28/14 @ 1000 (TAP)	
Relinquished By: Date/Time: 02/27/14@1325	Received in Lab by: Date/Time: 2-28-14 1325	Sample Integrity (Check) 1.9°c / 1.3°c Intact _____ On Ice: _____ Custody Seal: _____

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

3/7/2014

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-55806-1

Login Number: 55806

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CONESTOGA-ROVERS & ASSOCIATES

20818 44th Avenue West, Suite 190
Lynnwood, WA 98036
Telephone: (206) 914-3141
www.CRAworld.com

MEMORANDUM

TO:	Lia Holden	REF. NO.:	058324-2344
FROM:	Jeffrey Cloud/bjw/488-NF	DATE:	March 25, 2014
CC:	Jesse Orth, Julie Lidstone		

RE: Analytical Results and Reduced Validation of Report J55806
Quarterly Groundwater Sampling
Union Pacific Railroad (UPRR) – 2 Fourth Street and 34 Sixth Street
Santa Rosa, California
February 2014

1.0 Introduction

The following document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Groundwater Sampling at the 2 Fourth Street and 34 Sixth Street Site in Santa Rosa, California during February 2014. Samples were submitted to Test America, located in Pleasanton, California. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard Conestoga--Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS) and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the document entitled "United States Environmental Protection Agency (USEPA) Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008 subsequently referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in the methods. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (<6°C).

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3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for semi-volatile organic compound (SVOC) and diesel range organics (DRO)/motor oil range organics (ORO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction.

Each individual surrogate compound is expected to meet the laboratory (method) control limits with the exception of semi-volatile organic compound (SVOC) analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against the associated control limits. All surrogate recoveries met the above criteria.

5.0 Laboratory Control Sample (LCS) Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS/LCSD contained the compounds specified in the method. All LCS recoveries and RPDs were within the associated control limits, demonstrating acceptable analytical accuracy and precision.

6.0 Field QA/QC Samples

The field QA/QC consisted of one field duplicate sample set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 and 100 percent for water and soil samples, respectively. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criteria is one or two times the PQL value for water and soil samples, respectively.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7.0 Analyte Reporting

The laboratory did not report any detected concentrations below the laboratory's PQL/reporting limit (RL).

8.0 Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
UNION PACIFIC RAILROAD (UPRR) - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
FEBRUARY 2014

					Analysis/Parameters		
Sample Identification	***Location***	***Matrix***	***Collection Date (mm/dd/yyyy)***	***Collection Time (hr:min)***	***SW8015D***	***SW8270SIM***	***Comments***
WG-2344-MW1-20140227	MW1	Water	2/27/2014	10:45:00 AM	X	X	
WG-2344-MW2-20140227	MW2	Water	2/27/2014	11:50:00 AM	X	X	
WG-2344-MW3-20140227	MW3	Water	2/27/2014	11:20:00 AM	X	X	
WG-2344-MW4-20140227	MW4	Water	2/27/2014	12:22:00 PM	X	X	
WG-2344-DUP1-20140227	MW4	Water	2/27/2014	12:27:00 PM	X		FD(WG-2344-MW4-20140227)

Notes:

FD - Field Duplicate Sample of sample in parenthesis

TABLE 2

ANALYTICAL METHODS
QUARTERLY GROUNDWATER SAMPLING
UNION PACIFIC RAILROAD (UPRR) - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
FEBRUARY 2014

Parameter	*Method*	*Matrix*
Semi-Volatile Organic Compounds (SVOCs)	SW-846 8270C	Water
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	SW-846 8015B	Water

Notes:

Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARATERLY GROUNDWATER SAMPLING
UNION PACIFIC RAILROAD (UPRR) - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
FEBRUARY 2014

Sample Location:		*MW1*	*MW2*	*MW3*	*MW4*	*MW4*
Sample ID:		*WG-2344-MW1-20140227*	*WG-2344-MW2-20140227*	*WG-2344-MW3-20140227*	*WG-2344-MW4-20140227*	*WG-2344-DUP1-20140227*
Sample Date:		*2/27/2014*	*2/27/2014*	*2/27/2014*	*2/27/2014*	*2/27/2014*
						Duplicate
Parameters	***Units***					
Semi-volatile Organic Compounds						
Acenaphthene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Acenaphthylene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Anthracene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(a)anthracene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(a)pyrene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(b)fluoranthene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(g,h,i)perylene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(k)fluoranthene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Chrysene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Dibenz(a,h)anthracene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Fluoranthene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Fluorene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Indeno(1,2,3-cd)pyrene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Naphthalene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Phenanthrene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Pyrene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Petroleum Products						
Total Petroleum Hydrocarbons (C10-C28) DRO	µg/L	56	<55	<53	57	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	<53	<55	<53	<53	<53
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	µg/L	<110	<110	<110	110	-
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel	µg/L	<110	<110	<110	<110	<110

Notes:

DRO - Diesel Range Organics
- Not Analyzed

Second Quarter 2014 Quarterly Monitoring Report and Case Closure Request

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board
Case No. 1TSR196

Antea Group Project No. UPR8248
July 30, 2014

Prepared for:
Janice Goebel
California Water Quality Control Board
North Coast Region
5550 Skyline Boulevard, Suite A
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Inogen Environmental Alliance

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Second Quarter 2014 Quarterly Monitoring Report and Case Closure Request

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board
Case No. 1TSR196

1.0 INTRODUCTION

On behalf of Union Pacific Railroad (UPRR), Antea®Group has prepared this *Second Quarter 2014 Quarterly Monitoring Report and Case Closure Request* for the referenced site located at 2 Fourth Street and 34 Sixth Street in Santa Rosa, California (**Figure 1**). This report includes a summary of the data obtained from the second quarter 2014 groundwater monitoring event completed on June 25, 2014, as well as an evaluation of the site against the criteria established in the *California Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closure*, State Water Resources Control Board Resolution No. 2012-0016 (SB 2012-0016). This report has received a technical review by Ms. Lia Holden, California Professional Geologist #8584.

1.1 Site Description and Background

The site is currently owned by Sonoma Marin Area Rail Transit (SMART) and is used as an equipment and supply storage area for SMART construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the "3 West Third Street and 60 West Sixth Street Warehouses", to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties (**Figure 2**).

1.2 Site History

The site was historically used as a railroad freight depot and maintenance/fueling yard from the late 1800's through the 1960's. This site has been vacant and generally unused since the late 1960's. Consultants have conducted environmental investigations and remediation efforts at the site since 1987. Former operations at the site include the use of aboveground storage tanks (ASTs), underground storage tanks (USTs), a main railroad track system that occupied the eastern portion of the property, several associated railroad spurs and siding, a turntable, warehouses, and freight houses. A Sanborn Fire Insurance map dated 1885 indicates the Santa Rosa Woolen Mills was located in the northwestern portion of the site until approximately 1906 [EBA Engineering (EBA), 2009a]. The site's previous environmental case was closed in 2007, but was a case was reopened in 2009 following the discovery of an oil UST in 2008. **Appendix A** includes a summary of environmental investigations and remedial activities conducted at the site. **Figure 2** shows the site's historic borings and well locations.

1.3 Geologic and Hydrogeologic Setting

1.3.1 Regional Geology

The site is centrally located within the Santa Rosa Plain, which is part of the Coast Range Geomorphic Province of northern California. The Coast Range Geomorphic Province is characterized as a series of northwest trending elongated ridges and valleys that are a result of folding and faulting. The Santa Rosa Plain consists of alluvial fan deposits of Pleistocene and Holocene age. The alluvial fan deposits form a nearly continuous blanket over the Santa Rosa Plain and consist of poorly sorted coarse sand and gravel, moderately sorted fine sand and silt, and silty clay. The region has been mapped as having basement materials that underlie the alluvial fan deposits. The basement materials consist of marine sedimentary rocks of the Miocene Age Wilson Grove Formation. Portions of the Wilson Grove Formation are overlain by younger continental sedimentary rocks of the Pliocene-Pleistocene Age Glen Ellen Formation (EBA, 2008b).

1.3.2 Site Geology and Hydrogeology

The geology of the project site is characterized by shallow rocky fill or organic clay in the upper one to two feet below ground surface (bgs) that is underlain by sandy silt and clayey sediments containing varying amounts of angular to sub-rounded gravel. These finer-grained sediments extend to approximately 20 feet bgs, and are underlain by a laterally continuous sandy coarse-grained unit extending to a minimum of 26 feet bgs, which is the maximum depth explored at the project site to date (EBA, 2008b). Historical boring logs are included as **Appendix B;** cross sections prepared by Antea Group are presented in **Appendix C**.

The hydrogeology of the project site is likely controlled by gradational lenses of sediments separated by clayey layers. A thin, semi-continuous sandy unit located at an average depth of approximately 9-15 feet bgs overlays a similarly laterally extensive clayey bed. The more impervious clay units likely act as confining layers inhibiting the downward vertical migration of fluids. Based on this observation, the resulting perched groundwater in the upper permeable sand unit (Zone A) has been independently sampled from the deeper water-bearing zone present at a depth of approximately 20 to 25 feet bgs (EBA, 2008). However, as EBA previously noted, wells SRMW-7 and SRMW-8 were screened across both zones. The predominant groundwater flow direction is in a predominately westerly direction, with variations from southwest to northwest.

2.0 CURRENT GROUNDWATER MONITORING

2.1 Work Performed in the Second Quarter 2014

1. Antea Group submitted the *Quarterly Monitoring Report – First Quarter 2014* to the North Coast Regional Water Quality Control Board (NCRWQCB) on April 17, 2014.
2. Antea Group's subcontractor Blaine Tech Services, Inc. (Blaine Tech) conducted quarterly groundwater gauging and sampling activities on June 25, 2014.

2.2 Work Proposed for the Third Quarter 2014

1. Antea Group will submit the *Second Quarter 2014 Quarterly Monitoring Report and Case Closure Request* to the NCRWQCB (contained herein).
2. Pending regulatory approval of the Case Closure Request, Antea Group requests to discontinue quarterly groundwater monitoring at the site.

2.3 Current Project Status

Current phase of project:	Quarterly Groundwater Monitoring; Case Closure Evaluation
Lead agency for cleanup oversight:	North Coast Regional Water Quality Control Board (Case No. 1TSR196)
Monitoring well gauging and sampling schedule:	Quarterly: MW-1, MW-2, MW-3, and MW-4
Total number of monitoring wells (**Table 1**):	Onsite: 4 wells (MW-1, MW-2, MW-3, MW-4)
Range of well depths (total depth below ground surface, bgs):	18.5 to 20.0 feet bgs
Historical depth to water range, in feet below top of casing (BTOC):	Min: 7.78 (MW-4, 2/27/14) Max: 15.53 (MW-1, 11/20/13)
Historical groundwater elevation range (ft):	Min: 136.33 (MW-1, 11/20/13) Max: 144.19 (MW-4, 2/27/14)

2.4 Regulatory Correspondence

No correspondence was exchanged during the first quarter 2014.

2.5 Groundwater Monitoring

For this groundwater monitoring event, all four onsite monitoring wells were gauged, purged, and sampled by subcontractor Blaine Tech per standard sampling protocol. Copies of Blaine Tech's field data sheets are included in **Appendix D**. The recent gauging and sampling data are summarized below.

Well gauging and sampling date:	June 25, 2014
Wells gauged and sampled:	MW-1, MW-2, MW-3 and MW-4
Purge method:	Peristaltic pump
Sample collection method:	Dedicated equipment (tubing)
Groundwater parameters measured (**Appendix D; Table 2**):	Depth to water, temperature, pH, conductivity, oxidation-reduction potential (ORP), turbidity, and dissolved oxygen (DO)
Current depth to water range of wells (ft BTOC):	Min: 9.69 (MW-4) Max: 11.43 (MW-1)
Current groundwater elevation range of wells (ft):	Min: 140.43 (MW-1) Max: 142.28 (MW-4)
Groundwater flow direction and gradient:	Northwest with a hydraulic gradient of 0.012 feet/foot

2.5.1 Groundwater Flow Gradient and Directional Trends

Using the well gauging data from June 25, 2014 and the surveyed well casing elevations (**Table 1**), Antea Group calculated the groundwater table elevation at each monitoring well location (**Table 3**). These elevations were used to calculate and plot the groundwater flow direction and gradient across the site (**Figure 3**).

Based on the second quarter 2014 data, the groundwater flow direction at the site is to the northwest with a general hydraulic gradient of 0.012 feet/foot. The groundwater flow during the second quarter 2014 is similar to the four previous sampling events, but there appears to be localized variation in the groundwater elevation in the eastern portion of the site. In historic reports, groundwater elevation contours prepared with the site's former (larger) well network showed somewhat variable localized flow patterns across the site with an overall flow toward the west-southwest, which is more directly toward Santa Rosa Creek. **Appendix E** includes flow and gradient data from both monitoring events tabulated and plotted on a rose diagram.

2.5.2 Groundwater Quality Data and Contaminant Trends

Groundwater samples collected during the second quarter 2014 sampling event were submitted under chain of custody protocol to TestAmerica Laboratories, Inc. (TestAmerica), a state of California certified laboratory (California Certification No. 2496). The submitted groundwater samples were analyzed for the following:

- Diesel range organics (DRO) by Environmental Protection Agency (EPA) Test Method 8015 with and without silica gel cleanup,
- Motor oil range organics (MORO) by EPA Test Method 8015 with and without silica gel cleanup, and
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Test Method 8270C SIM.

The complete laboratory analytical report is included in **Appendix F**. Groundwater analytical results are presented in **Table 3** (current) and **Table 4** (historical); a groundwater concentration map is presented as **Figure 4**.

The laboratory reported three detections above the laboratory reporting limit (LRL). DRO was detected in monitoring wells MW-2 and MW-4 without silica gel cleanup at concentrations of 49 micrograms per liter (µg/L) and 340 µg/L, respectively. DRO with silica gel cleanup was only reported in MW-4 at a concentration of 70 µg/L. MORO was detected in monitoring well MW-4 at a concentration of 210 µg/L. MORO with silica gel cleanup was not reported above the LRL in any of the wells. As stated in the previous monitoring report, overall DRO and MORO detections may be attributed to heavily weathered residual hydrocarbons or naturally occurring carbon from organic material decomposition, and not indicative of site conditions as a result of a release. PAHs were not detected above the LRL in any of the groundwater samples during this sampling 2014 event.

2.5.3 Waste Disposal Summary

Well purge water generated during the second quarter 2014 sampling event was contained in a single Department of Transportation (DOT) approved 55-gallon drum and was temporarily stored at the site. Antea Group is currently

coordinating drum pickup and removal with subcontractor United Pumping Services, Inc. (UPS). Antea Group will include the fully executed manifest in the next quarterly monitoring report. The non-hazardous waste manifest from the fourth quarter 2013 sampling event, previously unavailable, is included as **Appendix G**.

2.5.4 Quality Assurance / Quality Control (QA/QC)

QA/QC measures included use of a field duplicate sample and a detailed QA/QC data validation check on the TestAmerica laboratory analytical results for the June 2014 sampling event performed by Conestoga-Rovers and Associates (CRA). The TestAmerica laboratory report and CRA validation memo is included as **Appendix F**. A summary of QA/QC information follows.

Duplicate (WG-2344-DUP1-250614) collected at parent sample MW-4:	Contaminant concentrations were not detected above the LRL for the duplicate sample, while the parent sample reported DRO with silica gel at 70 µg/L (See validation memo in **Appendix F**)
Laboratory QA/QC Performed:	Yes (memo provided by CRA)
Laboratory Data Qualifiers:	No data qualifiers were indicated in the laboratory report; although this lab report was revised to correct reported values of DRO and MRO for the duplicate sample.
Are the data valid for their intended purpose?	Yes, the data are valid

After review of the laboratory validation provided by CRA, Antea Group concludes that the laboratory data obtained during this groundwater sampling event are valid for their intended purpose.

3.0 LOW RISK CASE CLOSURE EVALUATION

3.1 General Site Criteria

This section reviews general criteria evaluated by Antea Group to determine if the site poses a low risk to human health and the environment.

3.1.1 Public Water System Availability

The site is located in the Sonoma County Water Agency (SCWA) water service area. The primary source of water for the SCWA is the Russian River via aqueducts and the secondary source is a collection of reservoirs/tanks located in higher elevations of Santa Rosa.

3.1.2 Unauthorized Release Consists Only of Petroleum Hydrocarbons, and has been stopped

According to EBA Engineering's (EBA) Phase I Environmental Site Assessment dated March 2008, the site is documented as a railroad freight depot and maintenance and fueling yard from the late 1800s up to the 1960s. In a Sanborn Fire Insurance Map dated 1885; the northwestern portion of the site is shown as Santa Rosa Woolen

Mills. This map shows a large structure with a 30,000-gallon above ground water tank. Apart from the Santa Rosa Woolen Mills, there is no indication of past use being anything other than railroad operations (EBA, 2008a).

During a 2008 geophysical survey, EBA discovered an undocumented 550-gallon UST and subsequently oversaw the evacuation of contents within the tank (EBA, 2008b). In November 2011 and under the supervision of Antea Group, UPS removed the 550-gallon UST. During the initial daylighting of this tank, UPS discovered an additional 500-gallon oil UST adjacent to the 550-gallon UST. UPS subsequently removed this tank. There is no other indication of a release occurring at the site for this particular case.

3.1.3 Free Product Removal

Approximately 500 gallons of oily water was pumped from the excavation pit and properly disposed. Non-aqueous phase liquid (NAPL) has not been reported in soil or groundwater since the 2011 UST removal event, including samples collected in 2012 from borings immediately surrounding the tank excavation area.

3.1.4 Site Conceptual Model (SCM)

In January 2003 Geomatrix prepared a SCM for the site prior to case closure in 2007. Antea Group has not completed a comprehensive site conceptual model (SCM) for this case; however, the data contained herein satisfies the criteria for a SCM. Additionally, supporting data and analyses used to develop this report, are contained in previous investigation reports submitted to NCRWQCB since the case was opened (refer to reports listed in **Appendix A**).

3.1.5 Secondary Source Removal

UPS excavated and disposed of approximately 213 tons of hydrocarbon-impacted soil during the November 2011 UST removal activities. Additionally, approximately 500 gallons of oily water was pumped from the excavation pit and properly disposed.

In July 2012, Antea Group oversaw UPS excavate contaminated soils in the area of former EBA boring SB-1. Approximately 758 tons of soil was excavated and transported offsite for disposal. UPS also pumped approximately 1,500 gallons of water from the base of this excavation and transported it offsite for disposal.

Antea Group believes that remedial efforts implemented at the site (both before the 2007 case closure and following the 2009 case opening) have effectively removed secondary source material to the extent practicable. For a list of additional secondary source removal activities with the previous case, refer to **Appendix A**.

3.1.6 MTBE in Soil and Groundwater

Both soil and groundwater were analyzed for MTBE during assessment and monitoring events for the site's previous environmental case in accordance with Health and Safety Code section 25296.15. Results of the soil and

groundwater testing were reported in the previous site assessment reports submitted to the NCRWQCB and the California State Water Resources Control Board (CRWQCB) GeoTracker database.

3.1.7 Nuisance Does Not Exist at the Site

A nuisance, as defined by Water Code Section 13050-13051 is defined by the following criteria:

1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property;
2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal;
3) Occurs during, or as a result of, the treatment or disposal of wastes;

Based on this definition, the site is not considered a nuisance.

3.2 Groundwater

This section reviews criteria specific to the risk to human health and the environment associated with contamination in groundwater. The SB 2012-0016 document only establishes groundwater criteria for MTBE and benzene concentrations. At the site, the primary COCs are DRO and MORO; SB 2012-0016 does not consider these components when evaluating risk to human health and the environment via the groundwater pathway. For the purpose of evaluating plume stability (required under SB 2012-0016), in the following sections, Antea Group will discuss DRO and MORO plumes in accordance with case closure guidelines.

3.2.1 Plume Stability

Antea Group evaluated plume stability in site wells (MW-1 through MW-4) based on time series graphs showing DRO and MORO concentrations over time. Time series graphs showing DRO and MORO concentrations over time in wells MW-1 through MW-4 indicate stable trends at low-level to non-detect concentrations (**Appendix H**). If a given analytical concentration was below the respective laboratory reporting limit, then half of that value was used for the graphs.

MW-3 has not reported DRO and MORO above laboratory reporting limits with and without silica gel cleanup. MW-1 and MW-2 have periodically reported minor concentrations of DRO without silica gel since groundwater sampling was initiated in May 2013 (**Table 3**); however, concentrations are below the San Francisco Bay Regional Water Quality Control Board's (SFBRWQCB) environmental screening levels (ESLs). Well MW-4, upgradient of the other site wells, has reported DRO and MORO without silica gel since August 2013 and November 2013, respectively. Using silica gel cleanup, DRO and MORO have not been reported above the laboratory reporting limits since sampling was initiated, with one exception. The second quarter 2014 sampling event shows DRO with silica gel at a concentration of 70 µg/L.

3.2.2 Plume Definition

Based on analytical data from site wells, the dissolved-phase DRO and MORO plumes are generally limited to MW-4 (**Table 3; Figure 4**).

3.2.3 Sensitive Receptors

A detailed discussion of sensitive receptors is included in **Appendix A**. As reported in 2003, there were approximately 50 groundwater wells within a half-mile of the site; of the 50 wells, only two were located in the general down-gradient direction of the site. These wells were reportedly used for irrigation and external purposes. Furthermore, the RWQCB indicated there is a water-producing well located west and in between the site and Santa Rosa Creek. This well was reportedly not in use in 2003 and will remain inactive (Geomatrix, 2003). Additionally, Santa Rosa Creek is located approximately 160 feet west (cross gradient) of the subject site (EBA, 2008b).

- Although Santa Rosa Creek and identified wells are located downgradient of the subject site, based on groundwater analytical concentrations since the case was reopened in 2009, they are not considered at risk from residual onsite DRO and MORO.

3.2.4 Benzene and MTBE Concentrations

Benzene and MTBE are not currently constituents of concern (COCs) at the site. During a 2008 investigation, benzene was not reported above LRLs in any grab groundwater samples collected (**Appendix I**). During this same investigation, MTBE was reported at a maximum concentration of 47.1 µg/L (SB-6-W; 10/6/ 2008), well below the SB 2012-0016 threshold of 1,000 µg/L.

At the time of the previous case closure in 2007, benzene and MTBE were only analyzed in wells SRMW-07 and SRMW-08 from 2001 to 2006. Benzene was not reported above LRLs in any groundwater samples collected at the site. The maximum concentration of MTBE in monitoring wells between 2001 and 2004 was reported at 23 µg/L (SRMW-08; 9/16/2004); SRMW-08 was an upgradient well. The historical maximum concentration of MTBE in the site's history was 120 µg/L reported in grab groundwater sample SRB-58 in September 2001. Maximum concentrations of MTBE did not exceeded the SB 2012-0016 threshold criteria of 1,000 µg/L for all historical groundwater sampling activities (**Appendix I**).

3.3 Petroleum Vapor Intrusion to Indoor Air

The site is currently being redeveloped into a SMART Rail Station which will include a rail station, and a mixture of residential and commercial buildings. Antea Group does not anticipate vapor intrusion to be a potential issue at the site due to the low to non-detectable levels of volatile organic compounds associated with the site. The site's COCs consist of heavy range hydrocarbons (DRO and MORO) and to a lesser extent, associated PAHs. Naphthalene is the only COC which has an ESL for potential groundwater to vapor intrusion. The maximum concentration of

naphthalene reported in the current monitoring network was 1.2 ug/L which is below the ESL of 160 ug/L, hence there does not appear to be a potential threat of vapor intrusion due to current dissolved phase analyte concentrations.

3.4 Direct Contact and Outdoor Air Exposure

This section reviews criteria associated with direct contact and outdoor air exposure. Direct contact and outdoor air exposure is influenced by contamination found in soils from 0 to 10 feet bgs, taking into account benzene, ethylbenzene, naphthalene, and PAHs (if historical waste-oil or Bunker C fuel were released at the site). The threshold values referenced are included as an excerpt from the SB 2012-0016 *Technical Justification for Soil Screening Levels for Direct Contact and Outdoor Air Exposure Pathways* below:

TABLE 1†

Chemical	Residential		Commercial/Industrial		Utility Worker
	0' - 5' bgs mg/kg	Volatilization to outdoor air (5' - 10' bgs) mg/kg	0' - 5' bgs mg/kg	Volatilization to outdoor air (5' - 10' bgs) mg/kg	0' - 10' bgs mg/kg
Benzene	1.9	2.8	8.2	12	14
Ethylbenzene	21	32	89	134	314
Naphthalene	9.7	9.7	45	45	219
PAH[19]*	0.063	Not applicable	0.68	Not applicable	4.5

*Sampling/analysis for PAH is only necessary where soil was affected by either waste oil or Bunker C fuel.

†Area of impacted soil where a par. cular exposure occurs is 25 x 25 meters (~82' x 82') or less.

Neither benzene nor ethylbenzene are COCs based on historical soil concentrations associated with the previous case; therefore they were removed from the sampling analysis suite when the case reopened. The maximum concentration of naphthalene was reported at 82.3 milligrams per kilogram at a depth of 7.5 feet bgs in 2008 (SB-1A). While this concentration exceeds the commercial/industrial threshold values, the area at and around SB-1A was excavated in 2012; subsequent confirmation sampling from the 2012 excavation showed no reported naphthalene concentrations. Furthermore, soil sampling events occurring in 2011, 2012, and 2013 do not indicate naphthalene above the laboratory reporting limits for any samples collected.

While there were low level PAH analytical results reported in soil samples collected in 2011, 2012, and 2013, no samples in the upper 10 feet of the site contained PAH concentrations which collectively had a benzo(a)pyrene toxicity equivalent (BaPE) exceeding the residential value of 0.063 mg/kg. Only one sample collected by EBA in 2008 exceeded the residential BaPE (SB-28@2'; BaPE was 0.36 mg/kg), but was below the commercial/industrial value. The soil sample from SB-28@5' showed no PAH detections. Based on the above criteria, shallow soil contamination appears to be limited in extent and does not appear to pose a significant threat to human health or the environment.

Table 5 summarizes all historical soil analytical data going back to 2011. Prior to that, historical soil data is included in **Appendix J**.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Upon evaluating the site against SB 2012-0016 criteria, Antea Group concludes the following:

- The primary sources have been removed and secondary source material has been addressed to the extent practicable.
- The contaminant plume is stable to decreasing and limited in extent to MW-4.
- There are no sensitive receptors that appear to be affected by or at risk from the site contaminant plume based on recent analytical data, definition of the plume and limited means of exposure.
- Benzene and MTBE are not COCs at the site; DRO and MORO are the only COCs at the site. DRO and MORO concentrations (with silica gel cleanup) have not exceeded the ESLs since groundwater monitoring and sampling was initiated at wells MW-1 through MW-4.
- There does not appear to be a threat to vapor intrusion from the site's current dissolved phase hydrocarbon and PAH plume.
- Shallow soil samples (0 to 10 feet bgs) collected since case closure are below the SB 2012-0016 criteria for a commercial/industrial site. With the exception of one isolated sample (SB-28@2'), shallow soil collected since case closure also meets the residential criteria (**Section 3.4**).

Based on the evaluation against SB 2012-0016 criteria, Antea Group does not consider the contaminant release associated with the subject site to be a risk to human health or the environment. Antea Group recommends the site be closed and no further action required. Additionally, Antea Group requests to discontinue groundwater monitoring and sampling while the agency reviews the case for closure.

5.0 LIMITATIONS

The findings contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc. does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

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Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



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Senior Project Manager
California Registered Professional Geologist No. 8584
Antea Group

cc: GeoTracker (upload)

6.0 REFERENCES

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Figures

Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3 Groundwater Elevation Contour Map – June 25, 2014
Figure 4 Groundwater Concentration Map – June 25, 2014





North

0 1000 2000 FT

SCALE

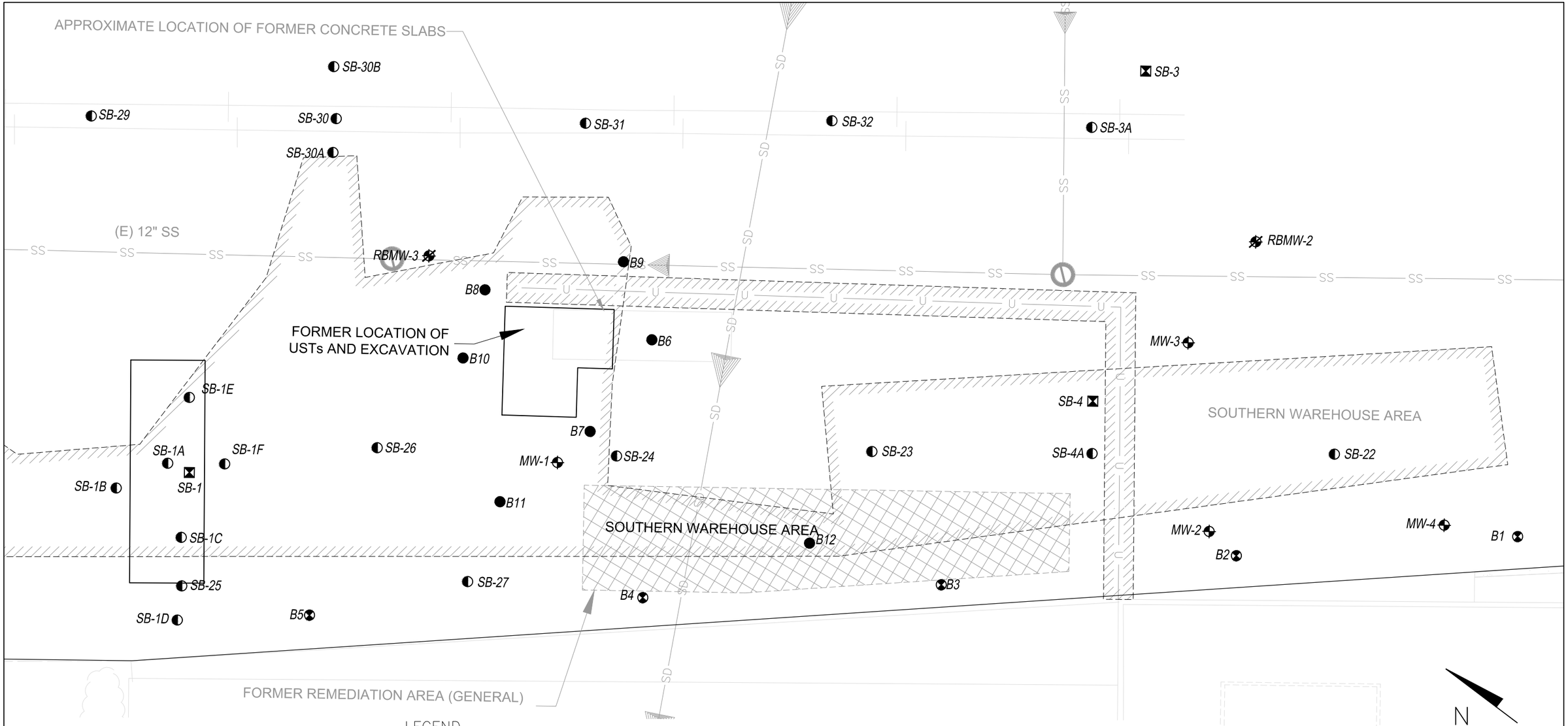
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup



LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- MONITORING WELL
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DS	JH
DATE	REVIEWED BY	FILE NAME
3/27/14	LH	UPR8248-Site

antea group

APPROXIMATE LOCATION OF FORMER CONCRETE SLABS

SB-30B

SB-29

SB-30

SB-31

SB-32

SB-3

SB-3A

SB-30A

(E) 12" SS

RBMW-3

RBMW-2

B9

B8

B6

FORMER LOCATION OF USTs AND EXCAVATION

B10

SB-1E

140.5

141.0

141.5

142.0

(142.02)

MW-3

SB-4

SOUTHERN WAREHOUSE AREA

B7

SB-1A

SB-1F

SB-26

MW-1

(140.43)

SB-24

SB-23

0.012 ft/ft

SB-4A

SB-22

SB-1B

SB-1

B11

SB-1C

SOUTHERN WAREHOUSE AREA

B12

MW-2

(141.99)

MW-4

(142.28)

B1

B2

SB-25

SB-27

B4

B3

SB-1D

B5

FORMER REMEDIATION AREA (GENERAL)

GROUNDWATER

(142.28) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

142.0 GROUNDWATER ELEVATION CONTOUR LINE (ft/msl)

0.012 ft/ft GENERAL DIRECTION OF GROUNDWATER FLOW AND HYDRAULIC GRADIENT (ft/ft)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- MONITORING WELL
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
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- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP
JUNE 25, 2014
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DK	JH
DATE	REVIEWED BY	FILE NAME
7/16/14	LH	UPR8248-Site

anteagroup

APPROXIMATE LOCATION OF FORMER CONCRETE SLABS

SB-30B

SB-29

SB-30

SB-31

SB-32

SB-3

SB-3A

SB-30A

(E) 12" SS

RBMW-3

B9

B8

FORMER LOCATION OF USTs AND EXCAVATION

B10

B6

B7

MW-1

SB-24

SB-1E

SB-1A

SB-1F

SB-26

SB-1B

SB-1

B11

SB-1C

SB-25

SB-27

SB-1D

B5

SOUTHERN WAREHOUSE AREA

B12

B4

B3

SB-4

SB-4A

SB-23

SOUTHERN WAREHOUSE AREA

SB-22

RBMW-2

MW-3

MW-2

B2

MW-4

B1

FORMER REMEDIATION AREA (GENERAL)

MW-1	DRO	DRO(SG)	MORO	MORO(SG)
6/25/14	<48	<48	<97	<97

MW-3	DRO	DRO(SG)	MORO	MORO(SG)
6/25/14	<50	<50	<99	<99

MW-2	DRO	DRO(SG)	MORO	MORO(SG)
6/25/14	49	<49	<97	<97

MW-4	DRO	DRO(SG)	MORO	MORO(SG)
6/25/14	340	70	210	<99

GROUNDWATER

NOTES:
DRO = DIESEL RANGE ORGANICS
MORO = MOTOR OIL RANGE ORGANICS
SG = SILICA GEL
< = LESS THAN LABORATORY INDICATED REPORTING LIMITS

CONCENTRATIONS N MICROGRAMS PER LITER (µg/L).

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
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- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

FIGURE 4
GROUNDWATER CONCENTRATION MAP JUNE 25, 2014

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DK	JH
DATE	REVIEWED BY	FILE NAME
7/16/14	LH	UPR8248-Site

antea group

Tables

Table 1 Soil Boring and Monitoring Well Construction Details
Table 2 Field Parameter Data
Table 3 Current Groundwater Gauging and Analytical Data
Table 4 Historical Groundwater Gauging and Analytical Data
Table 5 Historical Soil Analytical Data

TABLE 1
SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Updated 10/2/2013

Well ID	Well/Boring Completion Date	TOC Elevation[1] (ft)	Well/Boring Depth (ft bgs)	Well Casing Diameter (in)	Well Casing Material	Well Screen Slot Size (in)	Well Screen Interval (ft bgs)	Cement Grout Seal Interval (ft bgs)	Bentonite Seal Interval (ft bgs)	Filter Pack Interval (ft bgs)	Comments
Soil Borings											
B1	Apr-12	NA	20.0	NA	PVC	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B2	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B3	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B4	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B5	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B6	Apr-12	NA	20.2	NA	NA	NA	NA to NA	NA to 20.2	NA to NA	NA to NA	COT/UVOST Boring
B7	Apr-12	NA	22.1	NA	NA	NA	NA to NA	NA to 22.1	NA to NA	NA to NA	COT/UVOST Boring
B8	Apr-12	NA	22.3	NA	NA	NA	NA to NA	NA to 22.3	NA to NA	NA to NA	COT/UVOST Boring
B9	Apr-12	NA	23.2	NA	NA	NA	NA to NA	NA to 23.2	NA to NA	NA to NA	COT/UVOST Boring
B10	Apr-12	NA	22.1	NA	NA	NA	NA to NA	NA to 22.1	NA to NA	NA to NA	COT/UVOST Boring
B11	Apr-12	NA	20.2	NA	NA	NA	NA to NA	NA to 20.2	NA to NA	NA to NA	COT/UVOST Boring
B12	Apr-12	NA	20.3	NA	NA	NA	NA to NA	NA to 20.3	NA to NA	NA to NA	COT/UVOST Boring
Groundwater Monitoring Wells											
MW-1	May-13	151.86	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-2	May-13	152.79	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-3	May-13	153.44	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	
MW-4	May-13	151.97	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	

Notes:

ft = feet

in = inches

TOC = Top of Casing

bgs = below ground surface

--- = information not available

B = Boring

MW = Monitoring Well

[1] = TOC Elevations were surveyed to the North American Vertical Datum of 1988 (NAVD 88).

NA - Not Applicable

CPT = Cone Penetration Test

UVOST = Ultra-Violet Optical Screening Tool

TABLE 2
FIELD PARAMETER DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation (ft amsl)	Depth to Water (ft bgs)	Groundwater Elevation (ft amsl)	Field Parameters						
						Temperature, ambient (°C)	Temperature, sample (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	Oxidation reduction potential (mV)	pH	Conductivity (uS/cm)
MW1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	20	18.5	54	3.03	131.9	6.6	487
	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	25	18.1	10	1.11	59	6.49	555
	WG-2344-MW1-201113	11/20/2013	151.86	15.53	136.33	15	13.6	17	1.18	213.9	6.66	673
	WG-2344-MW1-20140227	02/27/2014	151.86	9.50	142.36	15	16.73	8	0.90	70.1	6.70	397
	WG-2344-MW1-250614	06/25/2014	151.86	11.43	140.43	15	18.9	10	0.93	74	6.72	478
MW2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	20	17.1	8	0.58	85.2	6.6	386
	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	25	17.6	7	0.4	47.5	6.83	462
	WG-2344-MW2-201113	11/20/2013	152.79	11.05	141.74	18	14.3	10	1.02	167.4	6.62	385.1
	WG-2344-MW2-20140227	02/27/2014	152.79	9.73	143.06	15	16.45	8	1.31	60.1	6.60	200
	WG-2344-MW2-250614	06/25/2014	152.79	10.80	141.99	15	16.67	8	1.33	60	6.64	207
MW3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	20	18.9	5	0.18	44	6.7	462
	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	25	18.8	8	0.81	44.1	6.81	547
	WG-2344-MW3-201113	11/20/2013	153.44	11.92	141.52	18.3	13.8	14	1.06	179.7	6.7	580.1
	WG-2344-MW3-20140227	02/27/2014	153.44	10.95	142.49	15	18.50	7	0.59	77.5	6.69	425
	WG-2344-MW3-250614	06/25/2014	153.44	11.42	142.02	15	19.08	6	0.6	77	6.71	425
MW4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	20	16.5	10	0.41	60.5	7	511
	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	25	17.1	9	0.3	-68.3	7	409
	WG-2344-MW4-201113	11/20/2013	151.97	10.48	141.49	18	12.4	11	1.1	91.8	7.02	501.9
	WG-2344-MW4-20140227	02/27/2014	151.97	7.78	144.19	15	16.00	7	0.57	85.6	6.67	572
	WG-2344-MW4-250614	06/25/2014	151.97	9.69	142.28	15	16.93	7	0.65	83	6.68	574

Notes:
NTU = Nephelometric Turbidity Unit
uS/cm = microsiemens per centimeter
mg/l = milligrams per liter
mV = millivolts
°C = Degrees Celsius
ft= feet
amsl= above mean sea level
bgs = below ground surface

TABLE 3
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	Petroleum Compounds[1]				PAHs[2]															
						DRO (µg/L)	DRO (Silica Gel) (µg/L)	MORO (µg/L)	MORO (Silica Gel) (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno(1,2,3-cd) pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
MW1	WG-2344-MW1-250614	06/25/2014	151.86	11.43	140.43	< 48	< 48	< 97	< 97	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095
MW2	WG-2344-MW2-250614	06/25/2014	152.79	10.80	141.99	**49**	< 49	< 97	< 97	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
MW3	WG-2344-MW3-250614	06/25/2014	153.44	11.42	142.02	< 50	< 50	< 99	< 99	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
MW4	WG-2344-MW4-250614	06/25/2014	151.97	9.69	142.28	**340**	**70**	**210**	< 99	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098
DUP-1	WG-2344-DUP1-250614	06/25/2014	--	--	--	--	<50	--	<100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels						100	100	100	100	20	30	0.73	0.027	0.014	0.056	0.10	0.056	0.35	0.016	8.0	3.9	0.056	6.2	4.6	2.0

Notes:

µg/L = micrograms per liter

NA = Not Applicable

< Analyte not detected at the laboratory indicated reporting limit

Bolded Value = Indicates result of analysis is above the laboratory reporting limit

-- = Not Analyzed

a. DUP-1 collected from MW-4.

Analyte Definitions:

DRO - Diesel Range Organics, carbon range C_{10} - C_{28}

MORO = Motor Oil Range Organics, carbon range C_{24} - C_{36}

SGC = Silica Gel Cleanup

PAHs = Polycylic Aromatic Hydrocarbons

Analytical Notes:

[1] - Analyzed by Environmental Protection Agency (EPA) Method 8015B

[2] - Analyzed by EPA Method 8270C SIM

TABLE 4
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	Petroleum Compounds[1]				PAHs[2]														
						DRO (µg/L)	DRO (Silica Gel) (µg/L)	MORO (µg/L)	MORO (Silica Gel) (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h)anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno(1,2,3-cd)pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
MW1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	<55	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW1-201113	11/20/2013	151.86	15.53	136.33	<50	<51	<99	<100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	WG-2344-MW1-20140227	02/27/2014	151.86	9.50	142.36	**56**	< 53	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW1-250614	06/25/2014	151.86	11.43	140.43	**< 48**	< 48	< 97	< 97	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095	< 0.095
MW2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	<54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-201113	11/20/2013	152.79	11.05	141.74	**68**	<51	**140**	<100	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-20140227	02/27/2014	152.79	9.73	143.06	< 55	< 55	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-250614	06/25/2014	152.79	10.80	141.99	**49**	< 49	< 97	< 97	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
MW3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	<54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW3-201113	11/20/2013	153.44	11.92	141.52	<51	<50	<100	<99	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	WG-2344-MW3-20140227	02/27/2014	153.44	10.95	142.49	< 53	< 53	< 110	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW3-250614	06/25/2014	153.44	11.42	142.02	< 50	< 50	< 99	< 99	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
MW4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	**150**	< 110	< 110	< 210	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-201113	11/20/2013	151.97	10.48	141.49	**210**	<52	**110**	<100	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-20140227	02/27/2014	151.97	7.78	144.19	**57**	< 53	**110**	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-250614	06/25/2014	151.97	9.69	142.28	**340**	**70**	**210**	< 99	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098	< 0.098
Grab Groundwater Samples																								
B1	W-2344-B1-042312	04/23/2012	--	--	--	--	**5600**	--	**4700**	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	**1.2**	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	**1.7**	< 0.60	**2.7**
B2	W-2344-B2-042312	04/23/2012	--	--	--	--	**110000**	--	**94000**	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	**1.0**	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	< 0.62	**1.4**	< 0.62	**2.5**
B3	W-2344-B3-042312	04/23/2012	--	--	--	--	**2000**	--	**1900**	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
B4	W-2344-B4-042312	04/23/2012	--	--	--	--	**32000**	--	< 1100	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	**0.36**	< 0.12	**0.38**
B5	W-2344-B5-042312	04/23/2012	--	--	--	--	< 56	--	< 110	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
B6B	W-2344-B6B-042412	04/24/2012	--	--	--	--	< 59	--	< 120	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
B7B	W-2344-B7B-042412	04/24/2012	--	--	--	--	< 62	--	< 120	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
B8A	W-2344-B8A-042512	04/25/2012	--	--	--	--	< 62	--	< 120	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
B8B	W-2344-B8B-042412	04/24/2012	--	--	--	--	< 62	--	< 120	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
B9B	W-2344-B9B-042512	04/25/2012	--	--	--	--	< 61	--	< 120	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
B10A	W-2344-B10A-042512	04/25/2012	--	--	--	--	< 58	--	< 120	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
B10B	W-2344-B10B-042512	04/25/2012	--	--	--	--	< 62	--	< 120	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
B11B	W-2344-B11B-042512	04/25/2012	--	--	--	--	< 62	--	< 120	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
B12A	W-2344-B12A-042512	04/25/2012	--	--	--	--	< 57	--	< 110	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12	< 0.12
B12B	W-2344-B12B-042512	04/25/2012	--	--	--	--	< 61	--	< 120	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13	< 0.13
San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels						100	100	100	100	20	30	0.73	0.027	0.014	0.056	0.10	0.056	0.35	0.016	8.0	3.9	0.056	6.2	4.6	2.0

Notes:

ug/L micrograms per liter
< Analyte not detected at the laboratory indicated reporting limit
Bolded Value Indicates result of analysis is above the laboratory reporting limit
-- Not Analyzed
B12"A" - "A" indicates that the water sample was collected from shallow/perched water zone
B12"B" - "B" indicates that the water sample was collected from the deep water zone

Analyte Definitions:

DRO - Diesel Range Organics, carbon range C_{10} - C_{28}
MORO - Motor Oil Range Organics, carbon range C_{24} - C_{36}
SGC - Silica Gel Cleanup
PAHs - Polycyclic Aromatic Hydrocarbons

Analytical Notes

1 - Analyzed by Environmental Protection Agency (EPA) Method 8015B
2 - Analyzed by EPA Method 8270C SIM

Table 5
Historical Soil Analytical Data
Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

Field Point	Sample Name	Sample Date	Sample Depth (feet bgs)	MORO[1] (mg/kg)	DRO[1] (mg/Kg)	GRO[2] (mg/Kg)	VOCs[2] (mg/kg)	PAHs[3] (mg/kg)	Metals[4] (mg/kg)
Excavation Samples									
T1N	SO-2344-T1N(5)-021111	11/2/2011	5.0	**180**	**300**	<0.36	<LRLs	<LRLs	**Chromium (98), Nickel (140), Lead 6.3), Zinc (180)**
T1S	SO-2344-T1S(5.5)-021111	11/2/2011	5.5	<50	<1.0	<0.28	<LRLs	<LRLs	**Chromium (110), Nickel (150), Lead (7.0), Zinc (74)**
T2N	SO-2344-T2N(5)-021111	11/2/2011	5.0	**1600**	**170**	<0.26	<LRLs	<LRLs	**Chromium (90), Nickel (130), Lead (7.7), Zinc (52)**
T2S	SO-2344-T2S(5.5)-021111	11/2/2011	5.5	**85**	**76**	<0.24	<LRLs	<LRLs	**Chromium (92), Nickel (140), Lead (7.1), Zinc (55)**
NW	SO-2344-NW(5)-021111	11/2/2011	5.0	**170**	**250**	<0.25	<LRLs	<LRLs	**Chromium (91), Nickel (140), Lead (6.3), Zinc (57)**
WW	SO-2344-WW(5)-021111	11/2/2011	5.0	**630**	**31**	<0.28	<LRLs	<LRLs	**Chromium (80), Nickel (140), Lead (5.3), Zinc (47)**
EW	SO-2344-EW(5)-021111	11/2/2011	5.0	<49	<0.99	<0.26	<LRLs	<LRLs	**Chromium (88), Nickel (140), Lead (5.4), Zinc (54)**
SW	SO-2344-SW(5.5)-021111	11/2/2011	5.5	<50	<1.0	<0.26	<LRLs	<LRLs	**Chromium (87), Nickel (140), Lead (6.8), Zinc (64)**
NWA	SO-2344-NWA(8)-031111	11/3/2011	8.0	<50	**2.9**	<0.26	<LRLs	<LRLs	**Barium (180), Vanadium (54), Arsenic (5.4), Copper (28), Cobalt (18), Chromium (85), Nickel (150), Lead (19), Zinc (53), Mercury (0.061)**
NWB	SO-2344-NWB(15)-031111	11/3/2011	15.0	<500	**560**	<0.36	<LRLs	**Chrysene (0.023), Fluorene (0.0054), Phenanthrene(0.019), and Pyrene (0.021)**	**Barium (190), Vanadium (56), Arsenic (6.0), Copper (32), Cobalt (20), Chromium (93), Nickel (150), Lead (14), Zinc (56), Mercury (0.070)**
WWA	SO-2344-WWA(7)-031111	11/3/2011	7.0	<49	<0.99	<0.28	<LRLs	<LRLs	**Barium (170), Vanadium (59), Arsenic (6.2), Copper (28), Cobalt (18), Chromium (89), Nickel (140), Lead (5.8), Zinc (50), Mercury (0.051)**
WWB	SO-2344-WWB(15)-031111	11/3/2011	15.0	<50	<1.0	<0.25	<LRLs	**Napthalene (0.0052)**	**Barium (140), Vanadium (48), Arsenic (4.0), Copper (20), Cobalt (12), Chromium (100), Nickel (100), Lead (6.3), Zinc (44), Mercury (0.038)**
EWA	SO-2344-EWA(7)-031111	11/3/2011	7.0	<49	**1.0**	<0.25	<LRLs	<LRLs	**Barium (170), Vanadium (58), Arsenic (5.3), Copper (28), Cobalt (18), Chromium (110), Nickel (150), Lead (6.6), Zinc (52), Mercury (0.064)**
EWB	SO-2344-EWB(15)-031111	11/3/2011	15.0	<50	**35**	<0.26	<LRLs	<LRLs	**Barium (200), Vanadium (44), Arsenic (4.0), Copper (23), Cobalt (29), Chromium (74), Nickel (150), Lead (6.3), Zinc (43), Mercury (0.053)**
SWA	SO-2344-SWA(7)-031111	11/3/2011	7.0	<49	**3.7**	<0.25	<LRLs	<LRLs	**Barium (190), Vanadium (62), Arsenic (5.9), Copper (32), Cobalt (22), Chromium (98), Nickel (150), Lead (12), Zinc (63), Mercury (0.089)**
SWB	SO-2344-SWB(15)-031111	11/3/2011	15.0	<50	**72**	<0.22	**Tetrachloroethene (0.0059)**	**Anthracene (0.014), Chrysene (0.012), Phenanthrene (0.023), and Pyrene (0.0073)**	**Barium (160), Vanadium (37), Copper (21), Cobalt (8.5), Chromium (84), Nickel (91), Lead (5.2), Zinc (39), Mercury (0.032)**
Site Assessment Soil Samples									
B1-5'	SO-2344-B1-5'-042312	4/23/2012	5.0	**51**	**15**	--	--	**Benzo[b]fluoranthene (0.035), Fluoranthene (0.027)**	--
B1-10'	SO-2344-B1-10'-042312	4/23/2012	10.0	**87**	**25**	--	--	<LRLs	--
B1-16'	SO-2344-B1-16'-042312	4/23/2012	16.0	<50	**49**	--	--	<LRLs	--
B2--5'	SO-2344-B2-5'-042312	4/23/2012	5.0	<50	<1.0	--	--	<LRLs	--
B2-11'	SO-2344-B2-11'-042312	4/23/2012	11.0	**610**	**240**	--	--	<LRLs	--
B2-14'	SO-2344-B2-14'-042312	4/23/2012	14.0	<49	<0.98	--	--	<LRLs	--
B3-5'	SO-2344-B3-5'-042312	4/23/2012	5.0	<50	<1.0	--	--	<LRLs	--
B3-12'	SO-2344-B3-12'-042312	4/23/2012	12.0	<50	<1.0	--	--	<LRLs	--
B3-15.5'	SO-2344-B3-15.5'-042312	4/23/2012	15.5	<50	<1.0	--	--	<LRLs	--
B4-5'	SO-2344-B4-5'-042312	4/23/2012	5.0	**220**	**77**	--	--	<LRLs	--
B4-12'	SO-2344-B4-12'-042312	4/23/2012	12.0	<500	**810**	--	--	**Napthalene (0.02) and Pyrene (0.017)**	--
B4-16'	SO-2344-B4-16'-042312	4/23/2012	16.0	<50	<0.99	--	--	<LRLs	--
B5-5'	SO-2344-B5-5'-042312	4/23/2012	5.0	<49	<0.99	--	--	<LRLs	--
B5-10'	SO-2344-B5-10'-042312	4/23/2012	10.0	<50	<1.0	--	--	**Benzo[b]fluoranthene (0.0052)**	--
B5-16'	SO-2344-B5-16'-042312	4/23/2012	16.0	<50	<1.0	--	--	<LRLs	--
2012 Excavation Soil Samples									
BASE 1	SO-2344-BASE1-100712	7/10/2012	13.0	**63**	**40**	--	--	<LRLs	--
BASE 2	SO-2344-BASE2-100712	7/10/2012	13.0	**180**	**170**	--	--	**Pyrene (0.0082)**	--
BASE 4	SO-2344-BASE4-110712	7/11/2012	13.0	<50	<0.99	--	--	<LRLs	--
ESW1	SO-2344-ESW1-110712	7/11/2012	6.5	<49	**20**	--	--	<LRLs	--
ESW2	SO-2344-ESW2-110712	7/11/2012	12.0	<50	<1.0	--	--	<LRLs	--

Table 5
Historical Soil Analytical Data
Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

Field Point	Sample Name	Sample Date	Sample Depth (feet bgs)	MORO[1] (mg/kg)	DRO[1] (mg/Kg)	GRO[2] (mg/Kg)	VOCs[2] (mg/kg)	PAHs[3] (mg/kg)	Metals[4] (mg/kg)
NSW1	SO-2344-NSW1-100712	7/10/2012	6.5	<50	**18**	--	--	<LRLs	--
NSW2	SO-2344-NSW2-100712	7/10/2012	6.5	<50	<1.0	--	--	<LRLs	--
NSW3	SO-2344-NSW3-110712	7/11/2012	6.5	<50	<1.0	--	--	<LRLs	--
NSW4	SO-2344-NSW4-110712	7/11/2012	6.5	<49	<0.99	--	--	<LRLs	--
NSW5	SO-2344-NSW5-110712	7/11/2012	12.0	**55**	**28**	--	--	**Benzo[a]pyrene (0.067), benzo[b]fluoranthene (0.110), benzo[g,h,i]perylene (0.054), Chrysene (0.053), Fluoranthene (0.074), Phenanthrene (0.060), and Pyrene (0.120)**	--
NSW6	SO-2344-NSW6-110712	7/11/2012	12.0	<49	<0.98	--	--	**Fluoranthene (0.0056), Phenanthene (0.0077), and Pyrene (0.025)**	--
SSW1	SO-2344-SSW1-100712	7/10/2012	6.5	**500**	**320**	--	--	<LRLs	--
SSW2	SO-2344-SSW2-100712	7/10/2012	6.5	**2000**	**1,800**	--	--	**Benzo[a]anthracene (0.056), Chrysene (0.072), and Pyrene (0.062)**	--
SSW3	SO-2344-SSW3-110712	7/11/2012	6.5	**93**	**39**	--	--	<LRLs	--
SSW4	SO-2344-SSW4-110712	7/11/2012	6.5	<50	<0.99	--	--	<LRLs	--
SSW5	SO-2344-SSW5-110712	7/11/2012	12.0	NA	NA	--	--	NA	--
SSW6	SO-2344-SSW6-110712	7/11/2012	12.0	<50	**2.7**	--	--	<LRLs	--
WSW1	SO-2344-WSW1-100712	7/10/2012	6.5	<50	**1.0**	--	--	<LRLs	--
WSW2	SO-2344-WSW2-110712	7/11/2012	12.0	<50	**37**	--	--	**Phenanthrene (0.020)**	--
2013 Well Installation Soil Samples									
MW-1	SO-2344-MW1-5.0-5.5-150513	5/15/2013	5-5.5	<50	<1.0	--	--	<LRLs	--
	SO-2344-MW1-10.5-11.0-150513	5/15/2013	10.5-11	<50	<1.0	--	--	**<LRLs**	--
	SO-2344-MW1-16.0-16.5-150513	5/15/2013	16-16.5	<50	**1.1**	--	--	<LRLs	--
MW-2	SO-2344-MW2-5.0-5.5-150513	5/15/2013	5-5.5	<50	<0.99	--	--	<LRLs	--
	SO-2344-MW2-9.5-10.0-150513	5/15/2013	9.5-10	<50	**1.5**	--	--	<LRLs	--
MW-3	SO-2344-MW3-5.0-5.5-160513	5/16/2013	5-5.5	<50	**10**	--	--	**Anthracene (0.0084), Benzo(b)fluoranthene (0.013), Benzo(g,h,i)perylene (0.0085), chrysene (0.011), Fluoranthene (0.0084), Fluorene (0.0084), Phenanthrene (0.018), Pyrene (0.013)**	--
	SO-2344-MW3-10.5-11.0-160513	5/16/2013	10.5-11	<50	<1.0	--	--	<LRLs	--
MW-4	SO-2344-MW4-5.0-5.5-160513	5/16/2013	5-5.5	<50	<1.0	--	--	<LRLs	--
	SO-2344-MW4-10.5-11.0-160513	5/16/2013	10.5-11	**420**	**290**	--	--	**Benzo(b)fluoranthene (0.012), Chrysene (0.054), Pyrene (0.037)**	--
Residential ESL (shallow/deep)	--	--	--	500/5000	100/240	100/490	Tetrachloroethene (0.55*)	Acenaphthene (16*), Acenphthylene (13*), Anthracene (2.8), Fluorene (8.9*), Benzo[b]fluoranthene (0.38*), Benzo [a]pyrene (0.038*), Benzo[g,h,i]perylene (27*), Chrysene (3.8*), Fluoranthene (40/60), Phenanthrene (11*), Pyrene (85*), Napthalene (1.2*)	Cadmium (12/78), Chromium (NE), Nickel (150/1500), Lead (80*), Zinc (600/2500), Barium (750/2500), Arsenic (0.39*), Copper (230/2500), Cobalt (23*), Vanadium (200/390), Mercury (6.7*)
Commercial/Ind ESL (shallow/deep)	--	--	--	2500/5000	500/530	500/580	Tetrachloroethene (0.70*)	Acenaphthene (16*), Acenphthylene (13*), Anthracene (2.8), Fluorene (8.9*), Benzo[b]fluoranthene (0.45*), Benzo[a]pyrene (0.045*), Benzo[g,h,i]perylene (27*), Chrysene (23*), Fluoranthene (40/60), Phenanthrene (11*), Pyrene (85*), Napthalene (1.2*)	Cadmium (12/1000), Chromium (2500/5000), Nickel (150/5000), Lead (320*), Zinc (600/5000), Barium (1500/5000), Arsenic (0.96*), Copper (230/5000), Cobalt (80/300), Vanadium (200/5000), Mercury (10/88)

Notes:
< - Denotes less than the Laboratory Reporting Limit (LRL)
mg/kg - milligrams per kilogram
-- Not Available/Applicable
bgs - Below Ground Surface
Bold - Reported concentration exceeded the LRL
EPA - Environmental Protection Agency
ESL - San Francisco Bay RWQCB Environmental Screening Levels
* - ESL is the same for shallow and deep soils

Analytical Definitions
MORO - Motor Oil Range Organics
DRO - Diesel range organics
GRO - Gasoline range organics
VOCs - Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons

Analytical Notes/Definitions
1 - Analyzed by EPA Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8260B and/or CA LUFT Method
3 - Analyzed by EPA Method 8270C SIM
4 - Analyzed by EPA Method 6010 (Mercury analyzed by EPA Method 7471A)

Appendix A

Site Details and Summary of Previous Environmental Investigations

SITE DETAILS

Currently, the site is being used as a construction equipment supply storage area for Sonoma Marin Area Rail Transit (SMART) construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the 3 West Third Street and 60 West Sixth Street Warehouses, to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties.

There are currently four groundwater monitoring wells (MW-1 through MW-4) at the site; quarterly groundwater sampling and monitoring is underway.

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

Over the history of environmental activities at the site, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by Environmental Protection Agency (EPA) method 8015B or 8260B. Antea Group uses the designation GRO for total petroleum hydrocarbons as gasoline within the C_5 to C_{10} carbon range, DRO for total petroleum hydrocarbons as diesel within the C_{10} to C_{28} carbon range, and RRO for total petroleum hydrocarbons as residual range organics (oil) within the C_{24} to C_{40} carbon range.

Terms from previous reports may include total recoverable petroleum hydrocarbons (TRPH), total purgeable petroleum hydrocarbons (TPPH) for GRO, total extractable petroleum hydrocarbons (TEPH) for DRO, and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific historical terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO. Antea Group has left the original designation when summarizing historic data and the current designations when applied to recent investigations and summary discussions.

SITE HISTORY

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site. These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs (Industrial Compliance [IC], 1992).

In April 1990, the North Coast Regional Water Quality Control Board (RWQCB) drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (MW-2 and MW-3). Monitoring well MW-3 was located approximately 100 feet down gradient (to the southwest) of the former fuel oil UST. Based on

information presented in a July 1992 report by IC, analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1. However, oil and grease was present in the soil sample collected from boring B-1 at 12 feet bgs at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PAHs). Soil samples collected at depths of 6 and 16 feet below ground surface (bgs) from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively. No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3 (Geomatrix Consultants, Inc. [Geomatrix], 2000).

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes (BTEX compounds), or PAHs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX compounds were detected in the grab groundwater sample collected from IC-B6 (Geomatrix, 2000).

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995. In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHmo), PAHs, metals, and volatile organic compounds (VOCs). Soil samples collected for analyses of TPHd, PAHs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHmo at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHmo at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHmo was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHmo was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs (Geomatrix, 2000).

PAHs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure. Concentrations of PAHs detected at this time are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a

depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PAH concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)4 in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs. No TPHd, TPHmo, or VOCs were detected in groundwater above laboratory reporting limits. The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These items, which are the focus of the work described herein, include additional evaluation of historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations (Geomatrix, 2000).

In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An up-gradient, single-screen monitoring well was installed on the eastern portion of the property in vicinity of the main line railroad tracks.

Extensive investigative activities were performed in 2002 on the northwest area of the project site at the historical location of the Santa Rosa Woolen Mills Facility. Soil samples collected as part of an investigation within this area reported significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former above ground fuel storage tank (AST), and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons. From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil (EBA, 2008b).

In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed, whereupon the excavation was advanced to a total depth of approximately 18 feet bgs. A significant amount of free-phase petroleum hydrocarbon product was encountered on the groundwater surface during the excavation activities. The product and water was subsequently pumped, treated, and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently terminated due to concerns of structure stability. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in the excavation sidewalls and groundwater in this area (EBA, 2008b).

Excavation activities in the northwestern portion of the property also included the removal off a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 350 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths below first encountered groundwater, which was encountered at approximately 19 feet bgs. The maximum depth attained by the excavation was approximately 22 feet bgs. Impacted groundwater encountered within the excavation pit, which included free-phase petroleum hydrocarbon product, was subsequently removed using pumps, treated, and disposed of to the sanitary sewer (EBA, 2008b).

Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area. Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the "southern warehouse area" (EBA, 2008b).

Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in a monitoring well identified as SRMW-13 located in the northwest corner of the property. In addition, the fuel oxygenate methyl tert-butyl ether (MTBE) was detected in SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored (EBA, 2008b).

The RWQCB issued a *No Further Action* (NFA) letter for the previous case at the site on August 31, 2007. In 2008, Sonoma Marin Area Rail Transit District (SMART) granted an option to purchase the site, formerly owned by Northwestern Pacific Railroad Authority (NWRPA) to New Railroad Square Associates, LLC for transit-oriented development purposes. In anticipation of property ownership for the site, New Railroad Square Associates, LLC (with consent from SMART) contracted the services of EBA Engineering (EBA) to perform environmental assessment activities. EBA's November 2008 *Comprehensive Report on Findings* concluded that on-site hazardous materials presently exist at various locations on the property. These materials include an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and impacted shallow soil across the site. The RWQCB reopened the environmental case for the site on January 16, 2009 based on EBA's findings.

In a letter dated February 4, 2011, the RWQCB directed UPRR to remove the oil UST on the property due to SMARTs site improvement activities planned for the site. Another letter, dated July 22, 2011, was submitted to UPRR from the RWQCB which directed them to remove "known shallow impacts", soil impacts encountered during property development and removal of impacted soil in the vicinity of SB-1 in addition to the removal of the oil UST. In November 2011, United Pumping Services (UPS) removed the UST as directed. However, during the initial day-lighting activities of the oil UST, an additional 500-gallon UST containing oil was discovered adjacent and west of the known tank. UPS evacuated, cleaned and removed the second UST in conjunction with the known UST. UPS excavated and disposed of approximately 213.03 tons of impacted soil surrounding the USTs, and pumped

approximately 500 gallons of oil impacted groundwater from the excavation. Antea Group collected 16 soil samples and one grab groundwater sample from within the excavation. Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears that a release from the removed USTs only affected the immediate soils surrounding the USTs. Sidewall samples NWB and SWB collected at 15 feet bgs reported concentrations of VOCs and PAHs not found in any other (shallower) samples collected. From the available data, soil VOCs and PAHs impacts appear to be the result of impacted groundwater within the capillary fringe, originating from outside of the excavated area, and not due to a release from the USTs at that location.

In a letter dated January 19, 2012, the RWQCB directed UPRR to address their remaining concerns from their July 22, 2011 directive letter. The remaining concerns included the removal of known shallow impacts and removal of impacted soil in the vicinity of SB-1. In addition, further investigation around the UST tank pit was directed since evidence of discharge was noted during the removal of the UST in November 2011. In April 2012, Antea Group advanced five soil borings (B1 through B5) on the southwestern boundary of the site and seven qualitative borings (B6 through B12) utilizing cone penetration testing (CPT) tip and Ultra-Violet Optical Screening Tool (UVOST) technology around the tank pit area. The borings were advanced to further investigate impacts of the UST removal and determine any contamination near the site boundaries and their origin. Soil samples were collected and submitted for laboratory analysis. Of the detection above the LRLs, only two concentrations are above their San Francisco Bay RWQCB environmental screening levels (ESLs). The DRO concentration in sample B2-11' [240 milligrams per kilogram (mg/kg)] and the concentration of DRO (810 mg/kg) detected in B4-12' exceeded the ESL of 83 mg/kg. Analysis of the UVOST data suggests that the only boring displaying minor indications of hydrocarbon impacts is boring B7 at approximately 5 to 10 feet bgs.

On July 9 through July 13, 2012 UPS and Antea Group conducted soil excavation in the area of former EBA soil boring SB-1. The results of the sidewall and base samples of the excavation in the vicinity of EBA boring SB-1 indicate that only samples from the southwest portion of the excavation exceed commercial/industrial ESLs for DRO and MORO.

On February 26, 2013, the RWQCB directed UPRR to install four monitoring wells on the site to further investigate groundwater impacts on their origin (potentially from off-site sources). Antea Group had proposed this work in their Site Remedial Action and Investigation Report dated October 16, 2012 and the RWQCB concurred. On May 5 and 6, 2013, Antea Group installed four groundwater monitoring wells (MW-1 through MW-4).

SENSITIVE RECEPTORS

Geomatrix performed a well survey in 2000. Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which is

fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use (Geomatrix, 2003).

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site. Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically down-gradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately up gradient and two approximately down gradient. Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use (Geomatrix, 2003).

Information about the possible presence of an additional water-producing well located near the site was provided by the RWQCB. This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek; its actual location has not been field-verified. At this time the well is not in use, and based on a conversation with the site redeveloper, the well will not be used in the future and will be appropriately destroyed (Geomatrix, 2003).

Appendix B

Historical Boring Logs

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Project No:	UPR8248	Client:	Union Pacific Railroad	Well/ Boring ID: **B1**
Logged By:	Renee Ransom	Location:	2 Fourth Street and 34 Sixth Street	Page 1 of 1
Driller:	Gregg Drilling	Date Drilled:	4/13/2012	Location Map: See Site Plan
Drilling Method:	Direct Push	Hole Diameter:	3.25"	
Sampling Method:	Acetate Liners	Hole Depth:	20'	
Casing Type:	PVC-Pre-packed well screens	Well Diameter:	0.75"	
Slot Size:	0.010	Well Depth:	20' (temporary)	
Gravel Pack:	20/40	Screened Interval:	15'-20' (temporary)	
Elevation		Northing		Easting

Well Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Collected	Sample Recovery	Soil Type	LITHOLOGY / DESCRIPTION
Concrete									Topsoil to 6"
		moist		Hand auger to 5 ft	1			OH	**Organic Clay (OH)** - Dark brown, high plasticity, malleable, organics, 5% fine to coarse grained gravel, 95% fines
Cement Grout			7.5		2			CL	**Lean Clay (CH)**, dark brown, 5% fine to coarse gravel, 95% fines, medium firm, medium plasticity.
					3				
			4.5		4				- As above, brown mottling
					5				
				Direct Push to 20 ft	6				
			5.5		7				
					8				
		moist			9			SM	**Silty Sand (SM)** - Brown, 60% sand, 40% fines, medium grained sand, poorly graded, medium firm
					10				
		moist			11			ML	**Silt (ML)** - Brown, medium firm, low plasticity, dark brown mottling
			16.2		12				- As above, wet @ 12'
		wet							
		moist			13			CL	**Sandy Lean Clay with gravel (CL)** - Gray-black, 20% fine to coarse grained gravel, 20% fine to coarse grained sand, 60% fines, black staining
			216		14			SW	**@ 14'-14'4" - Gravelly Sand (SW)** - Black-gray, fine to coarse grained sand and gravel, well graded, 45%
		wet						CL	gravel, 55% sand, trace fines, medium plastic, malleable,
		moist			15				**Sandy Lean Clay with Gravel (CL) (as above)**
			27.6		16			GM	**Sandy Gravel with silt (GM) -** Black-gray, fine to coarse grained sand and gravel, well-graded, 40% gravel, 30% sand, 30% fines
		wet			17				
		wet			18			CL	**Lean Clay (CL)** - Brown-gray, medium plasticity, firm
					19				
					20				**Total depth of boring = 20.0' below ground surface.**
					21				
					22				

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Project No:	UPR8248	Client:	Union Pacific Railroad	Well/ Boring ID: **B2**	
Logged By:	Renee Ransom	Location:	2 Fourth Street and 34 Sixth Street	Page 1 of 1	
Driller:	Gregg Drilling	Date Drilled:	4/13/2012	Location Map	See Site Plan
Drilling Method:	Direct Push	Hole Diameter:	3.25"		
Sampling Method:	Acetate Liners	Hole Depth:	20'		
Casing Type:	PVC-Pre-packed well screens	Well Diameter:	0.75"		
Slot Size:	0.010	Well Depth:	15' (temporary)		
Gravel Pack:	20/40	Screened Interval:	10'-15' (temporary)		
Elevation		Northing		Easting	

Well Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Collected	Sample: Recovery	Soil Type	LITHOLOGY / DESCRIPTION
									Topsoil to 7"
Concrete		moist		Hand auger to 5 ft	1			OH	@7" - **Organic Clay (OH)** - Dark brown,high plasticity, malleable 10% coarse grained gravel, 90% fines, organics
			5.0		2				
Cement Grout					3			CL	**Lean Clay (CL)**, dark brown, 10% coarse gravel, 90% fines, medium firm
			6.1		4				
		moist		Direct Push to 20 ft	5	■		SM	**Silty Sand (SM) -** Orange-brown, malleable, fine to coarse grained sand, well-graded, 70% sand, 30% fines
			5.6		6				
		moist			7			ML	**Sandy Silt (ML) -** Dark brown, stiff, low plasticity, 40% sand, 60% fines
			4.2		8				
					9				
			4.3		10				
					11	■			
			406		12			SM	**Silty Sand with Gravel (SM)** - Gray, malleable, fine to medium grained sand, well graded, 15% fine to coarse grained gravel, 65% sand, 20% fines
		moist			13				
			229		14	■		SW	**Gravelly Sand with Silt (SW) -** Brown, malleable, fine to coarse grained sand and gravel, 40% gravel, 40% sand, 20% fines, odor, black staining
		wet			15				
			308		16				No Recovery
					17				
					18				
					19				
					20				**Total depth of boring = 20.0' below ground surface.**
					21				
					22				

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Project No:	UPR8248	Client:	Union Pacific Railroad	Well/ Boring ID: **B3**
Logged By:	Renee Ransom	Location:	2 Fourth Street and 34 Sixth Street	Page 1 of 1
Driller:	Gregg Drilling	Date Drilled:	4/13/2012	Location Map: See Site Plan
Drilling Method:	Direct Push	Hole Diameter:	3.25"	
Sampling Method:	Acetate Liners	Hole Depth:	20'	
Casing Type:	PVC-Pre-packed well screens	Well Diameter:	0.75"	
Slot Size:	0.010	Well Depth:	20' (temporary)	
Gravel Pack:	20/40	Screened Interval:	15'-20' (temporary)	
Elevation		Northing		Easting

Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Collected	Sample Recovery	Soil Type	LITHOLOGY / DESCRIPTION
Backfill									Topsoil to 7"
Concrete		moist		Hand auger to 5 ft	1			OH	**Gravelly Organic Clay (OH)**- Dark brown, high plasticity, malleable, organics, 30% fine gravel, 70% fines
			4.1		2				
Cement Grout					3				
		moist	3.2		4			ML	**Sandy Silt with Gravel (ML) -** Dark brown, light brown mottling, low plasticity, medium firm, 20% fine to coarse gravel, 20% fine to coarse grained sand, 60% fines
					5				- As above, color change to brown
			7.4		6				
					7				
			5.8		8				
					9				
			4.6	Direct Push to 20 ft	10			ML	**Silt (ML) -** Orange-brown, low plasticity, medium firm, 5% fine gravel, 95% fines
		moist			11				
			5.4		12			SM	**Silty Sand with Gravel (SM)**- Brown, wet, fine to coarse grained sand and gravel, well graded, 50% sand, 25% gravel, 25% fines, unconsolidated
		wet	3.2		13				
			1.9		14				
					15				
			1.8		16			SM	**Silty Sand (SM),** Brown, 5% gravel, 60% sand, 25% fines, fine to coarse sand and gravel, well graded, unconsolidated
		wet			17			GW-GM	**Sandy Gravel with Silt (GM)** - Brown, malleable, fine to coarse grained sand and gravel, well graded, 40% gravel, 40% sand, 20% fines
		wet			18			CL	**Lean Clay (CL)** - Light brown, medium plastic, medium firm, 100% fines
					19			SW	Sand (SW)- Brown, unconsolidated, fine to coarse grained, well graded
					20			ML	Silt (ML) - Brown, low plasticity, medium firm
									Total depth of boring = 20.0' below ground surface.
					21				
					22				

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anteagroup	Project No: UPR8248	Client: Union Pacific Railroad	Well/ Boring ID: B4
	Logged By: Renee Ransom	Location: 2 Fourth Street and 34 Sixth Street	Page 1 of 1
	Driller: Gregg Drilling	Date Drilled: 4/13/2012	Location Map: See Site Plan
	Drilling Method: Direct Push	Hole Diameter: 3.25"	
	Sampling Method: Acetate Liners	Hole Depth: 20'	
	Casing Type: PVC-Pre-packed well screens	Well Diameter: 0.75"	
	Slot Size: 0.010	Well Depth: 20' (temporary)	
	Gravel Pack: 20/40	Screened Interval: 15'-20' (temporary)	
	Elevation	Northing	Easting

Well Completion (Backfill)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Collected	Sample Recovery	Soil Type	LITHOLOGY / DESCRIPTION
									Topsoil to 9"
Concrete		moist		Hand auger to 5 ft	1			OH	**@9" Organic Clay (OH)** - Dark brown, medium plasticty, malleable, organics, 5% fine to coarse grained gravel, 95% fines
			2.4		2				
Cement Grout					3				
		moist			4			CL	**Gravelly Lean Clay with Sand (CL) -** Dark brown, malleable, medium plasticity, fine to coarse grained sand and gravel, 25% gravel, 20% sand, 55% fines
			1.9		5				
		moist		Direct Push to 20 ft				ML	**Sandy Silt with Gravel (ML) -** Dark brown, orange mottling, indurated, 15% fine to medium grained gravel, 25% fine to coarse grained sand, 60% fines
			1.6		6				
					7				
		moist						CL	**Sandy Clay with Gravel (CL)** - Light brown, medium indurated, medium plastic, 10% fine grained gravel, 10% fine grained sand, 80% fines
			2.8		8				
					9				
			5.7		10				
					11				- As above, but color change to gray, odor
			49.3		12				
		moist			13			CL	**Lean Clay (CL)** - Brown, gray mottling, high plasticity, indurated
			5.6		14				
					15				
			4.5		16				No Recovery
					17				
					18				
		wet							- As above (Lean Clay), but wet
					19			SW-SM	**Gravelly Sand with Silt (SW-SM)** - Brown, malleable, fine to coarse grained sand and gravel, well graded, 40% gravel, 40% sand, 20% fines
					20				**Total depth of boring = 20.0' below ground surface.**
					21				
					22				

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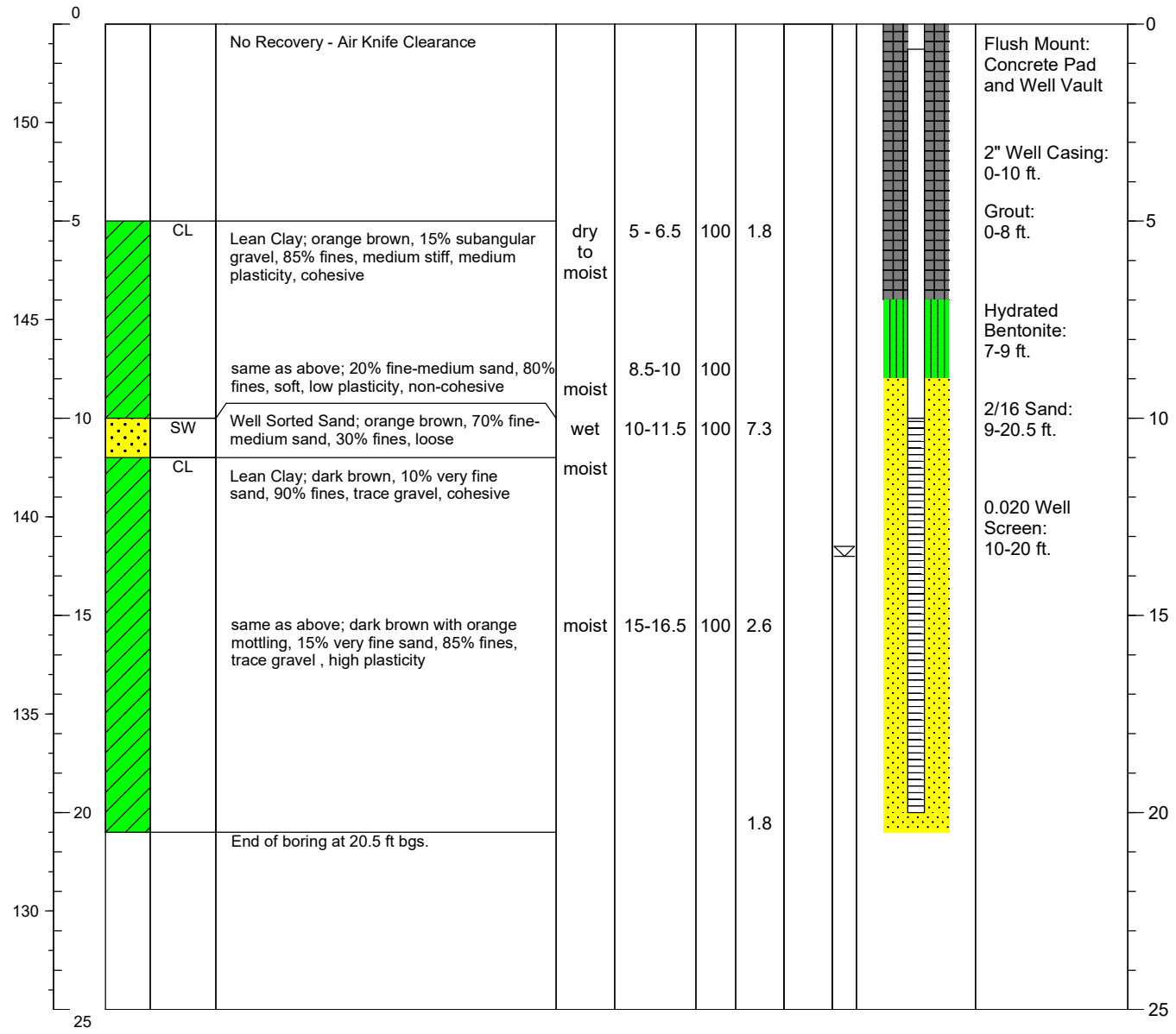
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Logged By:	Renee Ransom	Location:	2 Fourth Street and 34 Sixth Street	Page 1 of 1
Driller:	Gregg Drilling	Date Drilled:	4/13/2012	Location Map: See Site Plan
Drilling Method:	Direct Push	Hole Diameter:	3.25"	
Sampling Method:	Acetate Liners	Hole Depth:	20'	
Casing Type:	PVC-Pre-packed well screens	Well Diameter:	0.75" (temporary)	
Slot Size:	0.010	Well Depth:	20' (temporary)	
Gravel Pack:	20/40	Screened Interval:	15'-20' (temporary)	
Elevation		Northing		Easting

Well Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Collected	Sample: Recovery	Soil Type	LITHOLOGY / DESCRIPTION
									Topsoil to 6"
Concrete		moist		Hand auger to 5 ft	1			OH	**Organic Clay (OH)** - Dark brown, malleable, medium plastic, organics
			1.9		2			CL	**Lean Clay (CL)** - Dark brown, medium indurate, medium plastic
Cement Grout					3				
			4.6		4				
					5	■			
		moist						SM	**Silty Sand with Gravel (SM)** - Brown, 20% gravel, 60% sand, 20% fines, fine to coarse grained sand and gravel, well graded, low plasticity, indurated
			3.5		6				
					7				
			3.7		8				No Recovery
					9				
					10	■			
		moist		Direct Push to 20 ft				GW	**Sandy Gravel (GW)** - Light brown, 65% gravel, 35% sand, unconsolidated, fine to coarse grained sand and gravel, well graded,
			3.5		11				
		moist						CL	**Lean Clay (CL)** - Brown-orange, malleable, medium plasticity
			2.8		12				
					13				
			1.9		14				- As above, but color change to gray-brown, 10% medium grained sand
		moist			15			ML	**Sandy Silt (ML)** - Brown, 40% very fine sand, 60% fines, low plasticity, malleable.
			4.0		16	■			
		wet			17			SM	Silty Sand with clay (SM) - Brown, wet, dense, fine to coarse grained sand and gravel, well-graded, 55% sand, 20% fines, 25% gravel
					18			CL	Lean Clay (CL) - Brown w/orange mottling, medium plasticity, malleable
								CL	**Sandy Lean Clay with gravel (CL)** - Brown, 30% sand, 15% gravel, 55% fines, indurated
					19			CL	@18' 4" - **Lean Clay (CL)** - Brown w/orange mottling, malleable medium plasticity
					20				**Total depth of boring = 20.0' below ground surface.**
					21				
					22				

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Project Name	Monitoring Well Construction Log	Well Number
Union Pacific Railroad		**MW-1**

Address **2 Fourth St & 34 Sixth St** **Santa Rosa California**	Drilling Contractor **Gregg Drilling**	Ground Surface Elevation: **152.50**	Top of Casing Elevation: **151.86**
	Drilling Method **Air Knife / Hollow Stem Auger**	Boring Depth **20.5 ft.**	Boring Diameter **8 in.**
Logged By / Approved By **R. Ransom** / **L. Holden**	Sampling Method **Split Spoon**	Well Depth / Casing Type **20 ft.** / **SCH 40 PVC**	Well Screen Interval / Slot Size **10 - 20 ft.** / **0.020**
Antea Group Project Number **UPR8248**	Headspace Monitoring Device **PID**	Date Drilling Started **5/15/13**	Date Drilling Completed **5/15/13**



First Encountered Groundwater Static Groundwater

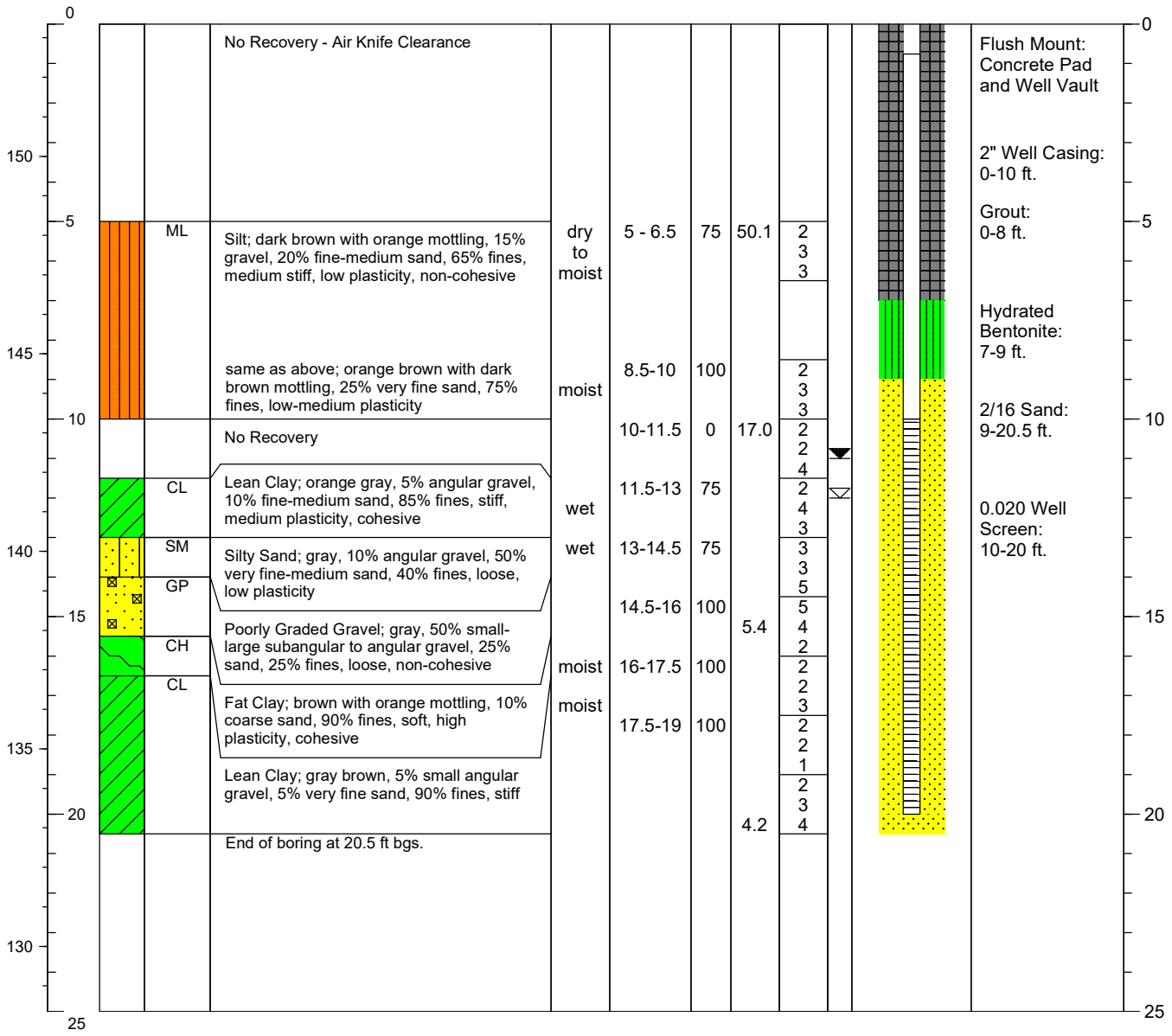
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Project Name	Monitoring Well Construction Log	Well Number
Union Pacific Railroad		**MW-2**

Address **2 Fourth St & 34 Sixth St** **Santa Rosa California**	Drilling Contractor **Gregg Drilling**	Ground Surface Elevation: **153.55**	Top of Casing Elevation: **152.79**
	Drilling Method **Air Knife / Hollow Stem Auger**	Boring Depth **20.5 ft.**	Boring Diameter **8 in.**
Logged By / Approved By **R. Ransom** / **L. Holden**	Sampling Method **Split Spoon**	Well Depth / Casing Type **20 ft.** / **SCH 40 PVC**	Well Screen Interval / Slot Size **10 - 20 ft.** / **0.020**
Antea Group Project Number **UPR8248**	Headspace Monitoring Device **PID**	Date Drilling Started **5/15/13**	Date Drilling Completed **5/15/13**

LITHOLOGY **SAMPLING DATA**



First Encountered Groundwater Static Groundwater

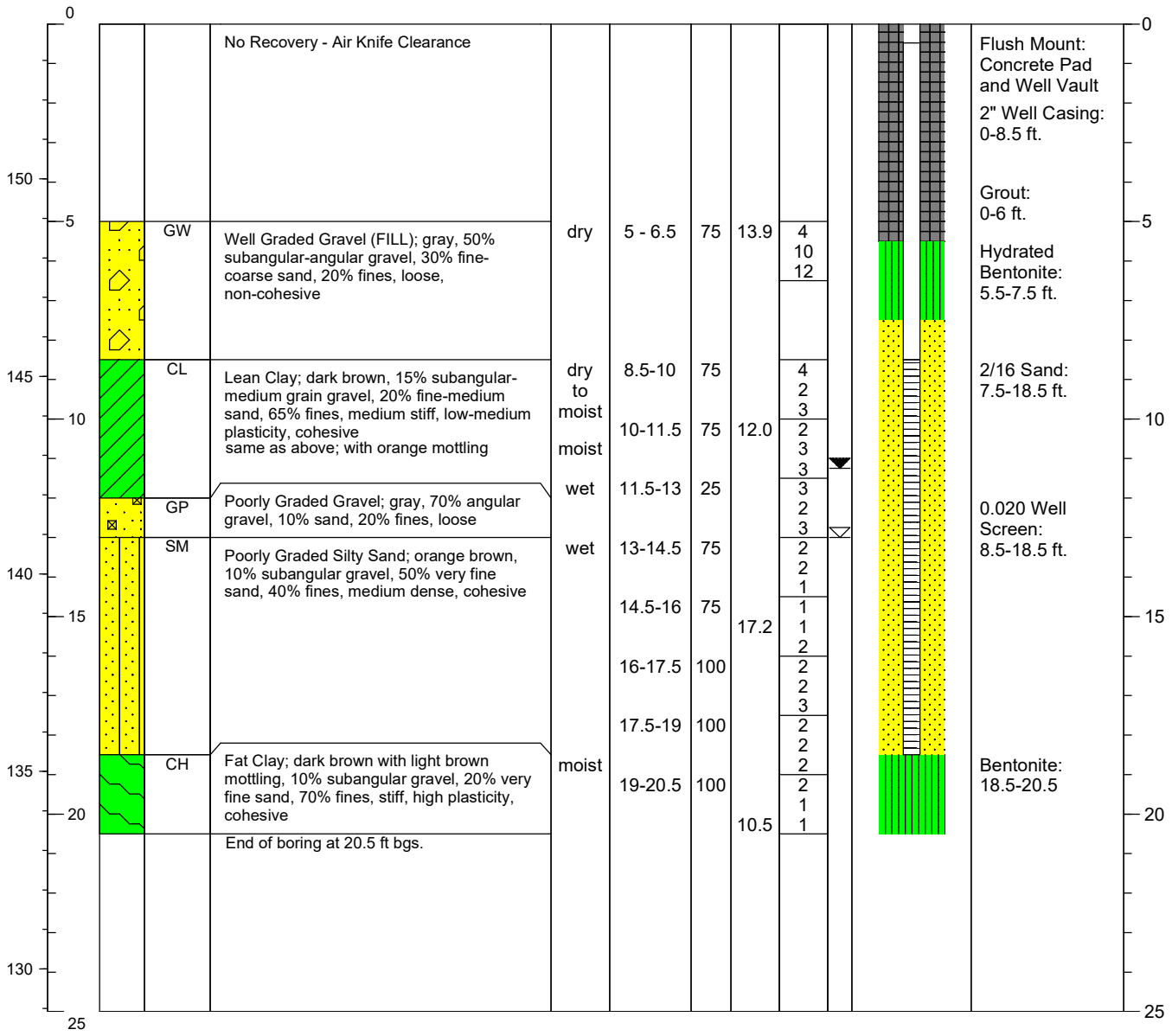
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INOGEN

Project Name	Monitoring Well Construction Log	Well Number
Union Pacific Railroad		**MW-3**

Address **2 Fourth St & 34 Sixth St** **Santa Rosa California**	Drilling Contractor **Gregg Drilling**	Ground Surface Elevation: **153.92**	Top of Casing Elevation: **153.44**
	Drilling Method **Air Knife / Hollow Stem Auger**	Boring Depth **20.5 ft.**	Boring Diameter **8 in.**
Logged By / Approved By **R. Ransom** / **L. Holden**	Sampling Method **Split Spoon**	Well Depth / Casing Type **18.5 ft.** / **SCH 40 PVC**	Well Screen Interval / Slot Size **8.5-18.5 ft.** / **0.020**
Antea Group Project Number **UPR8248**	Headspace Monitoring Device **PID**	Date Drilling Started **5/16/13**	Date Drilling Completed **5/16/13**

LITHOLOGY **SAMPLING DATA**



First Encountered Groundwater Static Groundwater

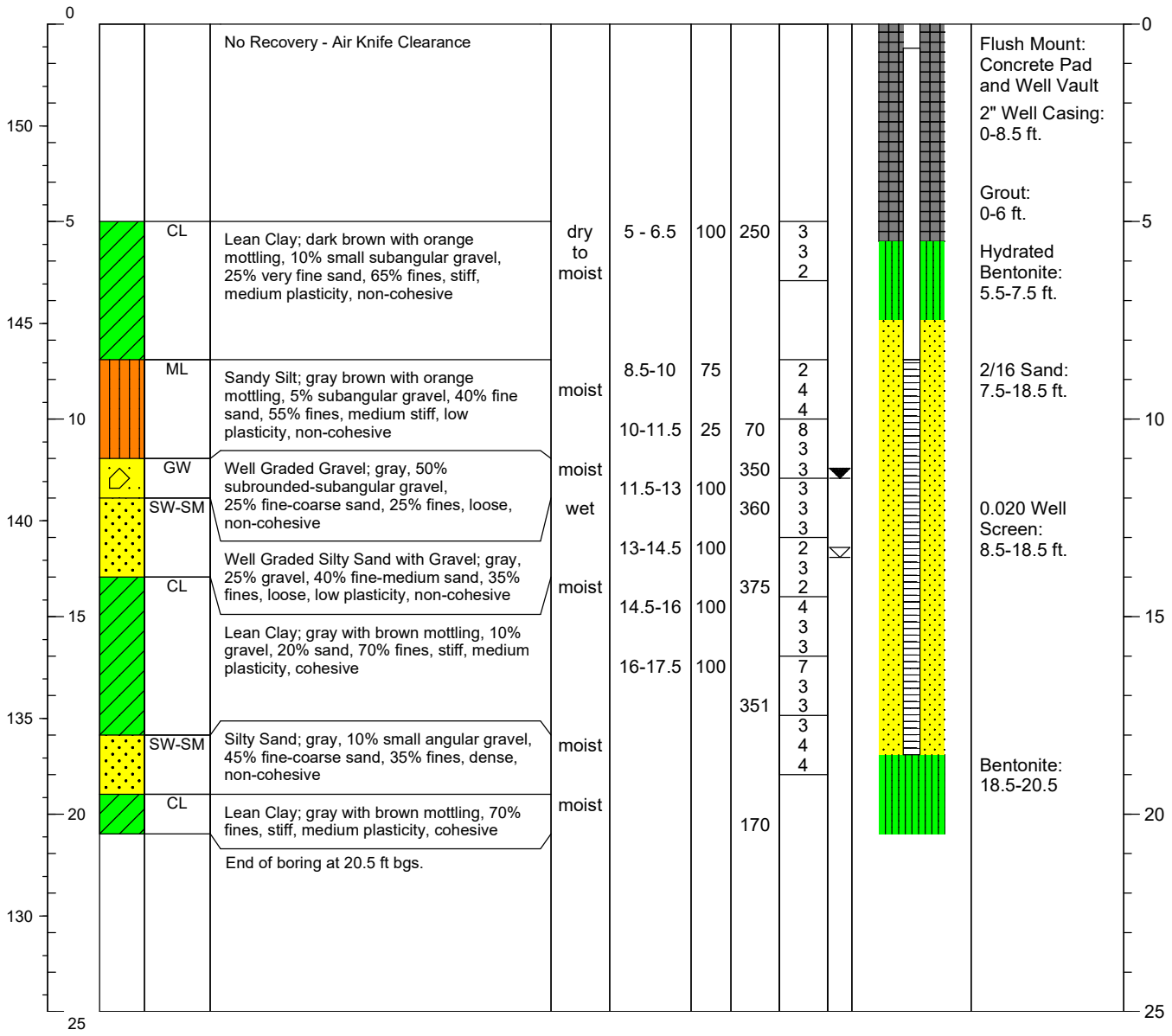
antea group

INOGEN

Project Name	Monitoring Well Construction Log	Well Number
Union Pacific Railroad		**MW-4**

Address **2 Fourth St & 34 Sixth St** **Santa Rosa California**	Drilling Contractor **Gregg Drilling**	Ground Surface Elevation: **152.58**	Top of Casing Elevation: **151.97**
	Drilling Method **Air Knife / Hollow Stem Auger**	Boring Depth **20.5 ft.**	Boring Diameter **8 in.**
Logged By / Approved By **R. Ransom** / **L. Holden**	Sampling Method **Split Spoon**	Well Depth / Casing Type **18.5 ft.** / **SCH 40 PVC**	Well Screen Interval / Slot Size **8.5 - 18.5 ft.** / **0.020**
Antea Group Project Number **UPR8248**	Headspace Monitoring Device **PID**	Date Drilling Started **5/16/13**	Date Drilling Completed **5/16/13**

LITHOLOGY **SAMPLING DATA**



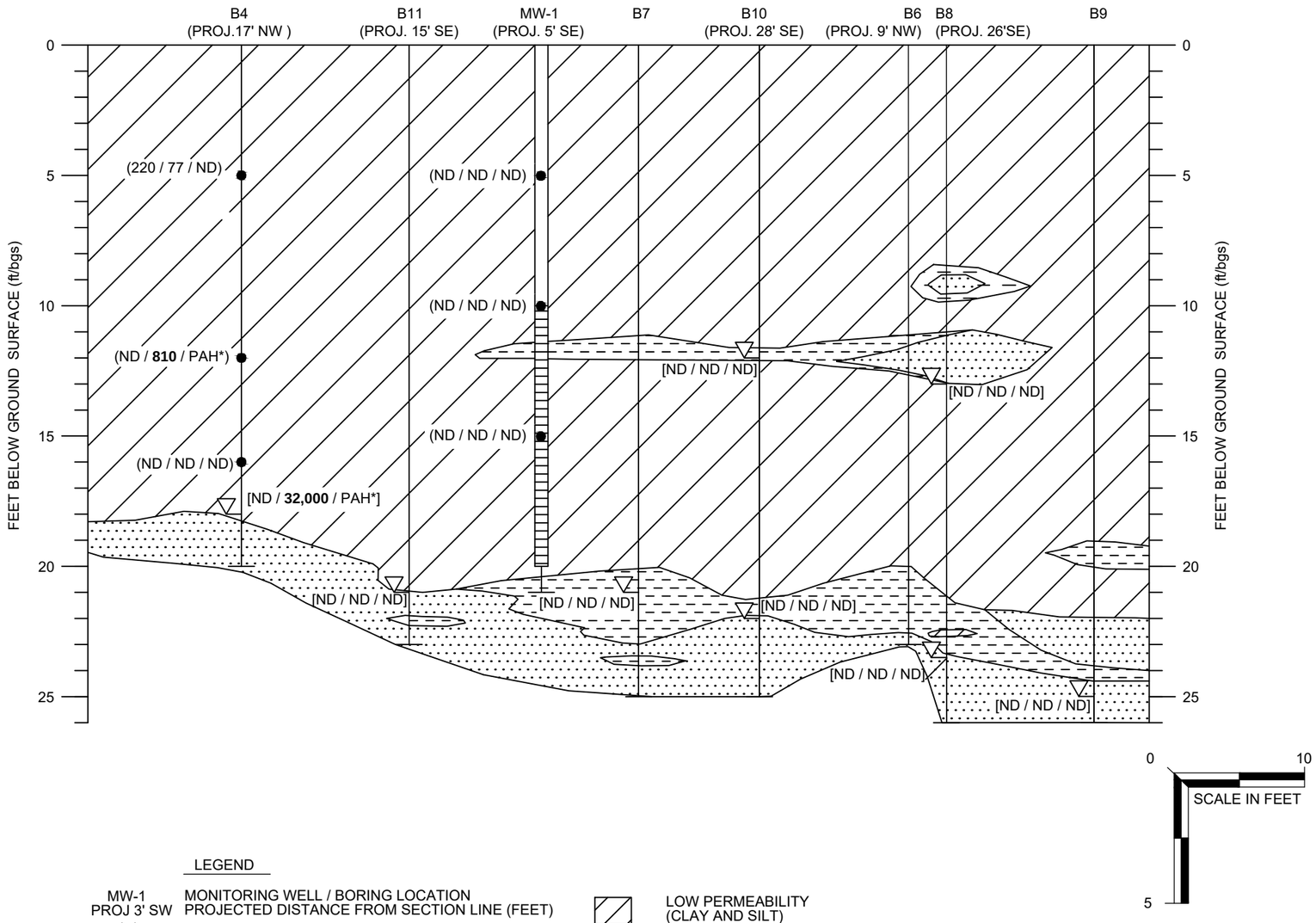
First Encountered Groundwater Static Groundwater

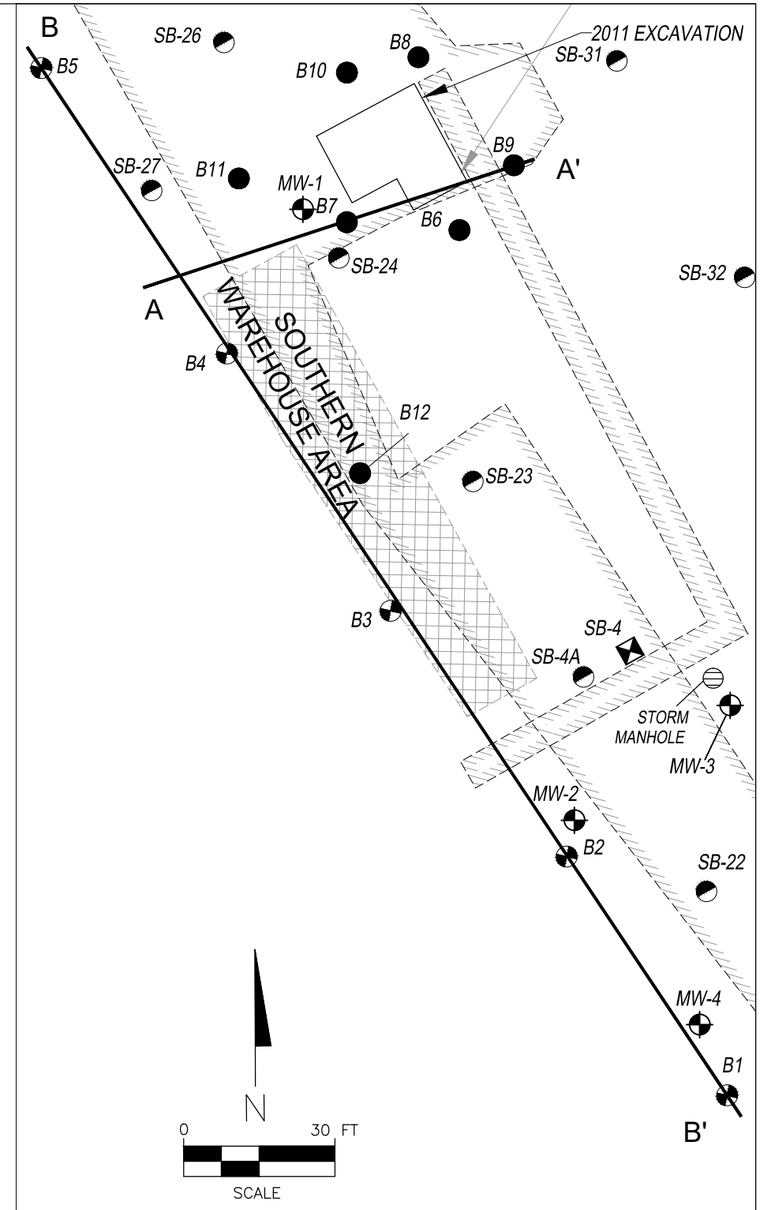
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Appendix C

Historical Cross-Sections





LEGEND

MW-1 / PROJ 3' SW — MONITORING WELL / BORING LOCATION; PROJECTED DISTANCE FROM SECTION LINE (FEET)

WELL CASING / EXPLORATORY BORING

WELL SCREEN

(ND / ND / ND) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (mg/kg)

[ND / ND / ND] — DEPTH TO FIRST ENCOUNTERED GROUNDWATER

GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (µg/L)

LOW PERMEABILITY (CLAY AND SILT)

MEDIUM PERMEABILITY (SILTY AND CLAYEY SANDS)

HIGH PERMEABILITY (SAND AND GRAVELS)

APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

MORO= MOTOR OIL RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
PAH = POLYCYCLIC AROMATIC HYDROCARBONS
PAH* = REFER TO TABLES 1 & 2 FOR SPECIFIC PAH CONCENTRATION
mg/kg = MILLIGRAMS PER KILOGRAM
µg/L = MICROGRAMS PER LITER
ND = LESS THAN LABORATORY INDICATED REPORTING LIMITS
BOLD= EXCEEDS ENVIRONMENTAL SCREENING LEVELS (ESL)

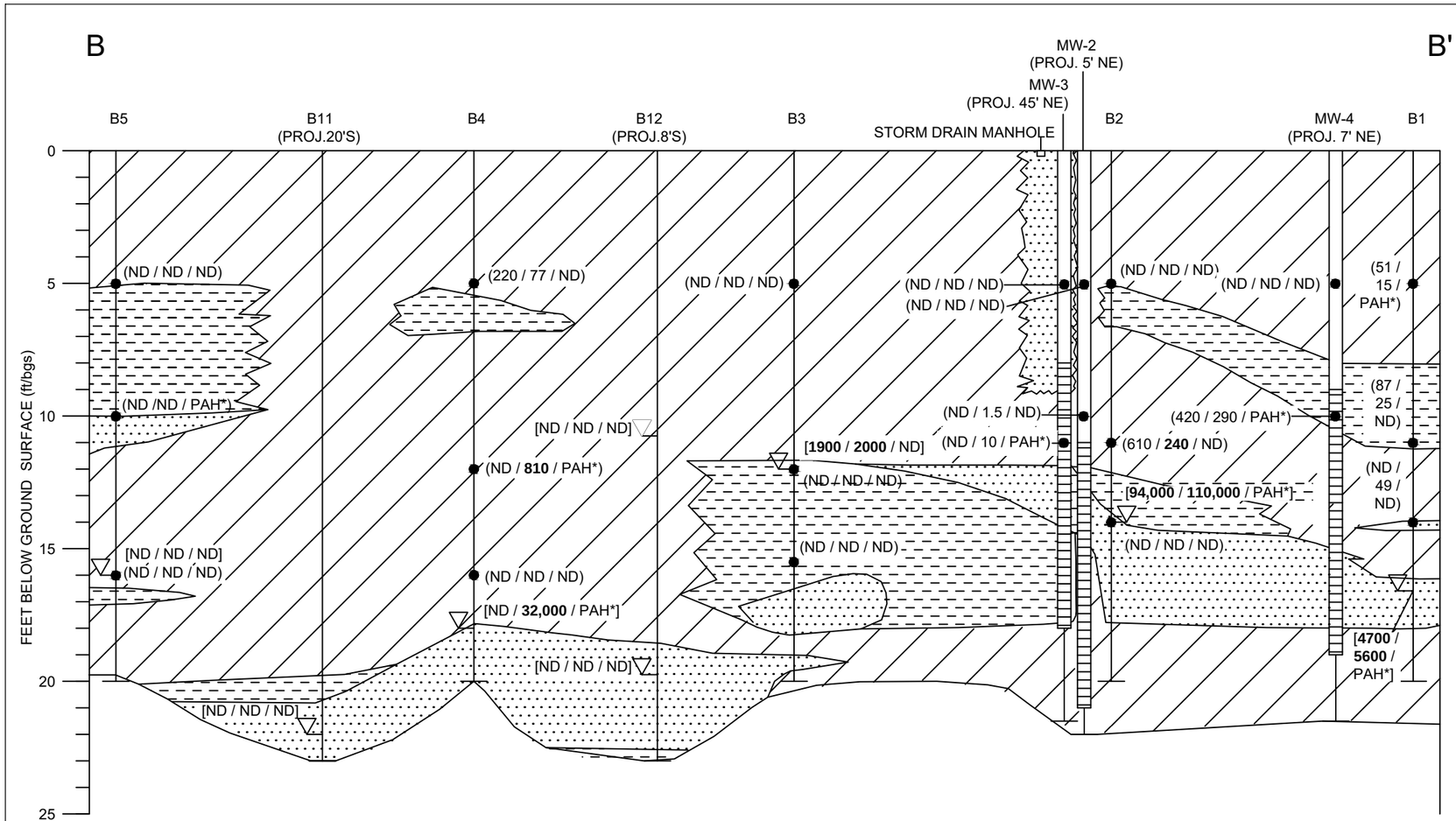
STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

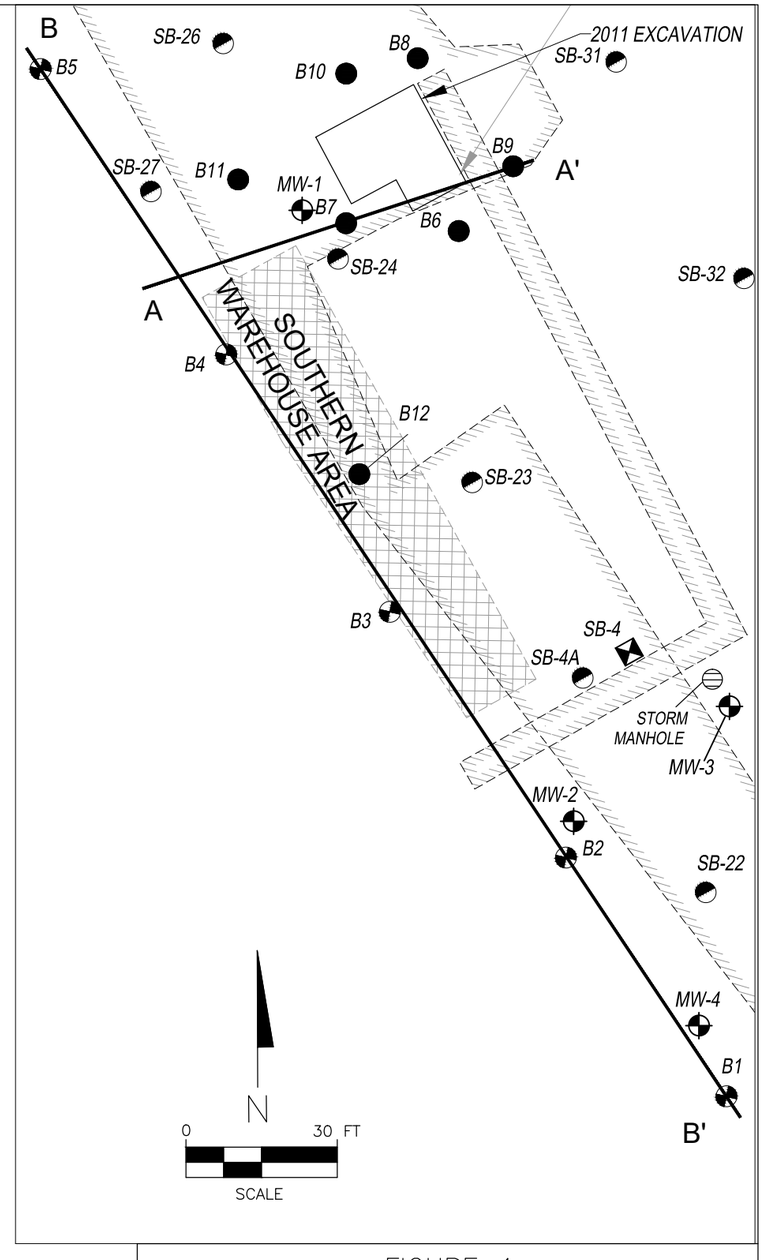
FIGURE 3
CROSS SECTION A – A'

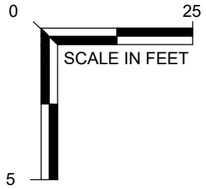
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
7/19/13	LH	UPR8248-Cross

antea group







LEGEND

MW-1 PROJ 3' SW — MONITORING WELL / BORING LOCATION; PROJECTED DISTANCE FROM SECTION LINE (FEET)

WELL CASING / EXPLORATORY BORING

WELL SCREEN

(ND / ND / ND) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (mg/kg)

DEPTH TO FIRST ENCOUNTERED GROUNDWATER

[ND / ND / ND] — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (µg/L)

LOW PERMEABILITY (CLAY AND SILT)

MEDIUM PERMEABILITY (SILTY AND CLAYEY SANDS)

HIGH PERMEABILITY (SAND AND GRAVELS)

APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

MORO= MOTOR OIL RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
PAH = POLYCYCLIC AROMATIC HYDROCARBONS
PAH* = REFER TO TABLES 1 & 2 FOR SPECIFIC PAH CONCENTRATION
mg/kg = MILLIGRAMS PER KILOGRAM
µg/L = MICROGRAMS PER LITER
ND = LESS THAN LABORATORY INDICATED REPORTING LIMITS
BOLD= EXCEEDS ENVIRONMENTAL SCREENING LEVELS (ESL)

STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

FIGURE 4
CROSS SECTION B – B'

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
7/19/13	LH	UPR8248–Cross

antea group

Appendix D

Blaine Tech Services' Quarterly Groundwater Sampling Field Data Sheets

WELL GAUGING DATA

Project # 140625-D5C Date 6/25/11 Client Antea

Site UPRR @ Santa Rosa

Well ID	Well Size (in.)	Time Gauged	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-1	2	0935					11.43	19.82	
MW-2	2	0949					10.80	19.63	
MW-3	2	0945					11.42	18.27	
MW-4	2	0952					9.69	18.27	—

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344- MW-1-250614	Sample Date: (mm/dd/yy)	06/25/14
Sampler Name:	Daniel Strunk	Sample Time (hhmm):	1040
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-1

Name of Duplicate Sample: _____ MS/MSD collected (yes/~~no~~)?: _____

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter:	2" X	4"	6"	8"
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 1024 @ 200ml/min Depth to Water When Sampled: 11.45

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: ~~°C~~ °F	Cond. Unit: µS	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: ml
1026	6.86	~~6.86~~ 20.3	576	33	47	1.30	500
1029	6.72	19.5	492	14	77	1.01	1100
1032	6.73	19.3	489	12	74	1.00	1700
1035	6.72	16.9	479	10	73	0.95	2300
1038	6.72	16.9	476	10	74	0.93	2900

Lock Present (~~yes~~/no)?: yes

Fixtures Replaced: _____

Weather Conditions/Ambient Temperature: Sunny

Comments: Fe^{2+}: 0.0mg/L

Signature of Sampler: _____

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Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344-MW-2-250614	Sample Date: (mm/dd/yy)	06/25/14
Sampler Name:	David Strunk	Sample Time (hhmm):	1150
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-2

Name of Duplicate Sample: _____ MS/MSD collected (yes/no)?: _____

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter: 2" X 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier (gal/ft.): 0.16 0.65 1.47 2.61

Start purge: 1033 @ 200ml/min Depth to Water When Sampled: 10.83

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: uS/cm	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: ml
1033	6.68	17.01	230	21	52	2.81	500
1136	6.65	16.81	212	13	56	1.41	1100
1139	6.65	16.70	205	9	59	1.37	1700
1142	6.63	16.69	210	6	60	1.31	2300
1145	6.64	16.67	207	~~8~~ 5	60	1.33	2900

Lock Present (yes/no)?: Y

Fixtures Replaced: _____

Weather Conditions/Ambient Temperature: Sunny

Comments: Fe^{2+}: 0.0 mg/L

Signature of Sampler: [signature]

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Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344-MW-3-250614	Sample Date: (mm/dd/yy)	06/25/14
Sampler Name:	David Strunk	Sample Time (hhmm):	1120
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-3

Name of Duplicate Sample: _____ MS/MSD collected (yes/no)?: No

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing X Dedicated Equip. X

Well Diameter: 2" X 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier (gal/ft.): 0.16 0.65 1.47 2.61

Start purge: 1100 @ 200 ml/min Depth to Water When Sampled: 11.42

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: µS	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: ml
1103	6.68	19.30	452	13	96	2.81	500
1106	6.75	19.17	437	8	87	0.69	1100
1109	6.72	19.10	430	6	82	0.65	1700
1112	6.70	19.07	425	6	81	0.63	2300
1115	6.71	19.06	425	6	77	0.60	2900

Lock Present (yes/no)?: Yes

Fixtures Replaced: _____

Weather Conditions/Ambient Temperature: Sunny

Comments: Fe^{2+}: 0.0 mg/L

Signature of Sampler: [signature]

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Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344-MW-4-250614	Sample Date: (mm/dd/yy)	06/24/14
Sampler Name:	David Strunk	Sample Time (hhmm):	1220
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-C1

Name of Duplicate Sample: WG-2344-Dup1-250614 @ 1225 MS/MSD collected (yes/no)?: NO

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter:	2" X	4"	6"	8"
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 1202 @ 200 ml/min Depth to Water When Sampled: 9.73

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: µS/cm	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/l	Volume Unit: ml
1205	6.76	17.10	564	21	78	0.83	500
1208	6.69	16.98	579	19	76	0.71	1000
1211	6.70	16.95	573	13	81	0.69	1700
1214	6.69	16.95	574	10	63	0.63	2300
1217	0.68	16.93	574	7	83	0.65	2900

Lock Present (yes/no)?: yes

Fixtures Replaced: _____

Weather Conditions/Ambient Temperature: Sunny

Comments: Fe^{2+}: 0.0 mg/L

Signature of Sampler: _____

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Test America- Pleasanton

Client Name/Address:	Project / PO Number:
Antea Group/UPRR **1155 North 1st Street, Suite 201** **San Jose, CA 95112**	**Santa, Rosa - 2 Fourth Street and 24 Sixth Street** **PEDD_2344-9-Rev0**
Project Manager/Phone Number: **Lia Holden / 408-606-4919** Sampler: Blaine Tech Services	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO & MORO (SW8015)	PAHs (8270C SIM)								Special Instructions
WG-2344-MW1-250614	WG	Various	4	6/25/14 @1040	Various	X	X								8015 analysis with and without Silica Gel Clean-up
WG-2344-MW2-250614	WG	Various	4	6/25/14 @1150	Various	X	X								
WG-2344-MW3-250614	WG	Various	4	6/25/14 @1120	Various	X	X								
WG-2344-MW4-250614	WG	Various	4	6/25/14 @1228	Various	X	X								
WG-2344-DUP1-250614	WG	Various	2	6/25/14 @1225	Various	X									With Silica Gel only

Relinquished By: Date/Time: 6/25/14 @ 1500	Received by: Date/Time: 6/25/14 @ 1500	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time: 6/26/14 @ 1315	Received by: Date/Time: 6/26/14 @ 1315	
Relinquished By: Date/Time:	Received in Lab by: Date/Time:	Sample Integrity: (Check) Intact _____ On Ice: _____ Custody Seal: _____

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

WELLHEAD INSPECTION CHECKLIST

Client Antea Date 6/25/14

Site Address UPRR Santa Rosa

Job Number 140625-DS1 Technician DS

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	X							
MW-2	X							
MW-3		X						
MW-4	X							

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Antea @ UPRR Santa Rosa				PROJECT NUMBER 140625-051			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. °C	INITIALS
YSI 556	09G100101	6/25/14 1005	pH: 4.09 7.09 10.00	4.05, 7.03, 10.00	Y	21.00	DG
"	"	"	Cond 3900 µs	3883	Y		
"	"	"	DO 100%	98.9%	Y	21.00	DG
"	"	"	ORP: 235.0 mV	235 mV	Y		

SPH or Purge Water Drum Log

Client: Antea

Site Address: UPRR @ Santa Rosa, CA

STATUS OF DRUM(S) UPON ARRIVAL						
Date	5/20/13	5/29/13	8/30/13	11.20.13	2/27/14	6/25/14
Number of drum(s) empty:	—					
Number of drum(s) 1/4 full:	—					1
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—	1				
Number of drum(s) full:	8	9				
Total drum(s) on site:	8	10	0	1	0	1
Are the drum(s) properly labeled?	yes	yes	—	yes	—	Y
Drum ID & Contents:	soil cuttings H2O	soil H2O	—	purge H2O	—	Purge H2O
If any drum(s) are partially or totally filled, what is the first use date:	5/16/13	5/16/13	—	8.30.13	—	2/27/14

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	5/21/13	5/29/13	8/30/13	11.20.13	2/27/14	6/25/14
Number of drums empty:	—					
Number of drum(s) 1/4 full:	—		1	1	1	1
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—					
Number of drum(s) full:	10	10	~~10~~			
Total drum(s) on site:	10	10	1	1	1	1
Are the drum(s) properly labeled?	Yes	Yes	yes	yes	Yes	Y
Drum ID & Contents:	soil Purge H2O	soil purge H2O	purge H2O	purge H2O	Purge H2O	Purge H2O

LOCATION OF DRUM(S)	
Describe location of drum(s):	Next to MW-3

FINAL STATUS						
Number of new drum(s) left on site this event	2	0	1	0	1	1
Date of inspection:	5/21/13	5/29/13	8/30/13	11.20.13	2/27/14	6/25/14
Drum(s) labelled properly:	Yes	Yes	yes	yes	Yes	Y
Logged by BTS Field Tech:			CW	BP	DW	
Office reviewed by:						

Appendix E

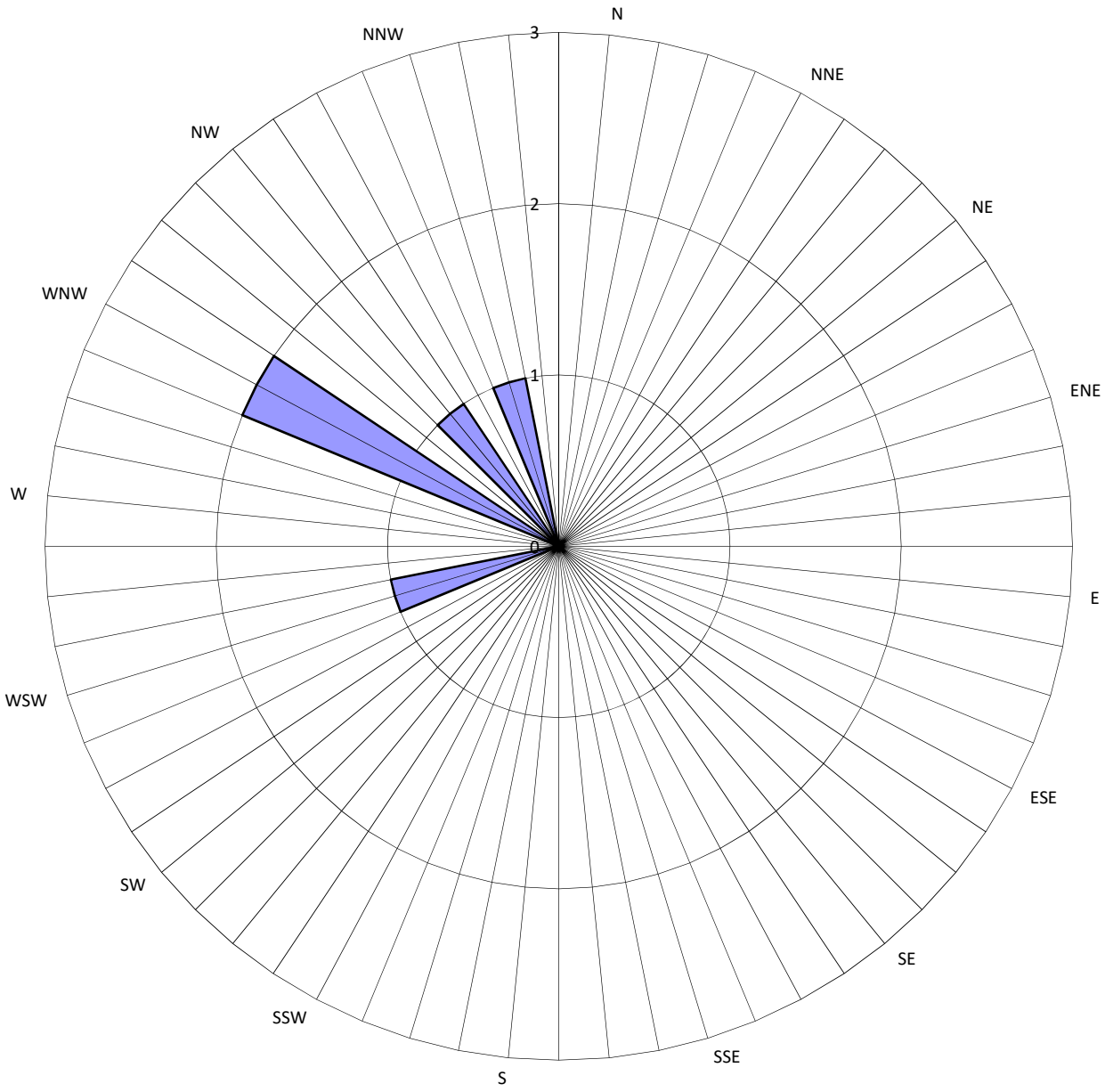
Groundwater Gradient and Flow Direction Data (Rose Diagram)

GROUNDWATER GRADIENT AND FLOW DIRECTION DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Monitoring Date	Groundwater Flow Direction	Groundwater Gradient (foot per foot)
May-13	West-Southwest	0.031
Aug-13	West-Northwest	0.035
Nov-13	West-Northwest	0.042
Feb-14	North-Northwest	0.012
Jun-14	Northwest	0.012
		Average: **0.026**

Notes:
Number of monitoring events = 5
- Data included in this table are from current and historical monitoring reports.

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA



Legend:
Each concentric gridline represents the number of monitoring events.
The diagram includes data from the Second Quarter 2013 through the Second Quarter 2014.

Appendix F

Certified Laboratory Analytical Report and Lab Validation Memo

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-58298-1
Client Project/Site: UPRR- Santa Rosa
Revision: 1

For:
Antea USA, Inc.
1155 North 1st Street
Suite 201
San Jose, California 95112

Attn: Ms. Lia Holden

Authorized for release by:
7/18/2014 3:58:52 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-58298-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-58298-1

Comments
The report is revised to correct results for DRO/MRO for sample #5..

Receipt
The samples were received on 6/26/2014 3:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 1.3º C.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Client Sample ID: WG-2344-MW1-250614 — Lab Sample ID: 720-58298-1

No Detections.

Client Sample ID: WG-2344-MW2-250614 — Lab Sample ID: 720-58298-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	49		49		ug/L	1		8015B	Total/NA

Client Sample ID: WG-2344-MW3-250614 — Lab Sample ID: 720-58298-3

No Detections.

Client Sample ID: WG-2344-MW4-250614 — Lab Sample ID: 720-58298-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	340		50		ug/L	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	210		99		ug/L	1		8015B	Total/NA
Diesel Range Organics [C10-C28]	70		50		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: WG-2344-DUP1-250614 — Lab Sample ID: 720-58298-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Client Sample ID: WG-2344-MW1-250614
Date Collected: 06/25/14 10:40
Date Received: 06/26/14 15:05

Lab Sample ID: 720-58298-1
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Acenaphthene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Acenaphthylene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Fluorene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Phenanthrene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Anthracene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Benzo[a]anthracene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Chrysene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Benzo[a]pyrene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Benzo[b]fluoranthene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Benzo[k]fluoranthene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Benzo[g,h,i]perylene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Indeno[1,2,3-cd]pyrene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Fluoranthene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Pyrene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1
Dibenz(a,h)anthracene	ND		0.095		ug/L		07/01/14 10:55	07/01/14 18:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*29 - 120*	*07/01/14 10:55*	*07/01/14 18:53*	*1*
Terphenyl-d14	*69*		*45 - 120*	*07/01/14 10:55*	*07/01/14 18:53*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		48		ug/L		06/30/14 10:11	06/30/14 15:41	1
Motor Oil Range Organics [C24-C36]	ND		97		ug/L		06/30/14 10:11	06/30/14 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*118*		*23 - 156*	*06/30/14 10:11*	*06/30/14 15:41*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		48		ug/L		06/30/14 10:18	07/01/14 01:32	1
Motor Oil Range Organics [C24-C36]	ND		97		ug/L		06/30/14 10:18	07/01/14 01:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 5*	*06/30/14 10:18*	*07/01/14 01:32*	*1*
p-Terphenyl	*91*		*31 - 150*	*06/30/14 10:18*	*07/01/14 01:32*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Client Sample ID: WG-2344-MW2-250614
Date Collected: 06/25/14 11:50
Date Received: 06/26/14 15:05

Lab Sample ID: 720-58298-2
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Acenaphthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Acenaphthylene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Fluorene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Phenanthrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Chrysene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*53*		*29 - 120*	*07/01/14 10:55*	*07/01/14 19:16*	*1*
Terphenyl-d14	*63*		*45 - 120*	*07/01/14 10:55*	*07/01/14 19:16*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**49**		49		ug/L		06/30/14 10:11	06/30/14 16:06	1
Motor Oil Range Organics [C24-C36]	ND		97		ug/L		06/30/14 10:11	06/30/14 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*117*		*23 - 156*	*06/30/14 10:11*	*06/30/14 16:06*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		49		ug/L		06/30/14 10:18	07/01/14 01:57	1
Motor Oil Range Organics [C24-C36]	ND		97		ug/L		06/30/14 10:18	07/01/14 01:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.07*		*0 - 5*	*06/30/14 10:18*	*07/01/14 01:57*	*1*
p-Terphenyl	*81*		*31 - 150*	*06/30/14 10:18*	*07/01/14 01:57*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Client Sample ID: WG-2344-MW3-250614
Date Collected: 06/25/14 11:20
Date Received: 06/26/14 15:05

Lab Sample ID: 720-58298-3
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Acenaphthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Acenaphthylene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Fluorene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Phenanthrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Chrysene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 19:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*29 - 120*	*07/01/14 10:55*	*07/01/14 19:40*	*1*
Terphenyl-d14	*65*		*45 - 120*	*07/01/14 10:55*	*07/01/14 19:40*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		06/30/14 10:11	06/30/14 15:41	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		06/30/14 10:11	06/30/14 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*111*		*23 - 156*	*06/30/14 10:11*	*06/30/14 15:41*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		06/30/14 10:18	07/01/14 02:21	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		06/30/14 10:18	07/01/14 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.07*		*0 - 5*	*06/30/14 10:18*	*07/01/14 02:21*	*1*
p-Terphenyl	*93*		*31 - 150*	*06/30/14 10:18*	*07/01/14 02:21*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Client Sample ID: WG-2344-MW4-250614
Date Collected: 06/25/14 12:20
Date Received: 06/26/14 15:05

Lab Sample ID: 720-58298-4
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Acenaphthene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Acenaphthylene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Fluorene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Phenanthrene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Anthracene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Benzo[a]anthracene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Chrysene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Benzo[a]pyrene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Benzo[b]fluoranthene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Benzo[k]fluoranthene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Benzo[g,h,i]perylene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Indeno[1,2,3-cd]pyrene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Fluoranthene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Pyrene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1
Dibenz(a,h)anthracene	ND		0.098		ug/L		07/01/14 10:55	07/01/14 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*29 - 120*	*07/01/14 10:55*	*07/01/14 20:03*	*1*
Terphenyl-d14	*62*		*45 - 120*	*07/01/14 10:55*	*07/01/14 20:03*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**340**		50		ug/L		06/30/14 10:11	06/30/14 16:06	1
Motor Oil Range Organics [C24-C36]	**210**		99		ug/L		06/30/14 10:11	06/30/14 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*114*		*23 - 156*	*06/30/14 10:11*	*06/30/14 16:06*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**70**		50		ug/L		06/30/14 10:18	07/01/14 02:45	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		06/30/14 10:18	07/01/14 02:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.03*		*0 - 5*	*06/30/14 10:18*	*07/01/14 02:45*	*1*
p-Terphenyl	*91*		*31 - 150*	*06/30/14 10:18*	*07/01/14 02:45*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Client Sample ID: WG-2344-DUP1-250614
Date Collected: 06/25/14 12:25
Date Received: 06/26/14 15:05

Lab Sample ID: 720-58298-5
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		06/30/14 10:18	07/18/14 10:08	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		06/30/14 10:18	07/18/14 10:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.08*		*0 - 5*	*06/30/14 10:18*	*07/18/14 10:08*	*1*
p-Terphenyl	*102*		*31 - 150*	*06/30/14 10:18*	*07/18/14 10:08*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-162207/1-A
Matrix: Water
Analysis Batch: 162227

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 162207

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Acenaphthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Acenaphthylene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Fluorene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Phenanthrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Chrysene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Fluoranthene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Pyrene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/14 10:55	07/01/14 18:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*52*		*29 - 120*	*07/01/14 10:55*	*07/01/14 18:30*	*1*
Terphenyl-d14	*76*		*45 - 120*	*07/01/14 10:55*	*07/01/14 18:30*	*1*

Lab Sample ID: LCS 720-162207/2-A
Matrix: Water
Analysis Batch: 162227

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 162207

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	4.92		ug/L		49	19 - 120
Acenaphthene	10.0	5.13		ug/L		51	24 - 120
Acenaphthylene	10.0	5.26		ug/L		53	24 - 120
Fluorene	10.0	5.32		ug/L		53	27 - 120
Phenanthrene	10.0	5.37		ug/L		54	31 - 120
Anthracene	10.0	5.92		ug/L		59	44 - 120
Benzo[a]anthracene	10.0	7.26		ug/L		73	48 - 120
Chrysene	10.0	7.84		ug/L		78	47 - 120
Benzo[a]pyrene	10.0	7.02		ug/L		70	43 - 120
Benzo[b]fluoranthene	10.0	7.47		ug/L		75	42 - 120
Benzo[k]fluoranthene	10.0	6.33		ug/L		63	42 - 120
Benzo[g,h,i]perylene	10.0	6.63		ug/L		66	35 - 120
Indeno[1,2,3-cd]pyrene	10.0	6.87		ug/L		69	36 - 120
Fluoranthene	10.0	6.49		ug/L		65	43 - 120
Pyrene	10.0	6.91		ug/L		69	47 - 120
Dibenz(a,h)anthracene	10.0	7.41		ug/L		74	33 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*51*		*29 - 120*
Terphenyl-d14	*76*		*45 - 120*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-162207/3-A
Matrix: Water
Analysis Batch: 162227

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 162207

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			10.0	4.87		ug/L		49	19 - 120	1	35
Acenaphthene			10.0	5.01		ug/L		50	24 - 120	2	35
Acenaphthylene			10.0	5.15		ug/L		51	24 - 120	2	35
Fluorene			10.0	5.19		ug/L		52	27 - 120	2	35
Phenanthrene			10.0	5.19		ug/L		52	31 - 120	3	35
Anthracene			10.0	5.79		ug/L		58	44 - 120	2	35
Benzo[a]anthracene			10.0	7.09		ug/L		71	48 - 120	2	35
Chrysene			10.0	7.70		ug/L		77	47 - 120	2	35
Benzo[a]pyrene			10.0	6.71		ug/L		67	43 - 120	5	35
Benzo[b]fluoranthene			10.0	7.20		ug/L		72	42 - 120	4	35
Benzo[k]fluoranthene			10.0	6.00		ug/L		60	42 - 120	5	35
Benzo[g,h,i]perylene			10.0	6.27		ug/L		63	35 - 120	6	35
Indeno[1,2,3-cd]pyrene			10.0	6.43		ug/L		64	36 - 120	7	35
Fluoranthene			10.0	6.35		ug/L		63	43 - 120	2	35
Pyrene			10.0	6.59		ug/L		66	47 - 120	5	35
Dibenz(a,h)anthracene			10.0	6.96		ug/L		70	33 - 120	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*50*		*29 - 120*
Terphenyl-d14	*72*		*45 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-162095/1-A
Matrix: Water
Analysis Batch: 162080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 162095

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		06/30/14 10:11	06/30/14 17:19	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		06/30/14 10:11	06/30/14 17:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*116*		*23 - 156*	*06/30/14 10:11*	*06/30/14 17:19*	*1*

Lab Sample ID: LCS 720-162095/2-A
Matrix: Water
Analysis Batch: 162080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 162095

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	2330		ug/L		93	34 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*116*		*23 - 156*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-162095/3-A
Matrix: Water
Analysis Batch: 162080

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 162095

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	2280		ug/L		91	34 - 115	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*114*		*23 - 156*

Lab Sample ID: MB 720-162096/1-A
Matrix: Water
Analysis Batch: 162081

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 162096

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		06/30/14 10:18	07/01/14 03:59	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		06/30/14 10:18	07/01/14 03:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*06/30/14 10:18*	*07/01/14 03:59*	*1*
p-Terphenyl	*97*		*31 - 150*	*06/30/14 10:18*	*07/01/14 03:59*	*1*

Lab Sample ID: LCS 720-162096/2-A
Matrix: Water
Analysis Batch: 162081

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 162096

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]			2500	1450		ug/L		58	32 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*82*		*31 - 150*

Lab Sample ID: LCSD 720-162096/3-A
Matrix: Water
Analysis Batch: 162081

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 162096

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1510		ug/L		60	32 - 119	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*84*		*31 - 150*

GC/MS Semi VOA

Prep Batch: 162207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58298-1	WG-2344-MW1-250614	Total/NA	Water	3510C	
720-58298-2	WG-2344-MW2-250614	Total/NA	Water	3510C	
720-58298-3	WG-2344-MW3-250614	Total/NA	Water	3510C	
720-58298-4	WG-2344-MW4-250614	Total/NA	Water	3510C	
LCS 720-162207/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-162207/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-162207/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 162227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58298-1	WG-2344-MW1-250614	Total/NA	Water	8270C SIM	162207
720-58298-2	WG-2344-MW2-250614	Total/NA	Water	8270C SIM	162207
720-58298-3	WG-2344-MW3-250614	Total/NA	Water	8270C SIM	162207
720-58298-4	WG-2344-MW4-250614	Total/NA	Water	8270C SIM	162207
LCS 720-162207/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	162207
LCSD 720-162207/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	162207
MB 720-162207/1-A	Method Blank	Total/NA	Water	8270C SIM	162207

GC Semi VOA

Analysis Batch: 162080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58298-1	WG-2344-MW1-250614	Total/NA	Water	8015B	162095
720-58298-2	WG-2344-MW2-250614	Total/NA	Water	8015B	162095
LCS 720-162095/2-A	Lab Control Sample	Total/NA	Water	8015B	162095
LCSD 720-162095/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	162095
MB 720-162095/1-A	Method Blank	Total/NA	Water	8015B	162095

Analysis Batch: 162081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58298-1	WG-2344-MW1-250614	Silica Gel Cleanup	Water	8015B	162096
720-58298-2	WG-2344-MW2-250614	Silica Gel Cleanup	Water	8015B	162096
720-58298-3	WG-2344-MW3-250614	Silica Gel Cleanup	Water	8015B	162096
720-58298-3	WG-2344-MW3-250614	Total/NA	Water	8015B	162095
720-58298-4	WG-2344-MW4-250614	Silica Gel Cleanup	Water	8015B	162096
720-58298-4	WG-2344-MW4-250614	Total/NA	Water	8015B	162095
LCS 720-162096/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	162096
LCSD 720-162096/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	162096
MB 720-162096/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	162096

Prep Batch: 162095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58298-1	WG-2344-MW1-250614	Total/NA	Water	3510C	
720-58298-2	WG-2344-MW2-250614	Total/NA	Water	3510C	
720-58298-3	WG-2344-MW3-250614	Total/NA	Water	3510C	
720-58298-4	WG-2344-MW4-250614	Total/NA	Water	3510C	
LCS 720-162095/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-162095/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-162095/1-A	Method Blank	Total/NA	Water	3510C	

GC Semi VOA (Continued)

Prep Batch: 162096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58298-1	WG-2344-MW1-250614	Silica Gel Cleanup	Water	3510C SGC	
720-58298-2	WG-2344-MW2-250614	Silica Gel Cleanup	Water	3510C SGC	
720-58298-3	WG-2344-MW3-250614	Silica Gel Cleanup	Water	3510C SGC	
720-58298-4	WG-2344-MW4-250614	Silica Gel Cleanup	Water	3510C SGC	
720-58298-5	WG-2344-DUP1-250614	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-162096/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-162096/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-162096/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 163251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-58298-5	WG-2344-DUP1-250614	Silica Gel Cleanup	Water	8015B	162096

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Client Sample ID: WG-2344-MW1-250614

Lab Sample ID: 720-58298-1

Date Collected: 06/25/14 10:40

Matrix: Water

Date Received: 06/26/14 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162207	07/01/14 10:55	JRM	TAL PLS
Total/NA	Analysis	8270C SIM		1	162227	07/01/14 18:53	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			162096	06/30/14 10:18	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	162081	07/01/14 01:32	JL	TAL PLS
Total/NA	Prep	3510C			162095	06/30/14 10:11	NVP	TAL PLS
Total/NA	Analysis	8015B		1	162080	06/30/14 15:41	JL	TAL PLS

Client Sample ID: WG-2344-MW2-250614

Lab Sample ID: 720-58298-2

Date Collected: 06/25/14 11:50

Matrix: Water

Date Received: 06/26/14 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162207	07/01/14 10:55	JRM	TAL PLS
Total/NA	Analysis	8270C SIM		1	162227	07/01/14 19:16	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			162096	06/30/14 10:18	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	162081	07/01/14 01:57	JL	TAL PLS
Total/NA	Prep	3510C			162095	06/30/14 10:11	NVP	TAL PLS
Total/NA	Analysis	8015B		1	162080	06/30/14 16:06	JL	TAL PLS

Client Sample ID: WG-2344-MW3-250614

Lab Sample ID: 720-58298-3

Date Collected: 06/25/14 11:20

Matrix: Water

Date Received: 06/26/14 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162207	07/01/14 10:55	JRM	TAL PLS
Total/NA	Analysis	8270C SIM		1	162227	07/01/14 19:40	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			162096	06/30/14 10:18	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	162081	07/01/14 02:21	JL	TAL PLS
Total/NA	Prep	3510C			162095	06/30/14 10:11	NVP	TAL PLS
Total/NA	Analysis	8015B		1	162081	06/30/14 15:41	JL	TAL PLS

Client Sample ID: WG-2344-MW4-250614

Lab Sample ID: 720-58298-4

Date Collected: 06/25/14 12:20

Matrix: Water

Date Received: 06/26/14 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			162207	07/01/14 10:55	JRM	TAL PLS
Total/NA	Analysis	8270C SIM		1	162227	07/01/14 20:03	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			162096	06/30/14 10:18	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	162081	07/01/14 02:45	JL	TAL PLS
Total/NA	Prep	3510C			162095	06/30/14 10:11	NVP	TAL PLS
Total/NA	Analysis	8015B		1	162081	06/30/14 16:06	JL	TAL PLS

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Client Sample ID: WG-2344-DUP1-250614
Date Collected: 06/25/14 12:25
Date Received: 06/26/14 15:05

Lab Sample ID: 720-58298-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3510C SGC			162096	06/30/14 10:18	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	163251	07/18/14 10:08	DCH	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-16

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-58298-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-58298-1	WG-2344-MW1-250614	Water	06/25/14 10:40	06/26/14 15:05
720-58298-2	WG-2344-MW2-250614	Water	06/25/14 11:50	06/26/14 15:05
720-58298-3	WG-2344-MW3-250614	Water	06/25/14 11:20	06/26/14 15:05
720-58298-4	WG-2344-MW4-250614	Water	06/25/14 12:20	06/26/14 15:05
720-58298-5	WG-2344-DUP1-250614	Water	06/25/14 12:25	06/26/14 15:05

Test America- Pleasanton

720-58298 154022

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 1155 North 1st Street, Suite 201 San Jose, CA 95112	Santa, Rosa - 2 Fourth Street and 24 Sixth Street PEDD_2344-9-Rev0
Project Manager/Phone Number: Lia Holden / 408-506-4919 Sampler: Blaine Tech Services	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO & MORO (SW8015)	PAHs (8270C SIM)								Special Instructions
WG-2344-MW1- 250614	WG	Various	4	6/25/14 @ 1040	Various	X	X								8015 analysis with and without Silica Gel Clean-up
WG-2344-MW2- 250614	WG	Various	4	6/25/14 @ 1150	Various	X	X								
WG-2344-MW3- 250614	WG	Various	4	6/25/14 @ 1120	Various	X	X								
WG-2344-MW4- 250614	WG	Various	4	6/25/14 @ 1228	Various	X	X								
WG-2344-DUP1- 250614	WG	Various	4	6/25/14 @ 1225	Various	X									With Silica Gel only

720-58298 Chain of Custody

Relinquished By: Date/Time: 6/25/14 @ 1500	Received by: Date/Time: 6/25/14 @ 1500	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time: 6/26/14 @ 1315	Received by: Date/Time: 6/26/14 @ 1315	1.3°c
Relinquished By: Date/Time: 6/26/14 @ 1505	Received in Lab by: Date/Time. 6/26/14 1505	Sample Integrity (Check) Intact _____ On Ice: _____ Custody Seal: _____

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

7/18/2014

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-58298-1

Login Number: 58298

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CONESTOGA-ROVERS & ASSOCIATES

20818 44th Avenue West, Suite 190
Lynnwood, WA 98036
Telephone: (206) 914-3141
www.CRAworld.com

MEMORANDUM

TO:	Lia Holden	REF. NO.:	058324-2344
FROM:	Jeffrey Cloud/eew/526-NF	DATE:	July 29, 2014
CC:	Jesse Orth, Julie Lidstone		

RE: Analytical Results and Reduced Validation of Report J58298
Quarterly Groundwater Sampling
Union Pacific Railroad (UPRR) - 2 Fourth Street and 34 Sixth Street
Santa Rosa, California
June 2014

1.0 Introduction

The following document details a reduced validation of analytical results for groundwater samples collected in support of the Quarterly Groundwater Sampling at the 2 Fourth Street and 34 Sixth Street Site in Santa Rosa, California during June 2014. Samples were submitted to TestAmerica, located in Pleasanton, California. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS) and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and applicable guidance from the document entitled "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review", USEPA 540-R-08-01, June 2008 subsequently referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in the methods. The sample chain of custody document and analytical report were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

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REGISTERED COMPANY FOR ISO 9001 ENGINEERING DESIGN

All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (<6°C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for semivolatile organic compound (SVOC) and diesel range organics (DRO)/motor oil range organics (ORO) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against the associated control limits. All surrogate recoveries met the above criteria.

5.0 Laboratory Control Sample (LCS) Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS/LCSD contained the compounds specified in the method. All LCS recoveries and RPDs were within the associated control limits, demonstrating acceptable analytical accuracy and precision.

6.0 Field QA/QC Samples

The field QA/QC consisted of one field duplicate sample set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 and 100 percent for water and soil samples, respectively. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criteria is one or two times the PQL value for water and soil samples, respectively.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7.0 Analyte Reporting

The laboratory did not report any detected concentrations below the laboratory's PQL/reporting limit (RL).

8.0 Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
UNION PACIFIC RAILROAD (UPRR) - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JUNE 2014

					Analysis/Parameters		
Sample Identification	***Location***	***Matrix***	***Collection Date (mm/dd/yyyy)***	***Collection Time (hr:min)***	***SW8015D***	***SW8270SIM***	***Comments***
WG-2344-MW1-250614	MW1	Water	06/25/2014	10:40	X	X	
WG-2344-MW2-250614	MW2	Water	06/25/2014	11:50	X	X	
WG-2344-MW3-250614	MW3	Water	06/25/2014	11:20	X	X	
WG-2344-MW4-250614	MW4	Water	06/25/2014	12:20	X	X	
WG-2344-DUP1-250614	MW4	Water	06/25/2014	12:25	X		FD(WG-2344-MW4-250614)

Notes:

FD - Field Duplicate Sample of sample in parenthesis

TABLE 2

ANALYTICAL METHODS
QUARTERLY GROUNDWATER SAMPLING
UNION PACIFIC RAILROAD (UPRR) - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JUNE 2014

Parameter	*Method*	*Matrix*
Semivolatile Organic Compounds (SVOCs)	SW-846 8270C	Water
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	SW-846 8015B	Water

Notes:

Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
UNION PACIFIC RAILROAD (UPRR) - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JUNE 2014

Sample Location:		*MW1*	*MW2*	*MW3*	*MW4*	*MW4*
Sample ID:		*WG-2344-MW1-250614*	*WG-2344-MW2-250614*	*WG-2344-MW3-250614*	*WG-2344-DUP1-250614*	*WG-2344-MW4-250614*
Sample Date:		*6/25/2014*	*6/25/2014*	*6/25/2014*	*6/25/2014*	*6/25/2014*
Sample Depth:		*-*	*-*	*-*	*-*	*-*
					(Duplicate)	
Parameters	***Units***					
Semivolatile Organic Compounds						
Acenaphthene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Acenaphthylene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Anthracene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Benzo(a)anthracene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Benzo(a)pyrene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Benzo(b)fluoranthene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Benzo(g,h,i)perylene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Benzo(k)fluoranthene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Chrysene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Dibenz(a,h)anthracene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Fluoranthene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Fluorene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Indeno(1,2,3-cd)pyrene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Naphthalene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Phenanthrene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Pyrene	µg/L	<0.095	<0.10	<0.10	--	<0.098
Petroleum Products						
Total Petroleum Hydrocarbons (C10-C28) DRO	µg/L	<48	49	<50	--	340
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	<48	<49	<50	<50	70
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	µg/L	<97	<97	<99	--	210
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L	<97	<97	<99	<100	<99

Notes:

-- Not applicable
DRO - Diesel Range Organics
< - - Not detected at the associated reporting limit

Appendix G

Non-Hazardous Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 11786034

2. Page 1 of 1

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD - UNI768
ANNE THRIAULT
LONG BEACH CA 2401 E SEPULVEDA BL 90810

4. Generator's Phone (626 890-7073

5. Transporter 1 Company Name
ASBURY ENVIRONMENTAL SERVICES

6. US EPA ID Number
CAD028277036

A. State Transporter's ID

B. Transporter 1 Phone (800)974-4495

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
DEMENNO / KERDOON
2000 N. ALAMEDA STREET
COMPTON CA 90222

10. US EPA ID Number
CAT080013352

E. State Facility's ID

F. Facility's Phone
(310)537-7100

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZARDOUS WASTE, LIQUID WATER	1	DM	10	G
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above
H039

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT : CHEMTREC 1-800-424-9300 * PROFILE # 9B1 : 360886 WATER * PO# A110183798 * APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT

SITE: 2 4TH ST / 34 6TH ST, , SANTA ROSA, CA 95401 1X55 DM

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year
ON BEHALF ANDREW HINTON		04	08	14

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
ANDREW HINTON		04	08	14

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

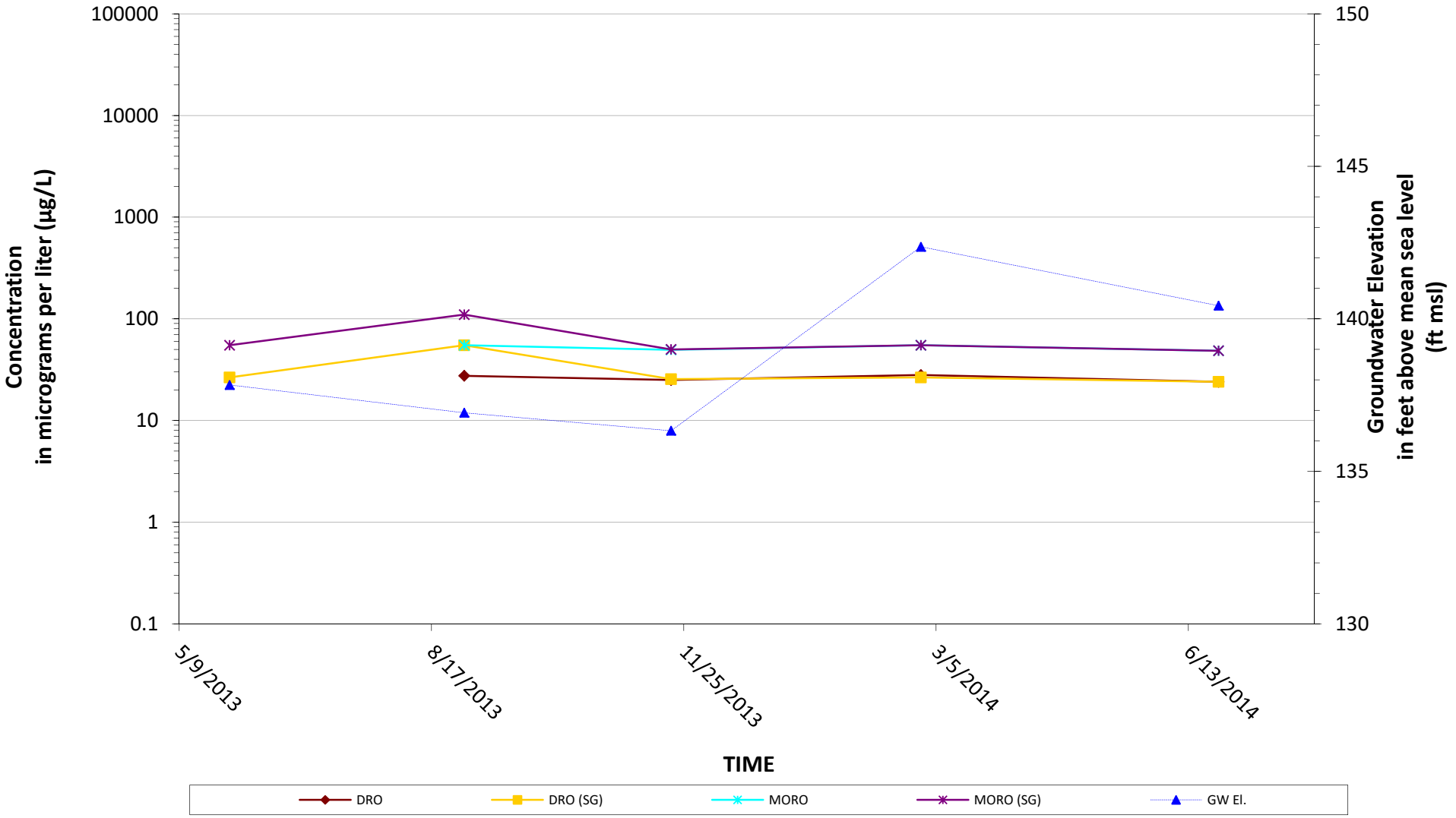
Printed/Typed Name	Signature	Date Month	Day	Year
ARMANDO TISCARENO		04	15	14

Appendix H

Time Series Hydrographs

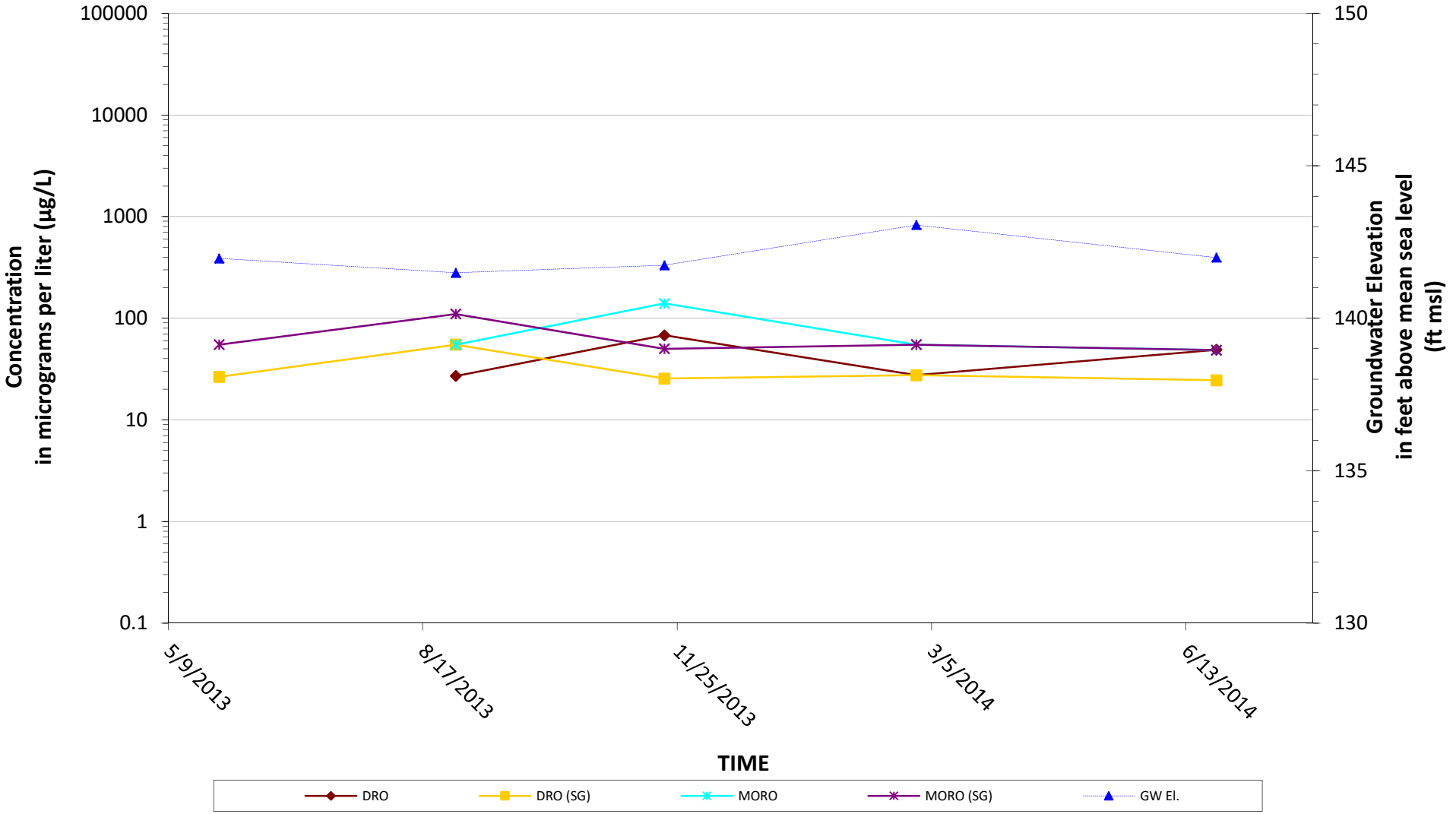
WELL MW-1
DRO and MORO CONCENTRATIONS AND
GROUNDWATER ELEVATION VERSUS TIME

UNION PACIFIC RAILROAD
SANTA ROSA, CALIFORNIA



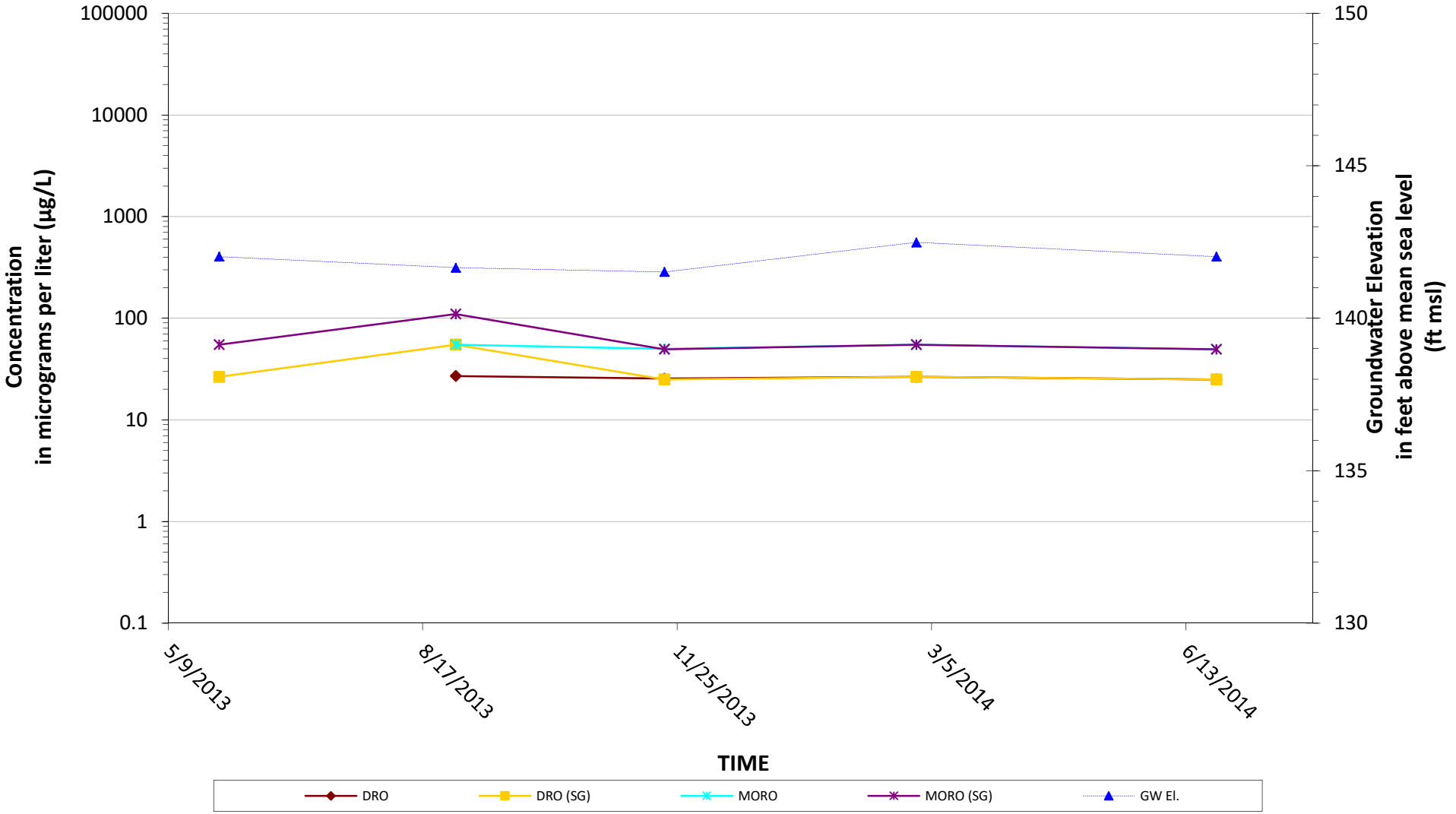
WELL MW-2
DRO AND MORO CONCENTRATIONS AND
GROUNDWATER ELEVATION VERSUS TIME

UNION PACIFIC RAILROAD
SANTA ROSA, CALIFORNIA



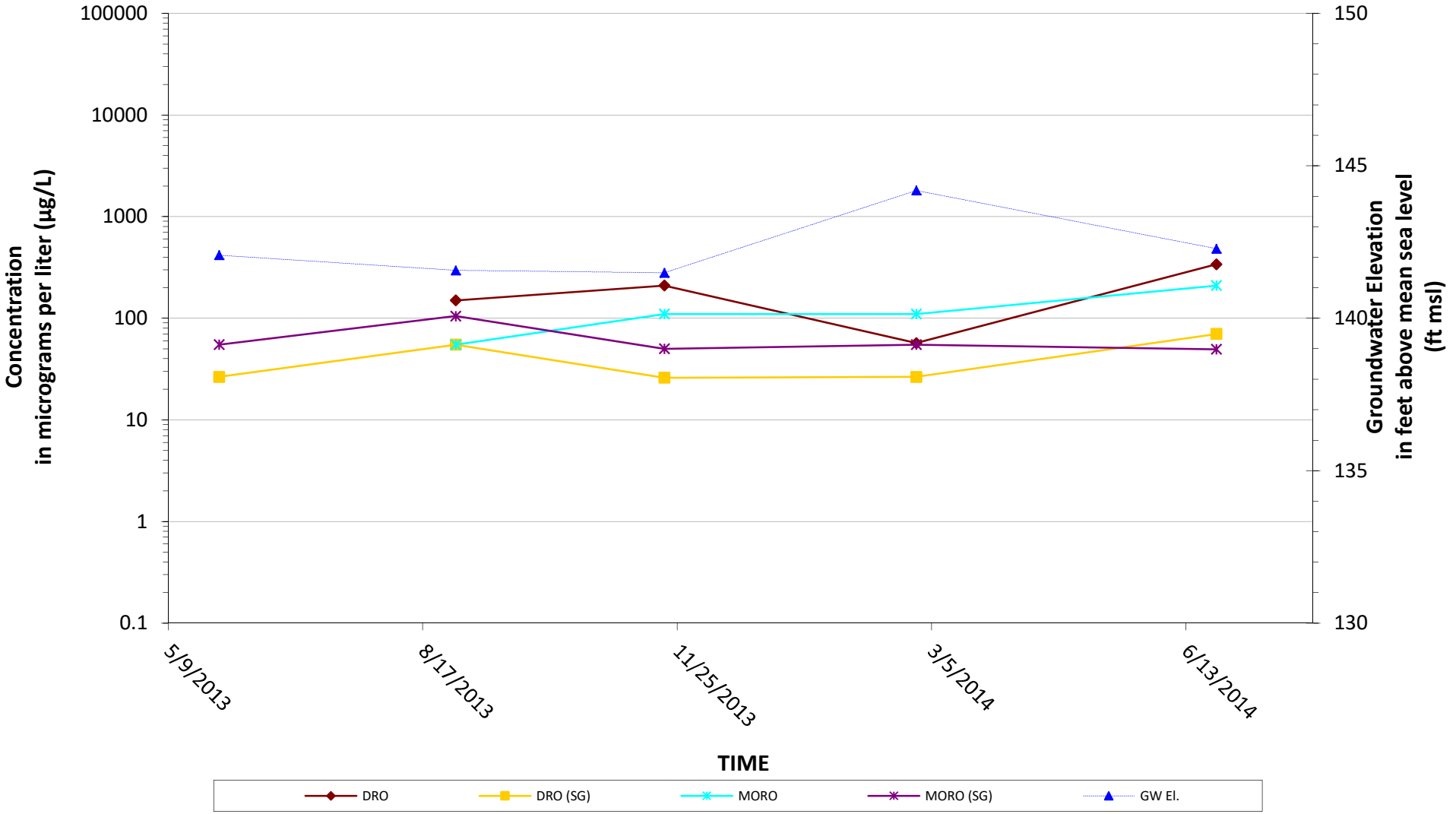
WELL MW-3
DRO AND MORO CONCENTRATIONS AND
GROUNDWATER ELEVATION VERSUS TIME

UNION PACIFIC RAILROAD
SANTA ROSA, CALIFORNIA



WELL MW-4
DRO AND MORO CONCENTRATIONS AND
GROUNDWATER ELEVATION VERSUS TIME

UNION PACIFIC RAILROAD
SANTA ROSA, CALIFORNIA



Appendix I

Historical Groundwater Analytical Results

GEOMATRIX

TABLE 4

ANALYTICAL RESULTS FOR GRAB GROUNDWATER[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in micrograms per liter (µg/l)

Borehole	Sample Date	TPHd	TPHd (f)	TPHm	TPHm (f)	PNAs	PNAs (f)	MTBE	VOCs[2]
SRB20	11/15/96	<50	--	<200	--	--	--	--	ND
SRB21	11/15/96	<50	--	<200	--	--	--	--	ND
SRB22	11/15/96	<50	--	<200	--	--	--	--	ND
SRB23	11/15/96	<50	--	<200	--	--	--	--	ND
SRB26	11/15/96	<50	--	<200	--	--	--	--	ND
SRB29	11/15/96	<50	--	<200	--	--	--	--	ND
SRB30	11/15/96	<50	--	<200	--	--	--	--	Acetone: 300
SRB31	11/15/96	<50	--	<200	--	--	--	--	ND
SRB32	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB33									
SRB34	3/7/00	**160**[3]	<50	**420**	<250	<0.2	<0.2	<5	ND
SRB35	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB36[4]	3/6/00	**67**[3]/<50	<50/<50	<250/<250	<250/<250	<0.2/<0.2	<0.2/<0.2	<5/<5	ND/ND
SRB37	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB38	3/6/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB39	3/7/00	<50	<50	<250	<250	<0.2	<0.2	**9.8**	ND
SRB40	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB41	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND

Notes:

1. Samples collected by Geomatrix Consultants, Inc. on November 14 and 15, 1996 and March 6 and 7, 2000. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California; TPHd and TPHm were analyzed using EPA Method 8015 following silica gel cleanup procedure EPA Method 3630C and VOCs were analyzed for using EPA Method 8240. Samples analyzed by Entech Analytical, Inc. of Sunnyvale, California and analyzed for TPHd and TPHm using EPA Method 8015M following silica gel cleanup procedure per method 3630C; PNAs using EPA Method 8270SIM; and VOCs including MTBE and other fuel oxygenates using EPA Method 8260. Samples that were collected in 2000 for TPHd, TPHm, and PNAs were analyzed before and after passing through a 0.7 micron galss fiber filter.
2. Chloroform was detected in equipment blank sample at a concentration of 9.6 µg/l.
3. Lab sheet indicates that result is quantified as diesel; chromatographic pattern not typical of fuel.
4. Results of sample/blink duplicate sample (labeled SRB46) are shown.

Abbreviations:

TPHd = total petroleum hydrocarbons quantified as diesel
TPHm = total petroleum hydrocarbons quantified as motor oil
f = filtered with 0.7 micron glass fiber filter
PNAs = polynuclear aromatic hydrocarbons
MTBE = methyl tertiary butyl ether
VOCs = volatile organic compounds
ND = not detected above laboratory reporting limits (for VOCs: 5 to 100 µg/l).

GEOMATRIX

TABLE 3

ANALYTICAL RESULTS OF
SOIL AND GROUNDWATER SAMPLES COLLECTED BY OTHERS

Santa Rosa Station Phased Closing Property

Santa Rosa, California

ID	Owner	Date	Depth (feet bgs)	TPHg	TPHd	TPHmo	TPHog	TPHk	BTEX	PAHs	CVOCs
Soil Borings (milligrams per kilogram [mg/kg])											
RBB-1	RWQCB	4/90	**12**	ND	ND	NA	**200**	NA	NA	See Note 1	NA
RBB-2	RWQCB	4/90	NA	ND	ND	NA	ND	NA	NA	NA	NA
RBMW-2	RWQCB	4/90	**6**	ND	**20**	NA	NA	NA	NA	NA	NA
			11	ND	ND	NA	NA	NA	ND	NA	NA
			16	ND	ND	NA	NA	NA	ND	NA	NA
			21	ND	ND	NA	NA	NA	ND	NA	NA
			31	ND	ND	NA	NA	NA	ND	NA	NA
RBMW-3	RWQCB	4/90	**6**	ND	**30**	NA	NA	NA	ND	NA	NA
			11	ND	**14**	NA	NA	NA	X = **0.011**	NA	NA
			16	ND	**11**	NA	NA	NA	ND	NA	NA
			21	ND	ND	NA	NA	NA	ND	NA	NA
			27.5	ND	**12**	NA	NA	NA	ND	NA	NA
			31	ND	ND	NA	NA	NA	ND	NA	NA
IC-B1	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B2	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B3	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B4	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B6	Industrial Compliance	5/92	**11**	ND	**37**	ND	NA	ND	ND	ND	NA
Grab Groundwater (micrograms per liter [µg/l])											
IC-B1	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B2	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B3	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B4	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B6	Industrial Compliance	5/92	--	ND	**31,000**	NA	NA	NA	ND	NA	NA

GEOMATRIX

TABLE 3

ANALYTICAL RESULTS OF SOIL AND GROUNDWATER SAMPLES COLLECTED BY OTHERS

Santa Rosa Station Phased Closing Property

Santa Rosa, California

ID	Owner	Date	Depth (feet bgs)	TPHg	TPHd	TPHmo	TPHog	TPHk	BTEX	PAHs	CVOCs
Monitoring Wells (micrograms per liter [µg/l])											
GW-24[2]	Mead Clark	4/6/88	--	ND	NA	NA	NA	NA	ND	NA	PCE = **7.6**
GW-24[2]	Mead Clark	7/19/89	--	ND	NA	NA	NA	NA	B = **0.7**	NA	NA
GW-24[2]	Mead Clark	2/19/90	--	ND	NA	NA	NA	NA	E = **0.3**	NA	NA
GW-27[2]	Mead Clark	4/14/88	--	ND	NA	NA	NA	NA	ND	NA	PCE = **0.8**
GW-27[2]	Mead Clark	7/19/89	--	NA	NA	NA	NA	NA	ND	NA	NA
RBMW-2	RWQCB	6/20/90	--	ND	ND	NA	ND	NA	ND	NA	NA
RBMW-2	RWQCB	6/25/91	--	ND	ND	NA	ND	NA	ND	NA	NA
RBMW-3	RWQCB	6/20/90	--	ND	**400**	NA	ND	NA	ND	NA	NA
RBMW-3	RWQCB	6/25/91	--	ND	ND	NA	ND	NA	ND	NA	PCE = **2.5**

Notes:

[1] PNAs detected in boring RBB-1 include naphthalene (2.08 mg/kg); 2-methylnaphthalene (1.15 mg/kg); acenaphthalene (1.45 mg/kg); dibenzofuran (1.13 mg/kg); fluorene (1.38 mg/kg); phenanthrene (3.86 mg/kg); anthracene (0.557 mg/kg), and benzo(a)anthracene (0.324 mg/kg).

[2] GW-24 and GW-27 were installed on behalf of Mead Clark. The analytical results for GW-24 and GW-27 show only the monitoring events in which constituents were detected. Six monitoring events have been performed (4/88, 6/88, 10/88, 1/89, 4/89, 7/89). Chlorinated volatile organic compounds (CVOCs) were tested for only in 4/88. Additional groundwater sampling was conducted at monitoring well GW-24 for TPHg and BTEX (2/90, 6/90, and 10/90).

Abbreviations:

TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
TPHmo = total petroleum hydrocarbons quantified as motor oil
TPHog = total petroleum hydrocarbons quantified as oil & grease
TPHk = total petroleum hydrocarbons quantified as kerosene
RWQCB = Regional Water Quality Control Board - North Coast Region
BTEX = benzene, toluene, ethylbenzene, and xylenes
PAHs = polynuclear aromatic hydrocarbons
CVOCs = chlorinated volatile organic compounds
feet bgs = feet below ground surface
NA = not available
ND = not detected above the laboratory detection limit
PCE = tetrachloroethene

GEOMATRIX

TABLE 4

ANALYTICAL RESULTS FOR QUARTERLY GROUNDWATER MONITORING[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Concentrations in micrograms per liter (µg/l)

Well ID[2]	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TPHg	TPHd	TPHmo	PAHs
SRMW-05	12/20/2001	NA[3]	NA	NA	NA	NA	NA	<50[4]	<300	<0.94
	3/19/2002	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	6/5/2002	NA	NA	NA	NA	NA	NA	<61	<610	<0.10
	9/17/2002	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
SRMW-06	12/20/2001	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	3/19/2002	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	6/5/2002	NA	NA	NA	NA	NA	NA	<60	<600	<0.11
	9/17/2002	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
SRMW-07	12/20/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<50	<300	<0.94
	3/19/2002	<0.5	<0.5	<0.5	<0.5	**0.6**	<50	<50	<300	<0.94
	6/5/2002	<1	<1	<1	<1	**5.3**	<50	**130U**[5]	<500	<0.10
	9/17/2002	<0.5	<0.5	<0.5	<1	**12**	<50	<50	<500	<0.10
SRMW-08	12/20/2001	<0.5	<0.5	<0.5	<0.5	**4.4**	<50	NA	NA	NA
	3/19/2002	<0.5/<0.5[6]	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	**5.3/5.2**	<50/<50	NA	NA	NA
	6/5/2002	<1/<1	<1/<1	<1/<1	<1/<1	**11/11**	<50/<50	NA	NA	NA
	9/17/2002	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<1/<1	**14/16**	<50/<50	NA	NA	NA
SRMW-10	12/20/2001	NA	NA	NA	NA	NA	NA	<50/<50	<300/<300	<0.94/<0.94
	3/19/2002	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	6/5/2002	NA	NA	NA	NA	NA	NA	<62	<620	<0.10
	9/17/2002	NA	NA	NA	NA	NA	NA	<50	<500	<0.10

Notes:

[1] Monitoring well groundwater samples collected by Geomatrix Consultants, Inc., and analyzed by Severn Trent Laboratories (STL) San Francisco of Pleasanton, California for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by U.S. EPA Method 8260; total petroleum hydrocarbons quantified as gas (TPHg), diesel (TPHd), and motor oil (TPHmo) by U.S. EPA Method 8015M; and polynuclear aromatic hydrocarbons (PAHs) by U.S. EPA Method 8270 SIM.

[2] Monitoring wells SRMW-05 and SRMW-06 are located west of the site on the Salvador Trust property, SRMW-07 and SRMW-08 are located east of the site on property owned by the NWPRA, and well MW-10 is located on the site.

[3] NA = not analyzed.

[4] "<" = not detected above the laboratory detection limit shown.

[5] "U" indicates compound was positively identified; the associated numerical value is less than five times the concentration detected in the field equipment blank and the result is considered non-detect.

[6] "<0.5/<0.5" = primary sample/duplicate sample

GEOMATRIX

TABLE 9

LEACHABILITY TEST RESULTS[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Borehole	Date Collected	Sampling Interval[2]	TPHd[3] (mg/kg)	TPHd[2] (WET)[4] (µg/l)	TPHmo[3] (mg/kg)	TPHmo[3] (WET)[4] (µg/l)	Total PNAs[5] (mg/kg)	PNAs[5] (WET)[4] (µg/l)
SRB-32	3/6/00	1.0	--	--	--	--	8.223	<0.2[6]
SRB-36	3/6/00	1.0	430[7]	<50[6]	780	<250[6]	--	--
SRB-40	3/7/00	7.5	210[7]	<50	370	<250	<0.05	<0.2
SRB-51	9/27/00	19.5	8,500	--	7600	--	30	<2.9
SRB-52	9/27/00	19.5	830	--	970	--	7.4	<0.73
SRB-53L	11/14/02	5.0	350	1,300/50[8]	810	630/<100[8]	--	--
	11/14/02	11.0	20	710/<50[8]	61	<100/<100[8]	--	--
SRB-79L	11/14/02	5.0	310	420/<50[8]	950	350/<100[8]	--	--
	11/14/02	11.0	<10	640/<50[8]	<50	<100/<100[8]	--	--
SRB-88L	11/14/02	8.0	1,400	1,100/<50[8]	1,800	190/<!00[8]	--	--
	11/14/02	11.0	610	910/<50[8]	780	140/<100[8]	--	--
SRB-100L	11/14/02	4.75	430	350/<50[8]	2,100	320/<100[8]	--	--
	11/14/02	8.0	16,000	2,400/61[8]	15,000	810/<100[8]	--	--
PL-06L	11/14/02	1.0	1,400	880/<50[8]	4,400	770/<100[8]	--	--
	11/14/02	5.0	670	1,200/<50[8]	920	320/<100[8]	--	--
PL-12L	11/14/02	1.0	16,000	14,000/690[8]	22,000	1000/<100[8]	--	--
	11/14/02	5.0	3,700	2,400/180[8]	4,100	520/<100[8]	8.35	--

Notes:

1 Samples collected by Geomatrix Consultants, Inc. Samples collected in March 2000 were analyzed by Entech Analytical, Inc. of Sunnyvale, California. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd., of Berkeley, California.

2 Sampling depth in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 1.0 equals a six inch sample collected from 0.5 – 1.0 feet below ground surface).

3 TPHd = total petroleum hydrocarbons as diesel; TPHmo = total petroleum hydrocarbons as motor oil. Samples analyzed by EPA Method 8015M followed by a silica gel cleanup by EPA Method 3630C.

4 WET = waste extraction test, waste extraction test was performed using simulated rainwater. Results are presented in micrograms per liter.

5 PNAs = polynuclear aromatic compounds. In March 2000, samples were analyzed by EPA Method 8270 SIM. In September 2000, samples were analyzed by EPA Method 8270.

6 The leachability tests for TPH and PNAs from samples SRB-36 and SRB-32, respectively, were performed one day beyond their hold times.

7 Lab sheet indicates that result is quantified as diesel but the chromatographic pattern is not typical of fuel.

8 1,300/<50 = result without silica gel cleanup / result with silica gel cleanup. The silica gel cleanup method removes non-hydrocarbons that would otherwise interfere with measurement of petroleum hydrocarbons. The data generated following silica gel cleanup is used for analysis of the leachability test results.

-- = not analyzed

TABLE 10

ANALYTICAL RESULTS FOR GRAB GROUNDWATER SAMPLES[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Results reported in micrograms per liter (µg/l)

Borehole	Sample Date	Sample Interval	TPHg	TPHd	TPHd with silica gel cleanup	TPHd(f)	TPHd(f) with silica gel cleanup	TPHmo	TPHmo with silica gel cleanup	TPHmo(f)	TPHmo(f) with silica gel cleanup	PAHs	PAHs(f)	BTEX	MTBE	Other VOCs
Sitewide																
SRB-20	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-21	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-26	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-29	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-30	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	Acetone = **300**
SRB-31	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-32	3/7/2000	10 - 13	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-36[2]	3/6/2000	17 - 22	--	**67**[3]/<50	--	<50/<50	--	<250/<250	--	<250/<250	--	<0.2/<0.2	<0.2/<0.2	--	<5/<5	ND/ND
SRB-37	3/7/2000	21 - 25	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-38	3/6/2000	12 - 16	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-39	3/7/2000	NS	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	**9.8**	ND
SRB-40	3/7/2000	16 - 21	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-41	3/7/2000	11 - 16	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-42	9/26/2000	16 - 21	--	--	--	--	--	--	--	--	--	--	--	--	**77**	--
SRB-42D[4]	9/26/2000	16 - 21	--	--	--	--	--	--	--	--	--	--	--	--	**75**	--
SRB-43	9/26/2000	23 - 28	--	--	--	--	--	--	--	--	--	--	--	--	**19**	--
SRB-45	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	--	--	--	--	--
SRB-47	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	--	--	--	--	--
SRB-49	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	<10	--	<0.5	--	--
SRB-49D	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	<9.4	--	<0.5	--	--
SRB-50	9/26/2000	23 - 28	--	--	--	--	--	--	--	--	--	--	--	--	**11**	--
SRB-55	9/25/2001	22 - 25	<50	--	--	--	--	--	--	--	--	--	--	<1.0	**2.8**	--
SRB-58	9/25/2001	17 - 19	<50	--	--	--	--	--	--	--	--	--	--	<5.0	**120**	--
SRB-59	9/25/2001	NS	<50	--	--	--	--	--	--	--	--	--	--	E = **1.7** X = **14.5**	**34**	--
SRB-60	9/25/2001	NS	<50	--	--	--	--	--	--	--	--	--	--	E = **1.0** X = **9.4**	**9.6**	--
SRB-61	9/24/2001	17 - 22	<50	--	--	--	--	--	--	--	--	--	--	<1.0	**6.5**	--
Fenced Enclosure																
SRB-62	9/26/2001	22 - 25	<50	--	--	--	--	--	--	--	--	--	--	T = **1.5**	**7.6**	--
SRB-74	6/25/2002	24 - 28	<50	<71	<71	<79	<79	<71	<71	<79	<79	--	--	<0.5[5]	**33**	--

TABLE 10

ANALYTICAL RESULTS FOR GRAB GROUNDWATER SAMPLES[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Results reported in micrograms per liter (µg/l)

Borehole	Sample Date	Sample Interval	TPHg	TPHd	TPHd with silica gel cleanup	TPHd(f)	TPHd(f) with silica gel cleanup	TPHmo	TPHmo with silica gel cleanup	TPHmo(f)	TPHmo(f) with silica gel cleanup	PAHs	PAHs(f)	BTEX	MTBE	Other VOCs
Northwestern Area																
SRB-22	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-23	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-34	3/7/2000	NS	--	**160**[3]	--	<50	--	**420**	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-35	3/7/2000	9 - 13	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-44	9/25/2000	17 - 22	--	**13,000**	--	**400**[6]	--	**12,000**	--	**360**[6]	--	--	--	--	--	--
SRB-46	9/25/2000	16 - 21	--	<50	--	--	--	<300	--	--	--	--	--	--	--	--
SRB-48	9/25/2000	17 - 22	--	**46,000**	--	**1500**[6]	--	**38,000**	--	**950**[6]	--	<190	--	<0.5	--	--
SRB-54	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	<9.4	--	<0.5	2.3	--
SRB-75	6/25/2002	18 - 22	**76**	**4,100**	**3,700**	**180**	<63	**3,900**	**3,800**	<63	<63	--	--	<0.5[5]	**3.3**	--
SRB-76	6/24/2002	15 - 19	<50	<58	<58	--	--	<58	<58	--	--	--	--	<1	<5	--
SRB-77	6/24/2002	18 - 22	<50	**950**	**960**	**180**	<67	**1,100**	**1,100**	<67	<67	--	--	<0.5[5]	**0.6**	--

Notes:

[1] Samples were collected by Geomatrix Consultants, Inc. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California; TPHd and TPHmo were analyzed using EPA Method 8015 following silica gel cleanup procedure EPA Method 3630C and VOCs were analyzed for using EPA Method 8240. Samples collected in March 2000 were analyzed by Entech Analytical, Inc. of Sunnyvale, California, and analyzed for TPHd and TPHmo using EPA Method 8015M following silica gel cleanup procedure per Method 3630C; PNAs using Method 8270SIM; and VOCs including MTBE and other fuel oxygenates using EPA Method 8260. Samples that were collected in March 2000 for TPHd, TPHmo, and PAHs were analyzed before and after passing through a 0.7 micron glass fiber filter. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd. of Berkeley, California, for TPHd and TPHm using EPA Method 8015M following silica gel cleanup procedure by EPA Method 3630M; for BTEX and MTBE using EPA Method 8260B; and for PAHs using EPA Method 8270C. Samples collected in September 2001 were analyzed by Severn Trent Laboratories (STL), of Sacramento, California, for TPHg, TPHd, TPHmo by EPA Method 8015M and for MTBE by EPA Method 8260B. Samples collected in 2002 analyzed by STL San Francisco of Pleasanton, California and analyzed for TPHg, TPHd, and TPHmo by EPA Method 8015M following a silica gel cleanup by EPA Method 3630 and for BTEX and MTBE by EPA Method 8260B.

[2] Results of sample/blind duplicate sample (labeled SRB46) are shown.

[3] Lab sheet indicates that result is quantified as diesel; chromatographic pattern not typical of fuel.

[4] A borehole identification number followed by "D" indicates that a blind duplicate sample was collected at this location.

[5] Detection limit for benzene, toluene, and ethylbenzene is 0.5 µg/l. Detection limit for xylenes is 1 µg/l.

[6] Samples were reanalyzed to quantify the dissolved concentrations of the chemicals listed. Analyses were performed by Friedman and Bruya, Inc., of Seattle, WA. Samples were passed through a 0.7 micron glass fiber filter and analyzed according to EPA method 8015M following silica gel cleanup procedure by EPA Method 3630. Extraction and reanalysis of samples SRB-44 and SRB-48 was performed on October 17, and 24, 2000, respectively.

Abbreviations:

TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
TPHmo = total petroleum hydrocarbons quantified as motor oil
f = filtered with 0.7 micron glass fiber filter
PAHs = polynuclear aromatic hydrocarbons
NS = not specified
MTBE = methyl tertiary butyl ether
BTEX = benzene, toluene, ethylbenzene, and xylenes
VOCs = volatile organic compounds
ND = not detected above laboratory reporting limits (for VOCs: 5 to 100 µg/l).
-- = not analyzed

Table 2: Summary of 6th Street Warehouse Source Area Investigation – Reconnaissance Groundwater Sample Analytical Results

Sample Identification	Date Sampled	Analytical Results (µg/l)[a] TPHd[b]	TPHmo[c]
SRB-104-W	10/15/03	**410**	**2,500**
SRB-105-W	10/15/03	**66,000,000**	**38,000,000**
SRB-106-W	10/15/03	**6,300,000**	**12,000,000**
SRB-107	10/14/03	<50[d]	**1,000**
SRB-108	10/14/03	<100	<1,000
SRB-109-W	10/15/03	**330**	**830**
SRB-110-W	10/15/03	**1,100**	**3,600**
SRB-111-W	10/15/03	**650**	**8,100**
SRB-112	10/14/03	**6,400,000**	**6,900,000**
SRB-113	10/14/03	**830**	**1,300**
SRB-114	10/14/03	**81**	**500**
SRB-115	10/14/03	**520**	<500
SRB-116	10/14/03	<50	**770**
SRB-117-W	10/15/03	**570**	<1,000
SRB-118-W	10/15/03	**2,200,000**	**2,400,000**
SRB-118-W (Dup)	10/15/03	**3,900,000**	**4,100,000**
SRB-119-W	10/15/03	<50	<500
SRB-120-W	10/15/03	<50	<500
SRB-121	10/14/03	<50	<500
SRB-122	10/14/03	**6,000,000**	**5,300,000**

(a) µg/l = micrograms per liter.
(b) Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(c) Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(d) Analyte not detected at, or above, stated laboratory reporting limit.

Results equal to, or greater than, the laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 7: Summary of Excavation Pit Dewatering Water Sample Analysis – Total Petroleum Hydrocarbons and VOCs

		Analytical Results (µg/l)[a]					
		TPHd[b]		TPHmo[c]		VOCs[d]	
Sample Identification	Date Sampled	Filtered	Unfiltered	Filtered	Unfiltered	Analyte	Results
Holding Tanks							
Frac Tank 10/24	10/24/03	--[e]	4,500	--	3,300	--	
Frac Tank - 2	10/27/03	--	140	--	800	Methylene chloride	120
Excavation Pit							
UST Ex	10/29/03	--	21,000	--	17,000	--	
GM Water	10/31/03	180	320	<500[f]	<500	--	
Main Pit Water	11/04/03	210	180	<500	<500	--	
SRB-113-Pit	11/14/03	71	110	<500	<500	--	

(a) µg/l = micrograms per liter.
(b) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(c) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(d) VOCs = Volatile organic compounds analysis by EPA Method 8260B. Only analytes detected above laboratory reporting limits are listed.
(e) -- = Not analyzed
(f) < = Analyte not detected at, or above, stated laboratory reporting limit.

Table 3: Summary of Analytical Results of Groundwater Samples

Monitoring Well	Sample Date	Analytical Results[a] (µg/l)[b]								
		Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]	MTBE[d]	Gas TPHg[e]	Diesel TPHd[f]	Motor Oil TPHmo[g]	PAHs[h]
SRMW-05	12/20/01	NA[i]	NA	NA	NA	NA	NA	<50[j]	<300	<0.94
	03/19/02	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	06/05/02	NA	NA	NA	NA	NA	NA	<61	<610	<0.10
	09/17/02	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	12/31/02	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	03/04/03	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	06/23/03	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	09/29/03	NA	NA	NA	NA	NA	NA	<50	<500	<3.1[k][l]
	12/09/03	NA	NA	NA	NA	NA	NA	<50[l]	<500[l]	<5.0[l]
	03/08/04	NA	NA	NA	NA	NA	NA	<50[l]	<500[l]	<5.0[m]
	06/15/04	NA	NA	NA	NA	NA	NA	<50[l]	<500[l]	<5.0[l]
	09/16/04	NA	NA	NA	NA	NA	NA	<50[l]	<500[l]	<5.0
	12/07/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.0
	03/24/05	NA	NA	NA	NA	NA	NA	<50	NA	<5.0
	06/14/05	NA	NA	NA	NA	NA	NA	<50	<500	<5.0
	06/07/06	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
SRMW-06	12/20/01	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	03/19/02	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	06/05/02	NA	NA	NA	NA	NA	NA	<60	<600	<0.11
	09/17/02	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	12/31/02	NA	NA	NA	NA	NA	NA	<50	<500	<0.11
	03/04/03	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	06/23/03	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	09/29/03	NA	NA	NA	NA	NA	NA	<50	<500	<2.0
	12/09/03	NA	NA	NA	NA	NA	NA	<50	<500	<5.0[l]
	03/08/04	NA	NA	NA	NA	NA	NA	<50[l]	<500[l]	<5.0[m]
	06/15/04	NA	NA	NA	NA	NA	NA	<50[l]	<500[l]	<20[k]
	09/16/04	NA	NA	NA	NA	NA	NA	<50[l]	<500[l]	<5.0[l]
	12/07/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.0
	03/24/05	NA	NA	NA	NA	NA	NA	<50	NA	<5.0
	06/14/05	NA	NA	NA	NA	NA	NA	<50	<500	<5.0

Table 3: Summary of Analytical Results of Groundwater Samples

Monitoring Well	Sample Date	Analytical Results[a] (µg/l)[b]								
		Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]	MTBE[d]	Gas TPHg[e]	Diesel TPHd[f]	Motor Oil TPHmo[g]	PAHs[h]
SRMW-06 Cont'd	06/07/06	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
SRMW-07	12/20/01	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<50	<300	<0.94
	03/19/02	<0.5	<0.5	<0.5	<0.5	**0.6**	<50	<50	<300	<0.94
	06/05/02	<1	<1	<1	<1	**5.3**	<50	**130**[n]	<500	<0.10
	09/17/02	<0.5	<0.5	<0.5	<1	**12**	<50	<50	<500	<0.10
	12/31/02	<0.5	<0.5	<0.5	<1	**0.52**	<50	<50	<500	<0.10
	03/04/03	<0.5	<0.5	<0.5	<1	<0.5	<50	<50	<500	<0.10
	06/23/03	<0.5	<0.5	<0.5	<1	<0.5	<50	<50	<500	<0.10
	09/29/03	<0.5[o]	<0.5[o]	<0.5[o]	<0.5[o]	<5[o]	<50	<50	<500	<2.0
	12/09/03	<0.5[o]	<0.5[o]	<0.5[o]	<0.5[o]	<5[o]	<50	<50[l]	<500[l]	<5.0[l]
	03/08/04	<0.5[o]	<0.5[o]	<0.5[o]	<0.5[o]	<5[o]	<50	<50	<500	<5.0[m]
	06/15/04	<0.5	<0.5	<0.5	<1.0	**1.7**	<50	<50[l]	<500[l]	<20[k]
	09/16/04	<0.5	<0.5	<0.5	<1.0	**2.5**	<50	<50	<500	<5.0[l]
	12/07/04	Not Sampled								
	03/24/05	Not Sampled								
	06/14/05	Not Sampled								
	06/07/06	Not Sampled								
SRMW-08	12/20/01	<0.5	<0.5	<0.5	<0.5	**4.4**	<50	NA	NA	NA
	03/19/02	<0.5 (<0.5)[p]	<0.5 (<0.5)[p]	<0.5 (<0.5)[p]	<0.5 (<0.5)	**5.3** (**5.2**)	<50 (<50)	NA	NA	NA
	06/05/02	<1 (<1)	<1 (<1)	<1 (<1)	<1 (<1)	**11** (**11**)	<50 (<50)	NA	NA	NA
	09/17/02	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<1 (<1)	**14** (**16**)	<50 (<50)	NA	NA	NA
	12/31/02	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<1 (<1)	**2.3** (**2.7**)	<50 (<50)	NA	NA	NA
	03/04/03	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<1 (<1)	**7.1**[q] (**4.3**)[q]	<50 (<50)	NA	NA	NA
	06/23/03	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<1 (<1)	**11** (**9.4**)	<50 (<50)	NA	NA	NA
	09/29/03	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	**22**[o] (**22**)[o]	<50 (<50)	NA	NA	NA

Table 3: Summary of Analytical Results of Groundwater Samples

Monitoring Well	Sample Date	Analytical Results[a] (µg/l)[b]								
		Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]	MTBE[d]	Gas TPHg[e]	Diesel TPHd[f]	Motor Oil TPHmo[g]	PAHs[h]
SRMW-08 Cont'd	12/09/03	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	**13**[o] (**13**)[o]	<50 (<50)	NA	NA	NA
	03/08/04	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	<0.5[o] (<0.5)[o]	<5[o] (<5)[o]	<50 (<50)	NA	NA	NA
	06/15/04	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<1.0 (<1.0)	**17** (**18**)	**57**[r] (**51**[r])	NA	NA	NA
	09/16/04	<0.5 (<0.5)	<0.5 (<0.5)	<0.5 (<0.5)	<1.0 (<1.0)	**23** (**21**)	<50 (<50)	NA	NA	NA
	12/07/04	Not Sampled								
	03/24/05	Not Sampled								
	06/14/05	Not Sampled								
	06/07/06	Not Sampled								
SRMW-10	12/20/01	NA	NA	NA	NA	NA	NA	<50 (<50)	<300 (<300)	<0.94 (<0.94)
	03/19/02	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	06/05/02	NA	NA	NA	NA	NA	NA	<62	<620	<0.10
	09/17/02	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	12/31/02	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	03/04/03	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	06/23/03	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
	09/29/03	NA	NA	NA	NA	NA	NA	<50	<500	<2.5[k]
	12/09/03	NA	NA	NA	NA	NA	NA	<50	<500	<5.7[l]
	03/08/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.6[k]
	06/15/04	NA	NA	NA	NA	NA	NA	<50	<500	<7.0[k]
	09/16/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.0[l]
	12/07/04	NA	NA	NA	NA	NA	NA	**150**[s] (<50)	<500 (<50)	<5.0 (<5.0)
	03/24/05	NA	NA	NA	NA	NA	NA	<50 (<50)	NA	5.0 (<5.0)
	06/14/05	NA	NA	NA	NA	NA	NA	<50 (<50)	<500 (<500)	5.0 (<5.0)
	06/07/06	NA	NA	NA	NA	NA	NA	<50 (<50)	<500 (<500)	<0.10 (<0.10)

Table 3: Summary of Analytical Results of Groundwater Samples

Monitoring Well	Sample Date	Analytical Results[a] (µg/l)[b]								
		Benzene[c]	Toluene[c]	Ethylbenzene[c]	Total Xylenes[c]	MTBE[d]	Gas TPHg[e]	Diesel TPHd[f]	Motor Oil TPHmo[g]	PAHs[h]
SRMW-11	09/16/04	NA	NA	NA	NA	NA	NA	<50[i]	<500[i]	<5.7[k][l]
	12/07/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.0
	03/24/05	NA	NA	NA	NA	NA	NA	<50	NA	<5.0
	06/14/05	NA	NA	NA	NA	NA	NA	<50	<500	<5.0
	06/07/06	NA	NA	NA	NA	NA	NA	<50	<500	<0.11
SRMW-12	09/16/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.0[i]
	12/07/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.0
	03/24/05	NA	NA	NA	NA	NA	NA	<50	NA	<5.0
	06/14/05	NA	NA	NA	NA	NA	NA	<50	<500	<5.0
	06/07/06	NA	NA	NA	NA	NA	NA	<50	<500	<0.11
SRMW-13	09/16/04	NA	NA	NA	NA	NA	NA	**540**[r] **220**[r][t]	<500	Phenanthrene **(4.6)**[i] Anthracene **(5.1)**[i] Pyrene **(6.1)**[i] Chrysene **(4.3)**[i]
	12/07/04	NA	NA	NA	NA	NA	NA	**1500**[s]	**970**[u]	<50[v][w]
	03/24/05	NA	NA	NA	NA	NA	NA	**390**[s] **190**[s][t][x]	NA	<5.0
	06/14/05	NA	NA	NA	NA	NA	NA	**730** **200**[t]	<500 <500	<5.0
	06/07/06	NA	NA	NA	NA	NA	NA	**280** **200**[t]	<500 <500[t]	Acenaphthene **(0.32)** Phenanthrene **(0.18)** Anthracene **(0.11)** Pyrene **(0.12)**
SRMW-14	09/16/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.0[i]
	12/07/04	NA	NA	NA	NA	NA	NA	<50	<500	<5.0
	03/24/05	NA	NA	NA	NA	NA	NA	<50	NA	<5.0
	06/14/05	NA	NA	NA	NA	NA	NA	**55** <50[t]	<500 <500	<5.0
	06/07/06	NA	NA	NA	NA	NA	NA	<50	<500	<0.10

Table 3: Summary of Analytical Results of Groundwater Samples

(a) Monitoring well groundwater samples analyzed by Severn Trent Laboratories (STL) San Francisco of Pleasanton, California. Data for samples collected prior to 29 September 2003 are from the *Quarterly Groundwater Monitoring Report – July 2003* produced by Geomatrix Consultants, Inc.
(b) µg/l = Micrograms per liter.
(c) Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260 unless indicated otherwise.
(d) MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8260 unless indicated otherwise.
(e) TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8015M.
(f) TPHd = Total petroleum hydrocarbons as diesel analyzed by EPA Method 8015M. Samples collected since 29 September 2003 analyzed with silica gel cleanup.
(g) TPHmo = Total petroleum hydrocarbons as motor oil analyzed by EPA Method 8015M. Samples collected since 29 September 2003 analyzed with silica gel cleanup.
(h) PAHs = Polycyclic aromatic hydrocarbons analyzed by EPA Method 8270 SIM prior to 29 September 2003 and EPA Method 8270C since 29 September 2003. Reported detection limit reflects the highest detection limit for individual PAHs.
(i) NA = Not analyzed.
(j) < = Not detected at or above stated laboratory reporting limit shown.
(k) Laboratory reports that the reporting limit was raised due to reduced sample size.
(l) Laboratory reports that the surrogate recoveries were lower than the quality control limit due to matrix interference, but that the analytical result was confirmed by reanalysis.
(m) Laboratory reports that the surrogate recoveries were lower than the quality control limit due to matrix interference.
(n) According to USEPA National Functional Guidelines, the compound is considered non-detect since the associated numerical value is less than five times the concentration of the compound detected in the field equipment blank.
(o) Sample analyzed using EPA Method 8021B.
(p) ( ) = Duplicate sample.
(q) The relative percent difference between primary and duplicate samples is greater than 30 percent.
(r) Hydrocarbon reported does not match the laboratory standard.
(s) Quantitation of unknown hydrocarbon(s) in sample based on diesel.
(t) Sample was filtered prior to analysis.
(u) Quantitation of unknown hydrocarbon(s) in sample based on motor oil.
(v) Reporting limits raised due to high level of non-target analyte materials.
(w) Surrogate(s) were diluted out.
(x) Sample was extracted out of hold time.

TABLE 5
GROUNDWATER SAMPLE ANALYTICAL RESULTS
TPH-g, TPH-d, and TPH-mo
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	TPH-g (mg/L)	TPH-d (mg/L)	TPH-mo (mg/L)
SB-1-W	10/6/2008	**1.44[AS]**	**29.7**	**19.7**
SB-1A-W	9/16/2008	**0.124[AS]**	**27.0**	**15.4**
SB-1B-W	9/25/2008	<0.050	<0.500	<0.500
SB-1D-W	9/25/2008	<0.050	<0.500	<0.500
SB-2A-W	9/17/2008	<0.050	<0.500	<0.500
SB-2-W	10/6/2008	<0.050	<0.050	<0.050
SB-3A-W	9/18/2008	<0.050	<0.500	<0.500
SB-3-W	10/7/2008	<0.050	<0.050	<0.050
SB-4A-W	9/18/2008	<0.050	<0.500	<0.500
SB-4-W	10/7/2008	<0.050	<0.050	<0.050
SB-5-W	10/6/2008	<0.050	<0.050	<0.050
SB-6A-W	9/19/2008	<0.050	<0.500	<0.500
SB-6-W	10/6/2008	<0.050	<0.050	<0.050
SB-7A-W	9/22/2008	<0.050	<0.500	<0.500
SB-7-W	10/7/2008	<0.050	<0.050	<0.050
SB-8A-W	9/23/2008	<0.050	<0.500	<0.500
SB-8-W	10/7/2008	<0.050	<0.050	<0.050
SB-9-W	10/7/2008	<0.050	**0.064**	<0.050
SB-10-W	10/7/2008	<0.050	**0.064**	<0.050
SB-11-W	9/25/2008	<0.050	<0.050	<0.050
SB-13-W	10/15/2008	<0.050	**0.279**	**0.246**
SB-28-W	10/15/2008	<0.050	<0.050	<0.050
SB-55-W	10/15/2008	**4.65[AS]**	**2.64[AK]**	<0.050
SRMW-07	10/2/2008	<0.050	<0.050	<0.050
SRMW-08	10/2/2008	<0.050	<0.050	<0.050

TPH-g = Total Petroleum Hydrocarbons as gasoline.
TPH-d = Total Petroleum Hydrocarbons as diesel.
TPH-mo = Total Petroleum Hydrocarbons as motor oil.
mg/L = milligrams per liter.
AK = Lighter hydrocarbon than diesel.
AS = Heavier hydrocarbon than gasoline contributing to value.

TABLE 6
GROUNDWATER ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS
SMART Property, Santa Rosa, California

Sample ID	Water-Bearing Zone: Shallow/Deep	Date	Units	PCE	TCE	CIS-1,2-DCE	MtBE	Xylene (M+P)	N-Propylbenzene	1,2,4-Trimethylbenzene	All other VOCs
SB-1A-W	Shallow (~15' BGS)	9/16/2008	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-1B-W	Shallow (~15' BGS)	9/25/2008	µg/L	0.520	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-1D-W	Shallow (~15' BGS)	9/25/2008	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-1-W	Deep (~25' BGS)	10/6/2008	µg/L	<1.00	<1.00	1.15	1.40	<1.00	<1.00	<1.00	<RL
SB-2A-W	Shallow (~15' BGS)	9/17/2008	µg/L	1.96	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-2-W	Deep (~25' BGS)	10/6/2008	µg/L	3.06	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-3A-W	Shallow (~15' BGS)	9/18/2008	µg/L	3.03	0.750	<0.500	3.80	<0.500	<0.500	<0.500	<RL
SB-3-W	Deep (~25' BGS)	10/7/2008	µg/L	1.06	1.95	6.77	23.8	<0.500	<0.500	<0.500	<RL
SB-4A-W	Shallow (~15' BGS)	9/18/2008	µg/L	1.03	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-4-W	Deep (~25' BGS)	10/7/2008	µg/L	12.7	1.96	0.530	21.3	<0.500	<0.500	<0.500	<RL
SB-5-W	Deep (~25' BGS)	10/6/2008	µg/L	5.88	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-6A-W	Shallow (~15' BGS)	9/19/2008	µg/L	2.18	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-6-W	Deep (~25' BGS)	10/6/2008	µg/L	9.63	2.70	1.20	47.1	<0.500	<0.500	<0.500	<RL
SB-7A-W	Shallow (~15' BGS)	9/22/2008	µg/L	3.40	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-7-W	Deep (~25' BGS)	10/7/2008	µg/L	<0.500	<0.500	<0.500	2.31	<0.500	<0.500	<0.500	<RL
SB-8A-W	Shallow (~15' BGS)	9/23/2008	µg/L	1.03	0.720	<0.500	0.710	<0.500	<0.500	<0.500	<RL
SB-8-W	Deep (~25' BGS)	10/7/2008	µg/L	0.920	<0.500	<0.500	7.79	<0.500	<0.500	<0.500	<RL
SB-9-W	Deep (~25' BGS)	10/7/2008	µg/L	0.620	<0.500	<0.500	1.46	<0.500	<0.500	<0.500	<RL
SB-10-W	Deep (~25' BGS)	10/7/2008	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-11-W	Shallow (~15' BGS)	9/25/2008	µg/L	0.730	1.15	<0.500	2.73	<0.500	<0.500	<0.500	<RL
SB-13-W	Shallow (~15' BGS)	10/15/2008	µg/L	1.22	1.40	1.18	<0.500	<0.500	<0.500	<0.500	<RL
SB-28-W	Shallow (~15' BGS)	10/15/2008	µg/L	3.63	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-55-W	Shallow (~15' BGS)	10/15/2008	µg/L	<1.00	<1.00	<1.00	<1.00	1.14	1.27	1.13	<RL
SRMW-07	Screened across both	10/2/2008	µg/L	0.920	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SRMW-08	Screened across both	10/2/2008	µg/L	8.74	4.75	5.69	24.5	<0.500	<0.500	<0.500	<RL

PCE = tetrachloroethene
TCE = trichloroethene
CIS-1,2-DCE = cis-1,2-dichloroethene
MtBE = methyl tert-butyl ether
VOCs = Volatile Organic Compounds
µg/L = micrograms per liter.
BGS = below ground surface.
~ = approximately
RL = method reporting limit.

Appendix J

Historical Soil Analytical Results

TABLE D-1

HISTORIC SOIL ANALYTICAL RESULTS
Santa Rosa Station/Third Street Property - Southern Section
4 West Third Street
Santa Rosa, California

Concentrations in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Location	Approximate Sample Depth (feet bgs[1])	Date Sampled	Lead
SRB1A-C[2,3]	Boring SRB1	2.0, 6.5	2/28/95	<5
SRB1B-C	Boring SRB1	12.5, 17.0	2/28/95	6
SRB2A-C	Boring SRB2	2.0, 5.0	2/28/95	65
SRB2B-C	Boring SRB2	9.0, 12.5	2/28/95	6
SRB3A-C	Boring SRB3	1.5, 5.5	2/28/95	<5
SRB3B-C	Boring SRB3	10.5, 14.0	2/28/95	<5
SRB4A-C	Boring SRB4	2.0, 5.5	2/28/95	15
SRB4B-C	Boring SRB4	9.5, 12.5	2/28/95	<5
SRB13-1.5	Boring SRB13	1.5	12/7/95	590
SRB13-3.0	Boring SRB13	3.0	12/7/95	8
SRB14-1.5	Boring SRB14	1.5	12/7/95	170
SRB14-2.5	Boring SRB14	2.5	12/7/95	40
SRB14-5.5	Boring SRB14	5.5	12/7/95	5
SRB15-1.0	Boring SRB15	1.0	12/7/95	22
SRB15-3.0	Boring SRB15	3.0	12/7/95	32
SRB15-5.5	Boring SRB15	5.5	12/7/95	6
SRB14-N[4]	North Sidewall SRB14	1	9/21/99	110
SRB14-E	East Sidewall SRB14	1	9/21/99	180
SRB14-S	South Sidewall SRB14	1	9/21/99	53
SRB14-W	West Sidewall SRB14	1	9/21/99	48
SRB14-B1	North Bottom SRB14	2.5	9/21/99	24
SRB14-B2	South Bottom SRB14	2.5	9/21/99	30
SRB13-N	North Sidewall SRB13	1	9/21/99	48
SRB13-E	East Sidewall SRB13	1	9/21/99	100
SRB13-S	South Sidewall SRB13	1	9/21/99	15
SRB13-W	West Sidewall SRB13	1	9/21/99	150
SRB13-B1	West Bottom SRB13	2.5	9/21/99	170
SRB13-B2	East Bottom SRB13	2.5	9/21/99	17
SRB14-N2	North Sidewall SRB14	1.5	10/14/99	64

TABLE D-1

HISTORIC SOIL ANALYTICAL RESULTS
Santa Rosa Station/Third Street Property - Southern Section
4 West Third Street
Santa Rosa, California

Concentrations in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Location	Approximate Sample Depth (feet bgs[1])	Date Sampled	Lead
SRB14-E2	East Sidewall SRB14	1.5	10/14/99	74
SRB13-W2	West Sidewall SRB13	1.5	10/14/99	130
SRB13-E2	East Sidewall SRB13	1.5	10/14/99	4.6
SRB13-B3	Bottom SRB13	4	10/14/99	71

Notes:

Shaded rows indicate sampling locations that have been excavated during soil remediation activities.[4]

[1] bgs = below ground surface
[2] Taken from referenced report, Geomatrix, 1999a.
[3] C = laboratory composite sample (i.e., laboratory composited and analyzed sample composed of discrete samples from locations indicated in sample depth column).
[4] Taken from referenced report, Geomatrix, 1999b.

GEOMATRIX

TABLE 1

ANALYTICAL RESULTS FOR TPHd AND TPHm IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	TPHd	TPHm	TPHd (WET)[3] - µg/l	TPHm (WET)[3] - µg/l
SRB20						
	c[4]-1.0, 4.0, 6.5	11/15/96	<20	900	---[5]	---
	4.0	11/15/96	---	69	---	---
	6.5	11/15/96	---	<5	---	---
	c-9.0, 11.5, 14.0	11/15/96	<1	56	---	---
SRB21						
	c-1.5, 4.0	11/14/96	130	510	---	---
	7.0	11/14/96	1600	<100	---	---
	9.0	11/14/96	960	<50	---	---
	11.0	11/14/96	150	<5	---	---
	13.5	11/14/96	<1	<5	---	---
SRB22						
	c-1.5, 4.0, 7.0	11/14/96	<1	43	---	---
	10.5	11/14/96	<1	120	---	---
	12.5	11/14/96	67	210	---	---
	14.5	11/14/96	<1	<5	---	---
SRB23						
	c-1.5, 4.5, 7.5	11/14/96	5	28	---	---
	c-10.0, 13.0, 14.5	11/14/96	<1	<5	---	---
SRB24						
	1.0, 4.0, 6.5	11/15/96	<1	<5	---	---
	c-9.0, 11.5, 14.5	11/15/96	<1	<5	---	---
SRB25						
	1.5, 4.0, 6.5	11/15/96	<1	<5	---	---
	c-9.0, 11.5, 14.0	11/15/96	<1	<5	---	---
SRB26						
	c-1.5, 4.0, 6.5	11/14/96	<1	12	---	---
	c-10.5, 12.0, 14.5	11/14/96	<1	<5	---	---
SRB27						
	1.5	11/14/96	<1	72	---	---
	4.5	11/14/96	<1	<5	---	---
SRB28						
	c-1.5, 4.5 7.0	11/14/96	<1	130	---	---
	c-9.0, 11.5, 14.0	11/14/96	<1	<5	---	---

GEOMATRIX

TABLE 1

ANALYTICAL RESULTS FOR TPHd AND TPHm IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	TPHd	TPHm	TPHd (WET)[3] - µg/l	TPHm (WET)[3] - µg/l
SRB32						
	1.0	3/6/00	**160**	<65	--[4]	--
	4.5	3/7/00	**2.8**[6]	<13	--	--
	7.5	3/7/00	--	--	--	--
	10.5	3/7/00	--	--	--	--
SRB33						
	1.0	3/7/00	**2.3**[6]	<13	--	--
	4.5	3/7/00	<1	<13	--	--
SRB34						
	1.0	3/7/00	**2.1**[6]	<13	--	--
	4.5	3/7/00	**2.2**[6]	<13	--	--
	7.5	3/7/00	--	--	--	--
	10.5	3/7/00	--	--	--	--
SRB35						
	1.0	3/7/00	<1	<13	--	--
	4.5	3/7/00	<1	<13	--	--
	7	3/7/00	--	--	--	--
SRB36						
	1.0	3/6/00	**430**[6]	**780**	<50	<250
	4.5	3/6/00	<1	<13	--	--
	7.5	3/6/00	--	--	--	--
	10.5	3/6/00	--	--	--	--
	13.5	3/6/00	--	--	--	--
	19.5	3/6/00	--	--	--	--
SRB39						
	1.0	3/6/00	<20	**720**	--	--
	4.5	3/6/00	<1	**51**	--	--
	7.5	3/6/00	--	**49**	--	--
	10.5	3/6/00	--	--	--	--
	13.5	3/6/00	--	--	--	--
SRB40						
	1.0	3/7/00	**990**[6]	**1700**	--	--
	4.5	3/7/00	**130**[6]	**240**	--	--
	7.5	3/7/00	**210**[6]	**370**	<50	<250
	10.5	3/7/00	--	--	--	--
	14.0	3/7/00	<1	<13	--	--
	16.5	3/7/00	--	--	--	--
	19.5	3/7/00	--	--	--	--

TABLE 1

ANALYTICAL RESULTS FOR TPHd AND TPHm IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	TPHd	TPHm	TPHd (WET)[3] - µg/l	TPHm (WET)[3] - µg/l
SRB41						
	1.0	3/7/00	<1	**40**	--	--
	4.5	3/7/00	<1	<13	--	--
	7.5	3/7/00	--	--	--	--
	10.5	3/7/00	--	--	--	--

Notes:

1. Samples collected by Geomatrix Consultants, Inc. on November 14 and 15, 1996 and March 6 and 7, 2000. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California. Samples collected in 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California for TPHd and TPHm using EPA Method 8015M following silica gel cleanup procedure per method 3630C.
2. Depth measured in feet below ground surface.
3. Waste extraction test was performed using simulated rainwater; results are reported in micrograms per liter.
4. "c" denotes composite sample.
5. -- = not analyzed.
6. Lab sheet indicates that result is quantified as diesel; chromatographic pattern not typical of fuel.

Abbreviations:

TPHd = total petroleum hydrocarbons quantified as diesel
TPHm = total petroleum hydrocarbons quantified as motor oil
WET = waste extraction test

TABLE 2

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL[1]

Santa Rosa Option Property/Third Street

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h)anthra-cene	Benzo(ghi)-perylene	PNAs (WET)[3] - µg/l
SRB20																	
	c[4]-1.0, 4.0, 6.5	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	**0.028**	<0.017	<0.017	<0.017	**0.025**	**0.049**	<0.017	--[5]
	c-9.0, 11.5, 14.0	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB21																	
	c-1.5, 4.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	**0.027**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.075**	<0.034	**0.029**	--
	7.0	11/14/96	<0.083	**0.87**	**0.19**	**0.081**	**0.33**	**0.20**	**0.021**	**0.10**	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	9.0	11/14/96	<0.083	**0.63**	**0.18**	**0.078**	**0.088**	**0.18**	**0.038**	**0.33**	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	11.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	13.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB22																	
	c-1.5, 4.0, 7.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	10.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	12.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	**0.052**	<0.017	<0.017	**0.026**	<0.017	<0.034	0.045	--
	14.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.020**	<0.034	<0.017	--
SRB23																	
	c-1.5, 4.5, 7.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	**0.025**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	c-10.0, 13.0, 14.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB24																	
	c-1.0, 4.0, 6.5	11/15/96	<0.083	<0.017	**0.019**	<0.0083	<0.017	**0.04**	<0.017	<0.017	<0.017	<0.017	<0.017	**0.034**	<0.034	<0.017	--
	c-9.0, 11.5, 14.0	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB25																	
	c-1.5, 4.0, 6.5	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	c-9.0, 11.0, 14.0	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB26																	
	c-1.5, 4.0, 6.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	c-10.5, 12.0, 14.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB27																	
	1.5	11/14/96	<0.083	<0.017	**0.046**	<0.0083	<0.017	**0.032**	<0.017	**0.046**	**0.021**	<0.017	<0.017	<0.017	<0.034	**0.02**	--
	4.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB28																	
	c-1.5, 4.5, 7.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	c-9.0, 11.5, 14.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB32																	
	1.0	3/6/00	**0.609**	**0.739**	**1.98**	**0.106**	**0.739**	**0.797**	**0.329**	**0.424**	**0.582**	**0.158**	**0.526**	**0.455**	**0.073**	**0.706**	<0.2
	4.5	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	7.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL[1]

Santa Rosa Option Property/Third Street

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h)anthra-cene	Benzo(ghi)-perylene	PNAs (WET)[3] - µg/l
SRB33																	
	1.0	3/7/00	<0.01	<0.01	**0.011**	<0.01	**0.027**	**0.028**	**0.019**	**0.019**	**0.024**	<0.01	**0.018**	<0.01	<0.01	**0.01**	--
	4.5	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
SRB34																	
	1.0	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	4.5	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	7.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB35																	
	1.0	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	4.5	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	7.0	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB36																	
	1.0	3/6/00	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
	4.5	3/6/00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--
	7.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	19.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB39																	
	1.0	3/6/00	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--
	4.5	3/6/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	7.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB40																	
	1.0	3/7/00	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	--
	4.5	3/7/00	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--
	7.5	3/7/00	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14.0	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	16.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	19.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL[1]

Santa Rosa Option Property/Third Street

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h)anthra-cene	Benzo(ghi)-perylene	PNAs (WET)[3] - µg/l
SRB41																	
	1.0	3/7/00	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--
	4.5	3/7/00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--
	7.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Industrial PRGs[6]			1.9E2	3.3E4	1.0E5[7]	3.9E5	3.0E4	5.4E4	2.9	2900	2.9	29	0.29	2.9	0.29	5.4E4[7]	--

Notes:

1. Samples collected by Geomatrix Consultants, Inc. on November 14 and 15, 1996 and March 6 and 7, 2000. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California using EPA Method 8310. Samples collected in 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California using EPA Method 8270SIM.
2. Depth measured in feet below ground surface.
3. Waste extraction test performed using simulated rainwater; results are reported in micrograms per liter (µg/l).
4. "c" denotes composite sample.
5. -- = not analyzed.
6. Industrial Preliminary Remediation Goals from U.S. EPA Region 9 (U.S. EPA 1999).
7. PRGs were not available for these constituents. Surrogate PRGs for a constituent with similar physical and chemical properties were used for the PRG comparison.

Abbreviations:
PNAs = polynuclear aromatic hydrocarbons
PRGs = preliminary remediation goals

TABLE 3

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Depth	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
SRB20																				
	c[2]-1.0, 4.0, 6.5	11/15/96	<1	2.6	150	0.4	<0.2	75	--[3]	17	25	14	<0.06	<0.2	130	<1	0.3	4	40	53
	c-9.0, 11.5, 14.0	11/15/96	<1	1.4	150	0.4	<0.2	49	--	14	21	7	<0.06	<0.2	80	<1	0.2	11	27	34
SRB21																				
	c-1.5, 4.0	11/14/96	<1	2.3	180	0.6	<0.2	82	--	18	31	9	<0.06	<0.2	110	<1	0.3	24	46	47
	7.0	11/14/96	<1	1.4	180	0.5	<0.2	81	--	17	31	8	<0.06	<0.2	120	<1	0.2	22	39	44
	9.0	11/14/96	<1	0.9	220	0.6	<0.2	92	--	18	32	9	<0.06	<0.2	130	<1	0.3	26	40	50
	11.0	11/14/96	<1	<0.5	160	0.4	<0.2	72	--	8.6	23	7	<0.06	<0.2	83	<1	0.2	17	25	40
	13.5	11/14/96	<1	<0.5	160	0.6	<0.2	56	--	14	23	8	<0.06	<0.2	92	<1	0.2	18	20	37
SRB22																				
	c-1.5, 4.0, 7.0	11/14/96	<1	1.9	150	0.4	<0.2	70	--	19	26	10	<0.06	<0.2	130	<1	0.3	8	43	48
	10.5	11/14/96	<1	4.6	180	0.4	<0.2	65	--	17	28	7	<0.06	<0.2	120	<1	0.2	20	37	44
	12.5	11/14/96	<1	2.1	180	0.5	<0.2	70	--	13	25	7	<0.06	<0.2	110	<1	0.2	22	33	42
	14.5	11/14/96	<1	<0.5	190	0.7	<0.2	63	--	18	28	9	<0.06	<0.2	100	<1	0.2	23	30	46
SRB23																				
	c-1.5, 4.5, 7.5	11/14/96	<1	3.1	130	0.4	<0.2	62	--	15	28	10	<0.06	<0.2	93	<1	0.2	22	52	46
	c-10, 13.0, 14.5	11/14/96	<1	3.2	73	0.3	<0.2	39	--	12	23	4	<0.06	<0.2	69	<1	0.2	15	35	34
SRB24																				
	c-1.0, 4.0, 6.5	11/15/96	<1	1.6	180	0.5	<0.2	69	--	18	29	18	<0.06	<0.2	100	<1	0.3	17	39	49
	c-9.0, 11.5, 14.0	11/15/96	<1	<0.5	180	0.5	<0.2	62	--	17	23	8	<0.06	<0.2	98	<1	0.2	16	29	36
SRB25																				
	c-1.5, 4.0, 6.5	11/15/96	<1	0.8	210	0.6	<0.2	76	--	21	29	8	<0.06	<0.2	130	<1	0.3	19	42	47
	c-9.0, 11.5, 14.0	11/15/96	<1	0.7	170	0.5	<0.2	64	--	11	23	7	<0.06	<0.2	97	<1	0.3	18	30	38
SRB26																				
	c-1.5, 4.0, 6.5	11/14/96	<1	2.8	180	0.5	<0.2	81	--	19	32	8	<0.06	<0.2	130	<1	0.3	23	47	47
	c-10.5, 12.0, 14.5	11/14/96	<1	1.5	190	0.6	<0.2	88	--	16	31	9	<0.06	<0.2	120	<1	0.2	26	41	49
SRB27																				
	1.5	11/14/96	0.6	7.6	57	0.3	<0.2	29	--	10	32	23	0.13	<0.2	40	<1	0.2	12	38	48
	4.5	11/14/96	<1	<0.5	180	0.6	<0.2	64	--	16	29	8	<0.06	<0.2	89	<1	0.2	20	43	46
SRB28																				
	c-1.5, 4.5, 7.0	11/14/96	<1	5	160	0.5	<0.2	73	--	16	32	11	0.12	<0.2	110	<1	0.2	22	47	49
	c-9.0, 11.5, 14.0	11/14/96	<1	2.2	180	0.5	<0.2	79	--	21	24	6	<0.06	<0.2	120	<1	0.2	21	36	41
SRB32																				
	1.0	3/6/00	<25	<5	110	<5	<5	170	--	<5	21	57	0.59	<5	80	<25	<5	<25	47	83
	4.5	3/7/00	<25	<5	150	<5	<5	53	--	17	17	<5	<0.05	<5	96	<25	<5	<25	45	55
	7.5	3/7/00	--[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Depth	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
SRB33																				
	1.0	3/7/00	<25	<5	160	<5	<5	470	--	29	20	13	0.083	<5	190	<25	<5	<25	56	54
	4.5	3/7/00	<25	<5	140	<5	<5	630	--	21	17	13	<0.05	<5	160	<25	<5	<25	62	55
SRB33A																				
	1.0	5/9/00	--	--	--	--	--	87	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/00	--	--	--	--	--	80	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB33B																				
	1.0	5/9/00	--	--	--	--	--	85	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/00	--	--	--	--	--	140	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB34																				
	1.0	3/7/00	<25	<5	150	<5	<5	320	--	16	18	23	<0.05	<5	92	<25	<5	<25	46	53
	4.5	3/7/00	<25	<5	160	<5	<5	440	--	20	19	10	<0.05	<5	140	<25	<5	<25	61	55
	7.5	3/7/00	--	--	--	--	--	68	--	--	--	--	--	--	130	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB34A																				
	1.0	5/9/00	--	--	--	--	--	43	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/00	--	--	--	--	--	80	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB34B																				
	1.0	5/9/00	--	--	--	--	--	35	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/00	--	--	--	--	--	75	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB35																				
	1.0	3/7/00	<25	<5	190	<5	<5	61	--	21	22	15	<0.05	<5	97	<25	<5	<25	68	68
	4.5	3/7/00	<25	<5	170	<5	<5	93	--	21	20	8.7	0.056	<5	150	<25	<5	<25	68	71
	7	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	110	--	--	--	--	--
SRB36																				
	1.0	3/6/00	<25	<5	95	<5	<5	43	--	15	20	48	0.059	<5	97	<25	<5	<25	57	61
	4.5	3/6/00	<25	<5	200	<5	<5	85	--	30	22	<5	<0.05	<5	160	<25	<5	<25	66	67
	7.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	19.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB39																				
	1.0	3/6/00	<25	<5	57	<5	<5	31	--	<5	<5	77	0.17	<5	43	<25	<5	<25	33	55
	4.5	3/6/00	<25	<5	150	<5	<5	58	--	<5	<5	<5	0.1	<5	78	<25	<5	<25	39	48
	7.5	3/6/00	--	--	140	--	--	76	--	--	--	--	--	--	100	--	--	--	--	--
	10.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Depth	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
SRB40																				
	1.0	3/7/00	<25	<5	56	<5	<5	22	--	8.9	56	110	0.093	<5	66	<25	<5	<25	24	44
	4.5	3/7/00	<25	14	160	<5	<5	110	--	22	30	7.4	0.058	<5	180	<25	<5	<25	67	60
	7.5	3/7/00	--	27	--	--	--	82	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/7/00	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	16.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	19.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB41																				
	1.0	3/7/00	<25	11	82	<5	<5	53	--	14	31	18	<0.05	<5	76	<25	<5	<25	43	43
	4.5	3/7/00	<25	20	150	<5	<5	86	--	18	26	<5	<0.05	<5	140	<25	<5	<25	57	51
	7.5	3/7/00	--	22	--	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/7/00	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Industrial PRGs[4]			820	2.7[5]	100,000	2200	810	100,000[6]	64	100,000	76,000	1000	610	10,000	41,000	10,000	10,000	--[7]	14,000	100,000
STLC (mg/l)[8]			15	5.0	100	0.75	1.0	560		80	25	5.0	0.2	350	20	1.0	5	7.0	24	250
TTLC (mg/kg)[9]			500	500	10,000	75	100	2500	500	8000	2500	1000	20	3500	2000	100	500	700	2400	5000

Notes:

1. Samples collected by Geomatrix Consultants, Inc. on November 14 and 15, 1996 and March 6 and 7, 2000. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California. Samples collected in 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California.
2. "c" denotes composite sample.
3. -- = Sample not analyzed for this metal.
4. Industrial Preliminary Remediation Goals (PRGs) from U.S. EPA Region 9 (U.S. EPA 1999).
5. The industrial PRG for arsenic at cancer risk levels of $1x10^{-6}$ to $1x10^{-4}$ ranges between 3.0 mg/kg and 300 mg/kg, respectively. At $1x10^{-6}$ cancer risk, the PRG is less than background and therefore is not applicable.
6. The industrial PRG for chromium (III) is used, as speciation of chromium in borings SRB 33-A, SRB 33-B, SRB-34A, and SRB 34-B did not indicate the presence of chromium (VI).
7. PRGs were not available for these constituents. Surrogate PRGs for a constituent with similar physical and chemical properties were used for the PRG comparison.
8. STLC = Soluble Threshold Limit Concentration, California Code of Regulations, Title 22, Section 66216.24
9. TTLC = Total Threshold Limit Concentration, California Code of Regulations, Title 22, Section 66216.24

GEOMATRIX

TABLE 1

ANALYTICAL RESULTS FOR SOIL SAMPLES
AUGUST 2000
Santa Rosa Station/Third Street Property
Southern Section
Santa Rosa, California

Concentrations in milligrams per kilogram (mg/kg)

Boring	Sample Depth	Date Sampled	Sample Number	Constituent[1]	Reportable Limit	Result
SSR30	1.0-1.5	8/24/00	SSR30-1.5	Lead	5	**140**[2]
	3.5-4.0	8/24/00	SSR30-4.0	Lead	5	**91**
	5.0-5.5	8/24/00	SSR30-5.5	Lead	5	7.2
	10.0-10.5	8/24/00	SSR30-10.5	Lead	5	7.8
	21.5-22.0	8/24/00	SSR30-22.0	Benzene	0.005	0.076
				Toluene	0.005	0.18
				Ethylbenzene	0.005	0.11
				Total Xylenes	0.005	0.17
				MTBE[3]	0.02	< 0.005[4,5]
SSR31	1.5-2.0	8/24/00	SSR31-2.0	Lead	5	11
	3.5-4.0	8/24/00	SSR31-4.0	Lead	5	5.2
	5.5-6.0	8/24/00	SSR31-6.0	Lead	5	5.6
	10.0-10.5	8/24/00	SSR31-10.5	Lead	5	6.8
	23.0-23.5	8/24/00	SSR31-23.5	Benzene	0.005	<0.005
				Toluene	0.005	<0.005
				Ethylbenzene	0.005	<0.005
				Total Xylenes	0.005	<0.005
				MTBE	0.02	<0.02
SSR32	1.5-2.0	8/24/00	SSR32-2.0	Lead	5	5.0
	5.0-5.5	8/24/00	SSR32-5.5	Lead	5	7.5
	7.0-7.5	8/24/00	SSR32-7.5	Lead	5	5.6
	10.5-11.0	8/24/00	SSR32-11.0	Lead	5	8.2
	21.0-21.5	8/24/00	SSR32-21.0	Benzene	0.005	<0.005
				Toluene	0.005	0.013
				Ethylbenzene	0.005	0.015
				Total Xylenes	0.005	0.028
				MTBE	0.02	<0.02
SSR33	1.5-2.0	8/24/00	SSR33-2.0	Lead	5	**80**
	4.0-4.5	8/24/00	SSR33-4.5	Lead	5	6.9
	7.0-7.5	8/24/00	SSR33-7.5	Lead	5	7.0
	10.8-11.3	8/24/00	SSR33-11.5	Lead	5	6.6
	17.0-17.5	8/24/00	SSR33-17.5	Benzene	0.005	0.013
				Toluene	0.005	0.049
				Ethylbenzene	0.005	0.054
				Total Xylenes	0.005	0.076
				MTBE	0.02	<0.02

Notes:

1. Analytical methods were as follows:
   Lead - United State Environmental Protection Agency (EPA) Method 6010;
   Benzene, toluene, ethylbenzene, total xylenes, and MTBE - EPA Method 8021.
2. Lead results in "bold" type are those that exceed the site-specific background concentration of 65 mg/kg.
3. MTBE = Methyl tert-butyl ether.
4. MTBE concentration confirmed by EPA Method 8260.
5. < = less than reported detection limit.

GEOMATRIX

TABLE 3

ANALYTICAL RESULTS OF
SOIL AND GROUNDWATER SAMPLES COLLECTED BY OTHERS

Santa Rosa Station Phased Closing Property

Santa Rosa, California

ID	Owner	Date	Depth (feet bgs)	TPHg	TPHd	TPHmo	TPHog	TPHk	BTEX	PAHs	CVOCs
Soil Borings (milligrams per kilogram [mg/kg])											
RBB-1	RWQCB	4/90	**12**	ND	ND	NA	**200**	NA	NA	See Note 1	NA
RBB-2	RWQCB	4/90	NA	ND	ND	NA	ND	NA	NA	NA	NA
RBMW-2	RWQCB	4/90	**6**	ND	**20**	NA	NA	NA	NA	NA	NA
			11	ND	ND	NA	NA	NA	ND	NA	NA
			16	ND	ND	NA	NA	NA	ND	NA	NA
			21	ND	ND	NA	NA	NA	ND	NA	NA
			31	ND	ND	NA	NA	NA	ND	NA	NA
RBMW-3	RWQCB	4/90	**6**	ND	**30**	NA	NA	NA	ND	NA	NA
			11	ND	**14**	NA	NA	NA	X = **0.011**	NA	NA
			16	ND	**11**	NA	NA	NA	ND	NA	NA
			21	ND	ND	NA	NA	NA	ND	NA	NA
			27.5	ND	**12**	NA	NA	NA	ND	NA	NA
			31	ND	ND	NA	NA	NA	ND	NA	NA
IC-B1	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B2	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B3	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B4	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B6	Industrial Compliance	5/92	**11**	ND	**37**	ND	NA	ND	ND	ND	NA
Grab Groundwater (micrograms per liter [µg/l])											
IC-B1	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B2	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B3	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B4	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B6	Industrial Compliance	5/92	--	ND	**31,000**	NA	NA	NA	ND	NA	NA

TABLE 5

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
Sitewide																				
SRB-20	c[3]-1.0, 4.0, 6.5	11/15/1996	<1	2.6	150	0.4	<0.2	75	--[4]	17	25	14	<0.06	<0.2	130	<1	0.3	4	40	53
	c-9.0, 11.5, 14.0	11/15/1996	<1	1.4	150	0.4	<0.2	49	--	14	21	7	<0.06	<0.2	80	<1	0.2	11	27	34
SRB-21	c-1.5, 4.0	11/14/1996	<1	2.3	180	0.6	<0.2	82	--	18	31	9	<0.06	<0.2	110	<1	0.3	24	46	47
	7.0	11/14/1996	<1	1.4	180	0.5	<0.2	81	--	17	31	8	<0.06	<0.2	120	<1	0.2	22	39	44
	9.0	11/14/1996	<1	0.9	220	0.6	<0.2	92	--	18	32	9	<0.06	<0.2	130	<1	0.3	26	40	50
	11.0	11/14/1996	<1	<0.5	160	0.4	<0.2	72	--	8.6	23	7	<0.06	<0.2	83	<1	0.2	17	25	40
	13.5	11/14/1996	<1	<0.5	160	0.6	<0.2	56	--	14	23	8	<0.06	<0.2	92	<1	0.2	18	20	37
SRB-24	c-1.0, 4.0, 6.5	11/15/1996	<1	1.6	180	0.5	<0.2	69	--	18	29	18	<0.06	<0.2	100	<1	0.3	17	39	49
	c-9.0, 11.5, 14.0	11/15/1996	<1	<0.5	180	0.5	<0.2	62	--	17	23	8	<0.06	<0.2	98	<1	0.2	16	29	36
SRB-25	c-1.5, 4.0, 6.5	11/15/1996	<1	0.8	210	0.6	<0.2	76	--	21	29	8	<0.06	<0.2	130	<1	0.3	19	42	47
	c-9.0, 11.5, 14.0	11/15/1996	<1	0.7	170	0.5	<0.2	64	--	11	23	7	<0.06	<0.2	97	<1	0.3	18	30	38
SRB-26	c-1.5, 4.0, 6.5	11/14/1996	<1	2.8	180	0.5	<0.2	81	--	19	32	8	<0.06	<0.2	130	<1	0.3	23	47	47
	c-10.5, 12.0, 14.5	11/14/1996	<1	1.5	190	0.6	<0.2	88	--	16	31	9	<0.06	<0.2	120	<1	0.2	26	41	49
SRB-32	1.0	3/6/2000	<25	<5	110	<5	<5	170	--	<5	21	57	0.59	<5	80	<25	<5	<25	47	83
	4.5	3/7/2000	<25	<5	150	<5	<5	53	--	17	17	<5	<0.05	<5	96	<25	<5	<25	45	55
SRB-36	1.0	3/6/2000	<25	<5	95	<5	<5	43	--	15	20	48	0.059	<5	97	<25	<5	<25	57	61
	4.5	3/6/2000	<25	<5	200	<5	<5	85	--	30	22	<5	<0.05	<5	160	<25	<5	<25	66	67
	7.5	3/6/2000	--	--	--	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--
SRB-40	1.0	3/7/2000	<25	<5	56	<5	<5	22	--	8.9	56	110	0.093	<5	66	<25	<5	<25	24	44
	4.5	3/7/2000	<25	14	160	<5	<5	110	--	22	30	7.4	0.058	<5	180	<25	<5	<25	67	60
	7.5	3/7/2000	--	27	--	--	--	82	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/7/2000	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB-41	1.0	3/7/2000	<25	11	82	<5	<5	53	--	14	31	18	<0.05	<5	76	<25	<5	<25	43	43
	4.5	3/7/2000	<25	20	150	<5	<5	86	--	18	26	<5	<0.05	<5	140	<25	<5	<25	57	51
	7.5	3/7/2000	--	22	--	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/7/2000	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fenced Enclosure																				
SRB-27	1.5	11/14/1996	0.6	7.6	57	0.3	<0.2	29	--	10	32	23	0.13	<0.2	40	<1	0.2	12	38	48
	4.5	11/14/1996	<1	<0.5	180	0.6	<0.2	64	--	16	29	8	<0.06	<0.2	89	<1	0.2	20	43	46
SRB-28	c-1.5, 4.5, 7.0	11/14/1996	<1	5	160	0.5	<0.2	73	--	16	32	11	0.12	<0.2	110	<1	0.2	22	47	49
	c-9.0, 11.5, 14.0	11/14/1996	<1	2.2	180	0.5	<0.2	79	--	21	24	6	<0.06	<0.2	120	<1	0.2	21	36	41
SRB-39	1.0	3/6/2000	<25	<5	57	<5	<5	31	--	<5	<5	77	0.17	<5	43	<25	<5	<25	33	55
	4.5	3/6/2000	<25	<5	150	<5	<5	58	--	<5	<5	<5	0.1	<5	78	<25	<5	<25	39	48
	7.5	3/6/2000	--	--	140	--	--	76	--	--	--	--	--	--	100	--	--	--	--	--

TABLE 5

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
Northwestern Area																				
SRB-22	c-1.5, 4.0, 7.0	11/14/1996	<1	1.9	150	0.4	<0.2	70	--	19	26	10	<0.06	<0.2	130	<1	0.3	8	43	48
	10.5	11/14/1996	<1	4.6	180	0.4	<0.2	65	--	17	28	7	<0.06	<0.2	120	<1	0.2	20	37	44
	12.5	11/14/1996	<1	2.1	180	0.5	<0.2	70	--	13	25	7	<0.06	<0.2	110	<1	0.2	22	33	42
	14.5	11/14/1996	<1	<0.5	190	0.7	<0.2	63	--	18	28	9	<0.06	<0.2	100	<1	0.2	23	30	46
SRB-23	c-1.5, 4.5, 7.5	11/14/1996	<1	3.1	130	0.4	<0.2	62	--	15	28	10	<0.06	<0.2	93	<1	0.2	22	52	46
	c-10, 13.0, 14.5	11/14/1996	<1	3.2	73	0.3	<0.2	39	--	12	23	4	<0.06	<0.2	69	<1	0.2	15	35	34
SRB-33	1.0	3/7/2000	<25	<5	160	<5	<5	470	--	29	20	13	0.083	<5	190	<25	<5	<25	56	54
	4.5	3/7/2000	<25	<5	140	<5	<5	630	--	21	17	13	<0.05	<5	160	<25	<5	<25	62	55
SRB-33A	1.0	5/9/2000	--	--	--	--	--	87	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/2000	--	--	--	--	--	80	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB-33B	1.0	5/9/2000	--	--	--	--	--	85	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/2000	--	--	--	--	--	140	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB-34	1.0	3/7/2000	<25	<5	150	<5	<5	320	--	16	18	23	<0.05	<5	92	<25	<5	<25	46	53
	4.5	3/7/2000	<25	<5	160	<5	<5	440	--	20	19	10	<0.05	<5	140	<25	<5	<25	61	55
	7.5	3/7/2000	--	--	--	--	--	68	--	--	--	--	--	--	130	--	--	--	--	--
SRB-34A	1.0	5/9/2000	--	--	--	--	--	43	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/2000	--	--	--	--	--	80	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB-34B	1.0	5/9/2000	--	--	--	--	--	35	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/2000	--	--	--	--	--	75	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB-35	1.0	3/7/2000	<25	<5	190	<5	<5	61	--	21	22	15	<0.05	<5	97	<25	<5	<25	68	68
	4.5	3/7/2000	<25	<5	170	<5	<5	93	--	21	20	8.7	0.056	<5	150	<25	<5	<25	68	71
	7.0	3/7/2000	--	--	--	--	--	--	--	--	--	--	--	--	110	--	--	--	--	--
Residential PRG[5] (mg/kg)			310	0.39	5,400	150	37	100,000	30	4,700	2,900	400	6.1	390	1,600	390	390	5.2	550	23,000
Industrial PRGs[5] (mg/kg)			820	2.7[6]	100,000	2200	810	100,000[7]	64	100,000	76,000	750	88	10,000	41,000	10,000	10,000	130	14,000	100,000
STLC (mg/l)[8]			15	5.0	100	0.75	1.0	560		80	25	5.0	0.2	350	20	1.0	5	7.0	24	250
TTLC (mg/kg)[9]			500	500	10,000	75	100	2500	500	8000	2500	1000	20	3500	2000	100	500	700	2400	5000

Notes:

[1] Samples collected by Geomatrix Consultants, Inc. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California. Samples collected in 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California. Metals analyzed in accordance with U.S. EPA Methods 6000/7000 series.

[2] Sampling depth measured in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).

[3] "c" denotes composite sample.

[4] -- = Sample not analyzed for this metal.

[5] Residential and Industrial Preliminary Remediation Goals (PRGs) from U.S. EPA Region 9 (U.S. EPA 2000).

[6] The residential and industrial PRGs for arsenic at cancer risk levels of $1x10^{-6}$ to $1x10^{-4}$ range between 0.39 mg/kg and 39 mg/kg (residential), and 2.7 and 270 mg/kg (industrial), respectively. At $1x10^{-6}$ cancer risk, the PRG is less than background and therefore is not applicable.

[7] The industrial PRG for chromium (III) is used, as speciation of chromium in borings SRB 33-A, SRB 33-B, SRB-34A, and SRB 34-B did not indicate the presence of chromium (VI).

[8] STLC = Soluble Threshold Limit Concentration, California Code of Regulations, Title 22, Section 66216.24

[9] TTLC = Total Threshold Limit Concentration, California Code of Regulations, Title 22, Section 66216.24

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TABLE 6

ANALYTICAL RESULTS
FOR TOTAL PETROLEUM HYDROCARBONS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Sampling Depth[2]	Date Collected	TPHg	TPHd	TPHmo	TPH Bunker-C Fuel Oil
Sitewide						
SRB-20	c[3]-1.0, 4.0, 6.5	11/15/1996	--[4]	<20[5]	**900**	--
	4	11/15/1996	--	--	**69**	--
	6.5	11/15/1996	--	--	<5	--
	c-9.0, 11.5, 14.0	11/15/1996	--	<1	**56**	--
SRB-21	c-1.5, 4.0	11/14/1996	--	**130**	**510**	--
	7	11/14/1996	--	**1600**	<100	--
	9	11/14/1996	--	**960**	<50	--
	11	11/14/1996	--	**150**	<5	--
	13.5	11/14/1996	--	<1	<5	--
SRB-24	c-1.0, 4.0, 6.5	11/15/1996	--	<1	<5	--
	c-9.0, 11.5, 14.5	11/15/1996	--	<1	<5	--
SRB-25	c-1.5, 4.0, 6.5	11/15/1996	--	<1	<5	--
	c-9.0, 11.5, 14.0	11/15/1996	--	<1	<5	--
SRB-26	c-1.5, 4.0, 6.5	11/14/1996	--	<1	**12**	--
	c-10.5, 12.0, 14.5	11/14/1996	--	<1	<5	--
SRB-32	1	3/6/2000	--	**160**	<65	--
	4.5	3/7/2000	--	**2.8**[5]	<13	--
SRB-36	1	3/6/2000	--	**430**[5]	**780**	--
	4.5	3/6/2000	--	<1	<13	--
SRB-40	1	3/7/2000	--	**990**[5]	**1700**	--
	4.5	3/7/2000	--	**130**[5]	**240**	--
	7.5	3/7/2000	--	**210**[5]	**370**	--
	14	3/7/2000	--	<1	<13	--
SRB-41	1	3/7/2000	--	<1	**40**	--
	4.5	3/7/2000	--	<1	<13	--
Fenced Enclosure						
SRB-27	1.5	11/14/1996	--	<1	**72**	--
	4.5	11/14/1996	--	<1	<5	--
SRB-28	c-1.5, 4.5, 7.0	11/14/1996	--	<1	**130**	--
	c-9.0, 11.5, 14.0	11/14/1996	--	<1	<5	--
SRB-39	1	3/6/2000	--	<20	**720**	--
	4.5	3/6/2000	--	<1	**51**	--
SRB-56	1.0[6]	9/25/2001	<26	<52	<260	--
	1.5[6]	9/25/2001	<1.1	<1.1	<5.3	--
	6.0[6]	9/25/2001	<1.2	<1.2	<6.1	--
SRB-70	0.5	8/2/2002	<1.0	**1200**	**5600**	--
	3	8/2/2002	<1.0	**120**	**500**	--
	5	8/2/2002	<1.0	<1.0	<50	--
SRB-71	0.5	8/2/2002	<1.0	**270**	**1300**	--
	3	8/2/2002	<1.0	<1.0	<5.0	--
	5	8/2/2002	<1.0	<1.0	<5.0	--
SRB-72	0.5	6/20/2002	<1	**10/6.8**[7]	<50/<50[7]	--
	3	6/20/2002	<1.3	**130/170**[7]	**350/260**[7]	--
	5	6/20/2002	<1	<1/1[7]	<50/<50[7]	--

GEOMATRIX

TABLE 6

ANALYTICAL RESULTS
FOR TOTAL PETROLEUM HYDROCARBONS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Sampling Depth[2]	Date Collected	TPHg	TPHd	TPHmo	TPH Bunker-C Fuel Oil
SRB-73	0.5	6/20/2002	<1	**180/120**[7]	**360/260**[7]	--
	3	6/20/2002	**2.5**	**440/410**[7]	**610/570**[7]	--
	5	6/20/2002	<1.9	**11/8.8**[7]	<50/<50[7]	--
SRB-74	1	6/25/2002	<1	**8/7.2**[7]	**87/84**[7]	--
	5	6/25/2002	<1.6	<1/<1[7]	<50/<50[7]	--
	9	6/25/2002	<1	--	--	--
	11		--	<1/<1[7]	<50/<50[7]	--
	15	6/25/2002	<1	<1/<1[7]	<50/<50[7]	--
SRB-96	0.5	6/20/2002	**13**	**2400/2700**[7]	**3300/2800**[7]	--
	3	6/20/2002	<1	<1/<1[7]	<50/<50[7]	--
	5	6/20/2002	<1	<1/<1[7]	<50/<50[7]	--
Northwestern Area						
SRB-22	c-1.5, 4.0, 7.0	11/14/1996	--	<1	**43**	--
	10.5	11/14/1996	--	<1	**120**	--
	12.5	11/14/1996	--	**67**	**210**	--
	14.5	11/14/1996	--	<1	<5	--
SRB-23	c-1.5, 4.5, 7.5	11/14/1996	--	**5**	**28**	--
	c-10.0, 13.0, 14.5	11/14/1996	--	<1	<5	--
SRB-33	1	3/7/2000	--	**2.3**[5]	<13	--
	4.5	3/7/2000	--	<1	<13	--
SRB-34	1	3/7/2000	--	**2.1**[5]	<13	--
	4.5	3/7/2000	--	**2.2**[5]	<13	--
SRB-35	1	3/7/2000	--	<1	<13	--
	4.5	3/7/2000	--	<1	<13	--
SRB-51	19.5	9/27/2000	--	**8500**	**7600**	--
SRB-52	19.5	9/27/2000	--	**830**	**970**	--
SRB-53L	5	11/14/2002	--	**350**	**810**	--
	11	11/14/2002	--	**20**	**61**	--
SRB-75	1	6/24/2002	<1	**6.3/4.9**[7]	**57/<50**[7]	--
	2	6/24/2002	<1	**6.7/6.7**[7]	**54/60**[7]	--
	5	6/24/2002	<1	<1/<1[7]	<50/<50[7]	--
	17	6/24/2002	--	<1	<50	--
	19	6/24/2002	<1	**1200/990**[7]	**1200/840**[7]	--
	20	6/24/2002	--	**310**	**340**	--
SRB-79L	5	11/14/2002		**310**	**950**	--
	11	11/14/2002	--	<10	<50	--
SRB-80	16	6/18/2002	--	<1	<50	--
	21.5	6/18/2002	--	<1	<50	--
SRB-81	8.5	6/18/2002	--	<1	<50	<50
	15.5	6/18/2002	--	**160**	**230**	<100
	22	6/18/2002	--	<1	<50	<50
SRB-83	9	6/18/2002	--	<1	<50	--
	21	6/18/2002	--	**4.9**	<50	--
SRB-88	21	6/19/2002	--	**4**	<50	<50

GEOMATRIX

TABLE 6

ANALYTICAL RESULTS
FOR TOTAL PETROLEUM HYDROCARBONS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Sampling Depth[2]	Date Collected	TPHg	TPHd	TPHmo	TPH Bunker-C Fuel Oil
SRB-88L	8	11/14/2002	--	**1400**	**1800**	--
	11	11/14/2002	--	**610**	**780**	--
SRB-90	14	6/19/2002	--	**21**	<50	--
	17	6/19/2002	--	**150**	**210**	--
SRB-91	11	6/19/2002	--	**8.8**	<50	<50
	14	6/19/2002	--	**73**	**91**	<50
SRB-93	14	6/20/2002	--	**87**	**130**	--
	18	6/20/2002	--	<1	<50	--
SRB-99	14	6/25/2002	--	**10/8.4**[7]	<50/<50[7]	<50
	17	6/25/2002	--	**120**	**130**	--
	20	6/25/2002	--	**1300/1100**[7]	**1300/940**[7]	<500
	23	6/25/2002	--	<1	<50	--
SRB-100	5	6/25/2002	--	**130/120**[7]	**1200/930**[7]	<500
	7.5	6/25/2002	--	**1800/2300**[7]	**5100/6600**[7]	<2500
	11	6/25/2002	--	**96**	**520**	--
	20	6/25/2002	--	**51**	**59**	--
SRB-100L	4.75	11/14/2002	--	**430**	**2100**	--
	8	11/14/2002	--	**16,000**	**15,000**	--
SRB-101	5	7/10/2002	--	**1.1**	<50	--
	8	7/10/2002	--	<1	<50	--
	11	7/10/2002	--	<1	<50	--
	17	7/10/2002	--	<1	<50	--
SRB-103	5	7/10/2002	--	<1	<50	--
	8	7/10/2002	--	<1	<50	--
	11	7/10/2002	--	<1	<50	--
	17	7/10/2002	--	<1	<50	--
Pipeline Area						
PL-01	0.5	6/19/2002	--	**780**	**5700**	--
	0.5	7/23/2002	--	**1400**	**900**	--
	1.5	7/23/2002	--	**650**	**4500**	--
	3	7/23/2002	--	**470**	**2800**	--
PL-02	0.5	6/19/2002	--	**16**	**290**	--
PL-03	0.5	6/19/2002	--	**3900**	**10,000**	--
	0.5	7/23/2002	--	**490**	**1900**	--
	1.5	7/23/2002	--	**1.4**	<50	--
	3	7/23/2002	--	<1	<50	--
PL-04	0.5	6/19/2002	--	**11**	**78**	--
PL-05	0.5	6/19/2002	--	**120**	**1200**	--
PL-06	0.5	6/19/2002	--	**2400**	**4500**	--
	0.5	7/23/2002	--	**250**	**1200**	--
	1.5	7/23/2002	--	**380**	**1800**	--
	3	7/23/2002	--	**280**	**1500**	--
PL-06L	1	11/14/2002	--	**1400**	**4400**	
	5	11/14/2002	--	**670**	**920**	
PL-07	0.5	6/19/2002	--	**150**	<1000	--

GEOMATRIX

TABLE 6

ANALYTICAL RESULTS
FOR TOTAL PETROLEUM HYDROCARBONS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Sampling Depth[2]	Date Collected	TPHg	TPHd	TPHmo	TPH Bunker-C Fuel Oil
PL-08	0.5	6/19/2002	--	**2000**	**6700**	--
	0.5	7/23/2002	--	**6.8**	<50	--
	1.5	7/23/2002	--	**1.4**	<50	--
	3	7/23/2002	--	**1.1**	<50	--
PL-09	0.5	6/19/2002	--	<1.0	<50	--
PL-10	0.5	6/19/2002	--	**51**	**440**	--
PL-11	0.5	6/19/2002	--	<1.0	<50	--
PL-12	0.5	6/19/2002	--	**4400**	**12,000**	--
	0.5	7/23/2002	--	**630**	**4100**	--
	1.5	7/23/2002	--	**610**	**2900**	--
	3	7/23/2002	--	**1100**	**2900**	--
PL-12L	1	11/14/2002	--	**16,000**	**22,000**	--
	5	11/14/2002	--	**3700**	**14,000**	--

Notes:

[1] Samples were collected by Geomatrix Consultants, Inc. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California for, TPHd and TPHmo using EPA Method 8015. Samples collected in March 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California, for TPHd and TPHmo using EPA Method 8015M following silica gel cleanup procedure by EPA Method 3630C. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd. of Berkeley, California for, TPHd and TPHmo using EPA Method 8015M following silica gel cleanup procedure by EPA Method 3630C. Samples collected in September 2001 were analyzed by Severn Trent Laboratories (STL) of Sacramento, California for TPHg, TPHd, and TPHmo using EPA Method 8015M. Samples collected in 2002 were analyzed by STL San Francisco of Pleasanton, California, for TPHg, TPHd, TPHmo, and Bunker-C fuel oil using EPA Method 8015M following silica gel cleanup procedures by EPA Method 3630C. Samples collected in November 2002 analyzed by Friedman and Bruya, Inc. of Seattle, Washington for TPHd and TPHmo using EPA Method 8015M following silica gel cleanup procedures by EPA Method 3630C.

[2] Sampling depth measured in feet below ground surface. Depth listed represents the bottom depth of the sample (i.e., 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).

[3] "c" denotes composite sample.

[4] -- = not analyzed.

[5] Lab sheet indicates that result is quantified as diesel; chromatographic pattern not typical of fuel.

[6] Additional analyses, total purgeable/total extractable petroleum hydrocarbons, performed for SRB-56-1.0, SRB-62-1.5, SRB-62-6.0. Results were SRB-62-1.0 = 330/8200; SRB-62-1.5 = <1.1/25, and SRB-62-6.0 = <1.2/97, respectively.

[7] 10/6.8 = Result without silica gel cleanup/result with silica gel cleanup.

Abbreviations:
TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
TPHmo = total petroleum hydrocarbons quantified as motor oil

TABLE 7

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Acenaph-thylene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h) anthra-cene	Benzo-(ghi) perylene
Sitewide																	
SRB-20	c[3]-1.0, 4.0, 6.5	11/15/1996	<0.083	<0.017	<0.0083	<0.0083	--[4]	<0.017	<0.017	<0.017	**0.028**	<0.017	<0.017	<0.017	**0.025**	**0.049**	<0.017
	c-9.0, 11.5, 14.0	11/15/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-21	c-1.5, 4.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	**0.027**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.075**	<0.034	**0.029**
	7.0	11/14/1996	<0.083	**0.87**	**0.19**	**0.081**	--	**0.33**	**0.20**	**0.021**	**0.10**	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	9.0	11/14/1996	<0.083	**0.63**	**0.18**	**0.078**	--	**0.088**	**0.18**	**0.038**	**0.33**	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	11.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	13.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-24	c-1.0, 4.0, 6.5	11/15/1996	<0.083	<0.017	**0.019**	<0.0083	--	<0.017	**0.04**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-25	c-1.5, 4.0, 6.5	11/15/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.034**	<0.034	<0.017
	c-9.0, 11.0, 14.0	11/15/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-26	c-1.5, 4.0, 6.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-32	1.0	3/6/2000	**0.609**	**0.739**	**1.98**	**0.106**	--	**0.739**	**0.797**	**0.329**	**0.424**	**0.582**	**0.158**	**0.526**	**0.455**	**0.073**	**0.706**
	4.5	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-36	1.0	3/6/2000	<2	<2	<2	<2	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	4.5	3/6/2000	<0.02	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
SRB-40	1.0	3/7/2000	<3	<3	<3	<3	--	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
	4.5	3/7/2000	<0.05	<0.05	<0.05	<0.05	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	7.5	3/7/2000	<0.05	<0.05	<0.05	<0.05	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	14.0	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-41	1.0	3/7/2000	<0.05	<0.05	<0.05	<0.05	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	4.5	3/7/2000	<0.02	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fenced Enclosure																	
SRB-27	1.5	11/14/1996	<0.083	<0.017	**0.046**	<0.0083	--	<0.017	**0.032**	<0.017	**0.046**	**0.021**	<0.017	<0.017	<0.017	<0.034	**0.02**
	4.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-28	c-1.5, 4.5, 7.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	c-9.0, 11.5, 14.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-39	1.0	3/6/2000	<2.5	<2.5	<2.5	<2.5	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
	4.5	3/6/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Northwestern Area																	
SRB-22	c-1.5, 4.0, 7.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	10.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	12.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	**0.052**	<0.017	<0.017	**0.026**	<0.017	<0.034	0.045
	14.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.020**	<0.034	<0.017
SRB-23	c-1.5, 4.5, 7.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	**0.025**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	c-10.0, 13.0, 14.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017

TABLE 7

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Acenaph-thylene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h) anthra-cene	Benzo-(ghi) perylene
SRB-33	1.0	3/7/2000	<0.01	<0.01	**0.011**	<0.01	--	**0.027**	**0.028**	**0.019**	**0.019**	**0.024**	<0.01	**0.018**	<0.01	<0.01	**0.01**
	4.5	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-34	1.0	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	4.5	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-35	1.0	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	4.5	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-51	19.5	9/27/2000	<2.9	<2.9	**13**	**5.2**	**2.9**	<2.9	**5**	<2.9	**3.9**	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9
SRB-52	19.5	9/27/2000	<0.73	<0.73	<0.73	**7.4**	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73
SRB-75	17	6/24/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	20	6/24/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0065**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-79	12.5	6/18/2002	<0.01	**0.016**	**0.22**	**0.15**	**0.024**	**0.019**	**0.23**	**0.033**	**0.097**	**0.02**	<0.01	**0.025**	<0.01	<0.01	**0.011**
SRB-80	16	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	21.5	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-81	8.5	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	15.5	6/18/2002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.11**	<0.025	**0.055**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	22	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-83	9	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	11	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	14	6/18/2002	<0.025	<0.025	<0.025	**0.33**	**0.039**	**0.074**	**0.46**	**0.089**	**0.22**	**0.041**	<0.025	**0.052**	<0.025	<0.025	**0.025**
	21	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-88	21	6/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0054**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-90	14	6/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.025**	<0.005	**0.0094**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	17	6/19/2002	<0.005	<0.005	<0.005	**0.062**	<0.005	**0.018**	**0.076**	**0.035**	**0.048**	**0.0091**	<0.005	**0.014**	<0.005	<0.005	**0.0073**
SRB-91	11	6/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	14	6/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0067**	**0.042**	**0.0069**	**0.02**	<0.005	<0.005	**0.005**	<0.005	<0.005	<0.005
SRB-93	14	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.01**	<0.005	**0.01**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	18	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-99	14	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	17	6/25/2002	<0.005	<0.005	<0.005	**0.0082**	<0.005	<0.005	<0.005	<0.005	**0.011**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	20	6/25/2002	<0.01	<0.01	<0.01	**0.022**	<0.01	**0.011**	**0.053**	<0.01	**0.059**	**0.011**	<0.01	<0.01	<0.01	<0.01	<0.01
	23	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-100	5	6/25/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	7.5	6/25/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.11**	<0.05	<0.05	<0.05	<0.05	<0.05	**0.06**
	11	6/25/2002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	20	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 7

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Acenaph-thylene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h) anthra-cene	Benzo-(ghi) perylene
SRB-101	5	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	8	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	11	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	17	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-103	5	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	8	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	11	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	17	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pipeline Area																	
PL-01	0.5	7/19/2002	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	**1.2**
	0.5	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.13**
	1.5	7/23/2002	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	**0.55**
	3.0	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.25**
PL-03	0.5	7/23/2002	<0.025	**0.047**	**0.24**	**0.056**	<0.025	**0.087**	**0.19**	**0.06**	**0.16**	**0.084**	**0.026**	**0.082**	**0.058**	<0.025	**0.13**
	1.5	7/23/2002	<0.005	<0.005	**11**	<0.005	<0.005	**0.03**	**0.032**	**0.021**	**0.023**	**0.02**	**0.018**	**0.025**	**0.013**	<0.005	**0.014**
	3.0	7/23/2002	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0072**	**0.0074**	**0.0056**	**0.0070**	**0.0067**	<0.005	**0.0068**	<0.005	<0.005	**0.0069**
PL-04	0.5	7/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
PL-06	0.5	7/23/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	1.5	7/23/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	3.0	7/23/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PL-08	0.5	7/19/2002	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	**0.063**	<0.63	**1**	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63
	0.5	7/23/2002	<0.005	<0.005	**0.012**	<0.005	<0.005	<0.005	**0.0052**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	1.5	37460.0	<0.005	<0.005	**0.022**	<0.005	<0.005	<0.005	**0.011**	**0.0071**	**0.0087**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	3.0	7/23/2002	<0.005	<0.005	**0.012**	<0.005	<0.005	**0.0083**	**0.012**	**0.0064**	**0.0095**	**0.011**	<0.005	**0.005**	<0.005	<0.005	**0.0051**
PL-12	0.5	7/19/2002	<1.3	<1.3	**11**	**1.3**	<1.3	**2.7**	**8.6**	**4.8**	**7.3**	**1.3**	<1.3	**4**	<1.3	<1.3	**1.3**
	0.5	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.17**
	1.5	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.16**
	3.0	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.48**	<0.13	**0.47**	**0.18**	<0.13	**0.29**	<0.13	<0.13	**0.2**
PL-12L	5.0	11/14/2002	<0.5	**1.9**	**0.96**	**1.2**	<0.5	<0.5	**1.7**	**0.51**	**1.1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Residential PRGs (mg/kg)[5]			56	2,700	22,000	22,000	3,700	2,300	2,300	0.38	3.8	0.38	0.38	0.038	0.38	0.11	2,300
Industrial PRGs (mg/kg)[5]			190	26,000	100,000	100,000	29,000	22,000	29,000	1.3	13	1.3	1.3	0.13	1.3	0.38	22,000[6]
Soil Screening Level (DAF=1)[7]			4	28	28	590	29	210	210	0.08	8	0.2	2	0.4	0.7	0.8	210
Soil Screen Level (DAF=20)			84	560	560	12,000	570	4300	4200	2	160	5	49	8	14	2	4300

TABLE 7

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Notes:

[1] All samples collected by Geomatrix Consultants, Inc. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California using EPA Method 8310. Samples collected in March 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California using EPA Method 8270SIM. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd., of Berkeley, California, using EPA Method 8270. Samples collected in 2002 analyzed by Severn Trent Laboratories (STL) San Francisco of Pleasanton, California using EPA Method 8270C SIM.

[2] Sample depth measured in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).

[3] "c" denotes composite sample.

[4] -- = not analyzed.

[5] For carcinogenic PAHs (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, indeno-(1,2,3-cd)pyrene, and dibenzo(a,h)anthracene) California cancer slope factors were used to derive residential and industrial PRGs. For non-carcinogenic PAHs EPA Region 9 (EPA, 2002) PRGs are presented.

[6] Surrogate PRGs for a constituent with similar physical and chemical properties were used for the PRG comparison. Phenanthrene screening based screening based on fluorene as a surrogate, benzo(g,h,i) perylene screening based on fluoranthene as surrogate.

[7] Soil screening levels are from the EPA PRG document, and assume a dilution attenuation factor (DAF) of 1 and a DAF of 20.

Abbreviations:

PNAs = polynuclear aromatic hydrocarbons
PRGs = preliminary remediation goals
DAF = dilution attentuaion factor

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TABLE 8

ANALYTICAL RESULTS FOR BTEX AND MTBE IN SOIL[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
Fenced Enclosure							
SRB-56	0.5	9/25/2001	--[3]	--	--	--	<0.01
SRB-62	1.0	9/25/2001	--	--	--	--	<0.01
	5.0	9/25/2001	--	--	--	--	<0.01
SRB-70	0.5	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	3	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-71	0.5	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	3	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-72	0.5	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	3	6/20/2002	<0.0065	<0.0065	<0.0065	<0.0065	<0.0065
	5	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-73	0.5	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	3	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	6/20/2002	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094
SRB-74	1	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	6/25/2002	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081
	9	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	15	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-96	0.5	6/20/2002	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053
	3	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
Northwestern Area							
SRB-51	19.5	9/27/2000	<5.3	<5.3	<5.3	<5.3	--
SRB-52	19.5	9/27/2000	<5.1	<5.1	<5.1	<5.1	--
SRB-75	1	6/24/2002	<0.005	<0.005	**0.011**	**0.051**	<0.005
	2	6/24/2002	<0.005	**0.031**	<0.005	**0.0076**	<0.005
	5	6/24/2002	<0.005	**0.029**	<0.005	<0.005	<0.005
	19	6/24/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-79	12.5	6/18/2002	<0.25	<0.25	<0.25	<0.5	--
SRB-81	8.5	6/18/2002	<0.005	**0.015**	<0.005	<0.005	<0.005
	15.5	6/18/2002	<0.005	**0.016**	<0.005	<0.005	<0.005
	22	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-83	11	6/18/2002	<0.005	<0.005	<0.005	<0.005	--
	14	6/18/2002	<0.005	**0.019**	<0.005	<0.005	--
SRB-88	21	6/19/2002	<0.005	**0.02**	<0.005	<0.005	<0.005
SRB-91	11	6/19/2002	<0.005	**0.021**	<0.005	<0.005	<0.005
	14	6/19/2002	<0.005	**0.025**	<0.005	<0.005	<0.005
SRB-99	14	6/25/2002	<0.005	**0.019**	<0.005	<0.005	<0.005
	20	6/25/2002	<0.5	<0.5	<0.5	<0.5	<0.5
SRB-100	5	6/25/2002	<0.005	**0.027**	<0.005	<0.005	<0.005
	7.5	6/25/2002	<0.005	**0.042**	<0.005	<0.005	<0.005

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TABLE 8

ANALYTICAL RESULTS FOR BTEX AND MTBE IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
Pipeline Area[4]							
PL-01	0.5	6/19/2002	<0.0052	<0.0052	<0.0052	<0.0052	--
PL-02	0.5	6/19/2002	<0.0058	<0.0058	<0.0058	<0.0058	--
PL-03	0.5	6/19/2002	<0.0056	<0.0056	<0.0056	<0.0056	--
PL-04	0.5	6/19/2002	<0.0052	<0.0052	<0.0052	<0.0052	--
PL-05	0.5	6/19/2002	<0.0059	<0.0059	<0.0059	<0.0059	--
PL-06	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
PL-07	0.5	6/19/2002	<0.0058	<0.0058	<0.0058	<0.0058	--
PL-08	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
PL-09	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
PL-10	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
PL-11	0.5	6/19/2002	<0.0055	<0.0055	<0.0055	<0.0055	--
PL-12	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
Residential PRGs			0.6	520	8.9	270	17
Industrial PRGs			1.3	520	20	420	36
Soil Screening Level (DAF=1)			0.002	0.6	0.7	10	36
Soil Screening Level (DAF=20)			0.03	12	13	210	NA

Notes:

[1] All samples were collected by Geomatrix Consultants, Inc. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd. of Berkeley, California for benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8260B. Samples collected in September 2001 were analyzed by Severn Trent Laboratories (STL) of Sacramento, California, for MTBE using EPA Method 8260B. Samples analyzed for MTBE were collected in Encore Samplers and prepared for analysis by the laboratory in accordance with EPA Method 5035. Samples collected in 2002 were analyzed by STL San Francisco of Pleasanton, California using EPA MEthod 8260B. Samples analyzed for BTEX and MTBE were collected in Encore Samplers and prepared for analysis by the laboratory in accordance with EPA Method 5035.

[2] Sampling depth in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).

[3] -- = not analyzed

[4] Sample intervals for samples collected in the pipeline area represent depth below pipeline.

Abbreviations:
MTBE = methyl tertiary butyl ether
PRGs = preliminary remediation goals
DAF = dilution attenuation factor
NA = not available

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TABLE 9

LEACHABILITY TEST RESULTS[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Borehole	Date Collected	Sampling Interval[2]	TPHd[3] (mg/kg)	TPHd[2] (WET)[4] (µg/l)	TPHmo[3] (mg/kg)	TPHmo[3] (WET)[4] (µg/l)	Total PNAs[5] (mg/kg)	PNAs[5] (WET)[4] (µg/l)
SRB-32	3/6/00	1.0	--	--	--	--	8.223	<0.2[6]
SRB-36	3/6/00	1.0	430[7]	<50[6]	780	<250[6]	--	--
SRB-40	3/7/00	7.5	210[7]	<50	370	<250	<0.05	<0.2
SRB-51	9/27/00	19.5	8,500	--	7600	--	30	<2.9
SRB-52	9/27/00	19.5	830	--	970	--	7.4	<0.73
SRB-53L	11/14/02	5.0	350	1,300/50[8]	810	630/<100[8]	--	--
	11/14/02	11.0	20	710/<50[8]	61	<100/<100[8]	--	--
SRB-79L	11/14/02	5.0	310	420/<50[8]	950	350/<100[8]	--	--
	11/14/02	11.0	<10	640/<50[8]	<50	<100/<100[8]	--	--
SRB-88L	11/14/02	8.0	1,400	1,100/<50[8]	1,800	190/<!00[8]	--	--
	11/14/02	11.0	610	910/<50[8]	780	140/<100[8]	--	--
SRB-100L	11/14/02	4.75	430	350/<50[8]	2,100	320/<100[8]	--	--
	11/14/02	8.0	16,000	2,400/61[8]	15,000	810/<100[8]	--	--
PL-06L	11/14/02	1.0	1,400	880/<50[8]	4,400	770/<100[8]	--	--
	11/14/02	5.0	670	1,200/<50[8]	920	320/<100[8]	--	--
PL-12L	11/14/02	1.0	16,000	14,000/690[8]	22,000	1000/<100[8]	--	--
	11/14/02	5.0	3,700	2,400/180[8]	4,100	520/<100[8]	8.35	--

Notes:

1 Samples collected by Geomatrix Consultants, Inc. Samples collected in March 2000 were analyzed by Entech Analytical, Inc. of Sunnyvale, California. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd., of Berkeley, California.

2 Sampling depth in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 1.0 equals a six inch sample collected from 0.5 – 1.0 feet below ground surface).

3 TPHd = total petroleum hydrocarbons as diesel; TPHmo = total petroleum hydrocarbons as motor oil. Samples analyzed by EPA Method 8015M followed by a silica gel cleanup by EPA Method 3630C.

4 WET = waste extraction test, waste extraction test was performed using simulated rainwater. Results are presented in micrograms per liter.

5 PNAs = polynuclear aromatic compounds. In March 2000, samples were analyzed by EPA Method 8270 SIM. In September 2000, samples were analyzed by EPA Method 8270.

6 The leachability tests for TPH and PNAs from samples SRB-36 and SRB-32, respectively, were performed one day beyond their hold times.

7 Lab sheet indicates that result is quantified as diesel but the chromatographic pattern is not typical of fuel.

8 1,300/<50 = result without silica gel cleanup / result with silica gel cleanup. The silica gel cleanup method removes non-hydrocarbons that would otherwise interfere with measurement of petroleum hydrocarbons. The data generated following silica gel cleanup is used for analysis of the leachability test results.

-- = not analyzed

Table 1: Summary of 6th Street Warehouse Source Area Investigation – Soil Sample Analytical Results

Sample Identification	Date Sampled	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]
SRB-104-5	10/15/03	5	<5.0[e]	**12**
SRB-104-10	10/15/03	10	<10	<20
SRB-104-20	10/15/03	20	<10	<20
SRB-105-5	10/15/03	5	<10	<20
SRB-105-15	10/15/03	15	<25	**64**
SRB-105-18.5	10/15/03	18.5	**48**	**180**
SRB-106-5	10/15/03	5	<5.0	<10
SRB-106-15	10/15/03	15	<5.0	<10
SRB-106-20	10/15/03	20	<5.0	<10
SRB-107-5	10/14/03	5	<5.0	<10
SRB-107-15	10/14/03	15	<5.0	<10
SRB-107-20	10/14/03	20	<5.0	<10
SRB-108-5	10/14/03	5	<5.0	<10
SRB-108-10	10/14/03	10	<5.0	<10
SRB-108-20	10/14/03	20	<5.0	<10
SRB-109-5	10/15/03	5	<5.0	<10
SRB-109-15	10/15/03	15	<5.0	<10
SRB-109-19	10/15/03	19	<5.0	<10
SRB-110-5	10/15/03	5	<5.0	<10
SRB-110-10	10/15/03	10	<5.0	<10
SRB-110-20	10/15/03	20	**180**	**180**
SRB-111-5	10/15/03	5	<10	**72**
SRB-111-10	10/15/03	10	**1,400**	**2,300**
SRB-111-18.5	10/15/03	18.5	**470**	**600**
SRB-112-5	10/14/03	5	<5.0	<10
SRB-112-10	10/14/03	10	<5.0	<10
SRB-112-15	10/14/03	15	**590**	**850**
SRB-112-20	10/14/03	20	**3,700**	**3,300**
SRB-113-5	10/14/03	5	**1,400**	**1,400**
SRB-113-10	10/14/03	10	**3,000**	**3,500**
SRB-113-15	10/14/03	15	**46**	**360**
SRB-113-20	10/14/03	20	**1,000**	**1,200**
SRB-114-5	10/14/03	5	<5.0	<10
SRB-114-10	10/14/03	10	<5.0	<10

Table 1: Summary of 6th Street Warehouse Source Area Investigation – Soil Sample Analytical Results

Sample Identification	Date Sampled	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]
SRB-114-20	10/14/03	20	<5.0	<10
SRB-115-5	10/14/03	5	<5.0	<10
SRB-115-10	10/14/03	10	<5.0	<10
SRB-115-20	10/14/03	20	<5.0	<10
SRB-116-5	10/14/03	5	<5.0	**31**
SRB-116-10	10/14/03	10	<5.0	<10
SRB-116-20	10/14/03	20	<5.0	<10
SRB-117-5	10/15/03	5	<5.0	<10
SRB-117-10	10/15/03	10	<5.0	<10
SRB-117-20	10/15/03	20	<5.0	<10
SRB-118-5	10/15/03	5	**21,000**	**15,000**
SRB-118-14.5	10/15/03	14.5	<250	**650**
SRB-118-20	10/15/03	20	**1,600**	**1,900**
SRB-119-5	10/15/03	5	<5.0	<10
SRB-119-10	10/15/03	10	<5.0	<10
SRB-119-20	10/15/03	20	<5.0	<10
SRB-120-5	10/15/03	5	<5.0	<10
SRB-120-10	10/15/03	10	<5.0	<10
SRB-120-20	10/15/03	20	<5.0	<10
SRB-121-5	10/14/03	5	<5.0	<10
SRB-121-15	10/14/03	15	<5.0	**15**
SRB-121-20	10/14/03	20	<5.0	<10
SRB-122-5	10/14/03	5	<5.0	<10
SRB-122-10	10/14/03	10	<5.0	<10
SRB-122-20	10/14/03	20	<5.0	<10

(a) mg/kg = milligrams per kilogram.
(b) feet bgs = feet below ground surface.
(c) Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(d) Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(e) < = Analyte not detected at or above stated laboratory reporting limit.

Results equal to, or greater than, the laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 3: Summary of Excavation Soil Sampling Analytical Results: Southern Warehouse Area – Total Petroleum Hydrocarbons and Arsenic

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Arsenic[e]	Date Sampled
SW-M1-1-2.5	2.5	**2,600**	**2,300**	--[f]	10/15/03
SW-M1-2-6.5	6.5	<5.0[g]	**17**	--	10/15/03
SW-M1-3-5.5	5.5	<5.0	<10	--	10/15/03
SW-M1-4-7	7	**1,500**	**1,400**	--	10/15/03
SW-M1-5-3	3	**1,400**	**1,800**	--	10/15/03
SW-M2-6-5.75	5.75	<5.0	<10	--	10/15/03
SW-N1-7-5	5	<5.0	<10	--	10/15/03
SW-L1-10-8C[h]	8	<5.0	<10	--	10/16/03
SW-L1-11-9.5C	9.5	<10	**33**	--	10/16/03
SW-L1-12-5C	5	<5.0	<10	--	10/16/03
SW-M1-13-4C	4	<5.0	<10	--	10/16/03
SW-L1-14-3.75C	3.75	<5.0	<10	--	10/16/03
SW-L1-15-4.5C	4.5	<5.0	<10	--	10/16/03
SW-M1-16-8C	8	<5.0	<10	3.0	11/16/03
SW-M1-17-8.5C	8.5	<5.0	<10	2.7	11/16/03
SW-M1-18-5C	5	**8.6**	**88**	3.7	11/16/03
SW-N1-19-4.5C	4.5	<5.0	<10	2.8	11/16/03
SW-N1-20-7C	7	<5.0	<10	2.3	11/16/03
SW-M1-21-4C	4	<5.0	<10	<2.0	11/16/03

(a) mg/kg = milligrams per kilogram.
(b) feet bgs = feet below ground surface.
(c) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(d) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(e) Arsenic analysis by EPA Method 6010B.
(f) -- = Not analyzed.
(g) < = Analyte not detected at, or above, stated laboratory reporting limit.
(h) C = Sample collected at the direction of regulatory agency personnel.

TPHd and TPHmo results equal to, or greater than, laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 4: Summary of Excavation Soil Sampling Analytical Results: Fenced Enclosure – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHg[c]	TPHd[d]	TPHmo[e]	Date Sampled
FE-L6-23-1.5C[f]	1.5	<1.0[g]	<5.0	**34**	10/17/03
FE-M6-24-1.5C	1.5	<1.0	<5.0	<10	10/17/03
FE-L5-29-0.5C	0.5	<1.0	<5.0	**1,100**	10/17/03
FE-L6-30-3C	3	<1.0	<5.0	**470**	10/17/03
FE-119-3.5C	3.5	--[h]	1.6	<10	11/13/03

(a) mg/kg = milligrams per kilogram.
(b) feet bgs = feet below ground surface.
(c) TPHg = Total petroleum hydrocarbons as gasoline analysis by EPA Method 8015m.
(d) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(e) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(f) C = Sample collected at the direction of regulatory agency personnel.
(g) < = Analyte not detected at, or above, stated laboratory reporting limit.
(h) -- = Not analyzed.

Results equal to, or greater than, laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 5: Summary of Excavation Soil Sampling Analytical Results: Fenced Enclosure BTEX[a] and Lead[b]

Sample Identification	Depth (feet bgs)[d]	Analytical Results (mg/kg)[c]					Date Sampled
		Benzene	Toluene	Ethylbenzene	Xylenes	Lead	
FE-L6-23-1.5C[e]	1.5	<0.005[f]	<0.005	<0.005	<0.013	26	10/17/03
FE-M6-24-1.5C	1.5	<0.005	<0.005	<0.005	<0.013	27	10/17/03
FE-L5-29-0.5C	0.5	<0.005	<0.005	<0.005	<0.013	98	10/17/03
FE-L6-30-3C	3	<0.005	<0.005	<0.005	<0.013	74	10/17/03

(a) BTEX = Benzene, toluene, ethylbenzene and xylenes analysis by EPA Method 8020.
(b) Lead = Analysis by EPA Method 6010B.
(c) mg/kg = milligrams per kilogram.
(d) feet bgs = feet below ground surface.
(e) C = Sample collected at the direction of regulatory agency personnel.
(f) < = Analyte not detected at or above stated laboratory reporting limit.

Table 6: Summary of Excavation Soil Sampling Analytical Results: Northwestern Area – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Date Sampled
NW-B2-8-14C	14	**900**	**740**	10/16/03
NW-B1-9-7C	7	<83[e]	**450**	10/16/03
NW-B3-10-8.5C	8.5	**220**	**400**	10/16/03
NW-D2-25-9	9	<5.0	<10	10/17/03
NW-D2-26-11	11	<5.0	<10	10/17/03
NW-C2-27-4.5	4.5	<5.0	<10	10/17/03
NW-F2-28-11	11	**420**	**1,200**	10/17/03
NW-B2-31-16C	16	**340**	**290**	10/20/03
NW-B1-32-16	16	<83	**230**	10/20/03
NW-B1-33-21C[f]	21	<25	**58**	10/20/03
NW-D2-34-19	19	**490**	**490**	10/20/03
NW-D2-35-9C	9	<5.0	<10	10/20/03
NW-E1-36-10	10	**3,500**	**3,000**	10/21/03
NW-C1-37-6	6	<5.0	**23**	10/21/03
NW-B1-38-6	6	<5.0	**16**	10/21/03
NW-E1-39-18	18	**2,100**	**2,100**	10/21/03
NW-E1-40-13.5	13.5	<5.0	<10	10/21/03
NW-E1-41-7	7	**2,400**	**1,700**	10/22/03
NW-E1-42-8	8	<5.0	<10	10/22/03
NW-F2-43-14	14	<5.0	<10	10/22/03
NW-E1-44-13.5	13.5	**460**	**470**	10/22/03
NW-E1-45-9	9	**23**	**110**	10/22/03
NW-E1-46-4	4	**1,200**	**950**	10/22/03
NW-F1-47-6	6	**310**	**700**	10/22/03
NW-F1-48-9	9	<5.0	<10	10/22/03
NW-F1-49-14.5	14.5	**1,000**	**1,200**	10/22/03
NW-F1-50-8	8	**750**	**980**	10/22/03
NW-F1-51-5	5	<250	**1,700**	10/22/03
NW-D1-52-4	4	<10	**63**	10/22/03

Table 6: Summary of Excavation Soil Sampling Analytical Results: Northwestern Area – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Date Sampled
NW-C1-53-4	4	<5.0	<10	10/22/03
NW-C2-54-3.5	3.5	<10	**31**	10/22/03
NW-F1-55-15.5	15.5	**14**	**62**	10/22/03
NW-F1-56-14	14	**230**	**340**	10/22/03
NW-F1-57-8.5	8.5	<5.0	<10	10/22/03
NW-E2-58-5	5	<5.0	<10	10/23/03
NW-F2-59-5	5	<5.0	<10	10/23/03
NW-E2-60-6	6	<5.0	**21**	10/23/03
NW-D1-61-20	20	<10	**100**	10/23/03
NW-D1-62-21	21	**550**	**460**	10/23/03
NW-E1-63-21	21	**230**	**260**	10/23/03
NW-E1-64-21	21	**3,300**	**2,500**	10/23/03
NW-E2-65-21	21	**1,400**	**1,200**	10/23/03
NW-E1-66-21	21	**330**	**310**	10/24/03
NW-E1-67-21	21	**63**	**120**	10/24/03
NW-E2-68-21	21	<5.0	<10	10/24/03
NW-E1-69-21	21	**1,600**	**1,600**	10/24/03
NW-G1-70-8	8	**1,100**	**1,100**	10/24/03
NW-G1-71-13	13	<25	**510**	10/24/03
NW-G1-72-5	5	<25	**280**	10/24/03
NW-G1-73-4	4	**210**	**1,600**	10/24/03
NW-F2-74-11	11	<5.0	**22**	10/24/03
NW-G2-75-7	7	<5.0	<10	10/24/03
NW-G2-76-6	6	<5.0	<10	10/24/03
NW-H2-77-4	4	<25	**160**	10/24/03
NW-C2-78-8	8	<5.0	<10	10/27/03
NW-A2-79-18C	18	**280**	**290**	10/27/03
NW-A2-80-21C	21	**92**	**150**	10/27/03
NW-B2-81-21C	21	**77**	**75**	10/27/03
NW-A1-82-19C	19	**110**	**110**	10/27/03

Table 6: Summary of Excavation Soil Sampling Analytical Results: Northwestern Area – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Date Sampled
NW-B2-83-16C	16	**120**	**110**	10/27/03
NW-A1-84-18C	18	<5.0	**51**	10/27/03
NW-A1-85-10C	10	<5.0	<10	10/27/03
NW-A1-86-16C	16	<5.0	**92**	10/27/03
NW-F1-87-16C	16	**320**	**420**	10/27/03
NW-G2-88-11	11	<5.0	<10	10/28/03
NW-H2-89-15	15	<5.0	<10	10/28/03
NW-H2-90-18	18	**67**	**110**	10/28/03
NW-H2-91-17	17	<5.0	<10	10/28/03
NW-H2-92-12	12	<5.0	<10	10/28/03
NW-G1-93-16	16	**540**	**480**	10/28/03
NW-F1-94-17	17	**14**	**37**	10/28/03
NW-E2-95-7C	7	<5.0	**34**	10/28/03
NW-E2-96-9C	9	<25	**190**	10/28/03
NW-H2-97-16-C	16	<5.0	**25**	10/28/03
NW-H2-98-13C	13	<5.0	**46**	10/28/03
NW-H2-99-11C	11	<5.0	<10	10/28/03
NW-H2-100-13C	13	<5.0	<10	10/28/03
NW-E2-101-9C	9	<5.0	<10	10/28/03
NW-D1-102-11	11	**16**	**33**	10/29/03
NW-C1-103-17	17	**14**	**33**	10/29/03
NW-C1-104-9	9	<5.0	<10	10/29/03
NW-C1-105-8	8	<5.0	**11**	10/29/03
NW-C1-106-16	16	<5.0	<10	10/30/03
NW-C1-107-18	18	**1,500**	**1,500**	10/30/03
NW-C1-108-18	18	<5.0	<10	10/30/03
NW-01-109-10	10	**2,300**	**2,300**	10/31/03
NW-01-110-17.5	17.5	**130**	**140**	10/31/03
NW-D1-111-21	21	**1,800**	**1,000**	11/13/03
NW-D1-112-16	16	**1,300**	**720**	11/13/03

Table 6: Summary of Excavation Soil Sampling Analytical Results: Northwestern Area – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Date Sampled
NW-D1-113-14	14	<4.0	<4.0	11/13/03
NW-C1-114-17	17	<1.0	<1.0	11/13/03
NW-C1-115-13	13	**280**	**410**	11/13/03
NW-F1-116-10	10	**200**	<400	11/13/03
NW-F1-117-10	10	<4.0	**100**	11/13/03
NW-E1-118-10	10	**760**	**510**	11/13/03

(a) mg/kg = milligrams per kilogram.
(b) feet bgs = feet below ground surface.
(c) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(d) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(e) < = Analyte not detected at or above stated laboratory reporting limit.
(f) Sample collected at the direction of regulatory agency personnel.

Results equal to, or greater than, laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
TPH-d, TPH-mo, and TPH-g
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	TPH-d (mg/kg)	TPH-mo (mg/kg)	TPH-g (mg/kg)
SB-1A@2'	9/16/2008	385[AC]	360	NA
SB-1A@5.5'	9/16/2008	2,160	1,060	NA
SB-1A@7.5'	9/16/2008	4,410	2,170	NA
SB-1A@12'	9/16/2008	1,880	1,010	NA
SB-1A@15'	9/16/2008	<10.0	<10.0	NA
SB-1B@5'	9/23/2008	<10.0	<10.0	NA
SB-1B@10'	9/23/2008	<10.0	<10.0	NA
SB-1C@8'	9/24/2008	2,960[AC]	3,170	NA
SB-1C@15'	9/24/2008	41.8	21.0	NA
SB-1D@15'	9/24/2008	<10.0	<10.0	NA
SB-1E@5'	9/24/2008	99.3[AC]	304	NA
SB-1E@14'	9/24/2008	32.9	31	NA
SB-1F@5'	9/24/2008	<10.0	<10.0	NA
SB-1F@14'	9/24/2008	<10.0	<10.0	NA
SB-2A@2'	9/17/2008	1,460[AC]	2,460	NA
SB-2A@5'	9/17/2008	<10.0	<10.0	NA
SB-3A@2'	9/17/2008	<10.0	43.8	NA
SB-3A@5'	9/17/2008	<10.0	<10.0	NA
SB-4A@2'	9/18/2008	20.4	<10.0	NA
SB-4A@5'	9/18/2008	<10.0	<10.0	NA
SB-5A@2'	9/18/2008	<10.0	<10.0	NA
SB-5A@6'	9/18/2008	<10.0	<10.0	NA
SB-6A@2'	9/19/2008	<10.0	<10.0	NA
SB-6A@5'	9/19/2008	<10.0	<10.0	NA
SB-7A@2'	9/22/2008	<10.0	<10.0	NA
SB-7A@5'	9/22/2008	<10.0	<10.0	NA
SB-8A@2'	9/22/2008	<10.0	<10.0	NA
SB-8A@5'	9/22/2008	<10.0	<10.0	NA
SB-9A@2'	9/23/2008	<10.0	<10.0	NA
SB-9A@5'	9/23/2008	<10.0	<10.0	NA
SB-11@9.5'	9/24/2008	<10.0	<10.0	NA
SB-11@15.5'	9/24/2008	<10.0	<10.0	NA
SB-12@8'	9/24/2008	<10.0	<10.0	<1.00
SB-13@9'	9/24/2008	<10.0	<10.0	<1.00
SB-14@11'	9/24/2008	<10.0	<10.0	<1.00
SB-18@2'	9/16/2008	<10.0	<10.0	NA
SB-18@5'	9/16/2008	<10.0	<10.0	NA
SB-19@2'	9/16/2008	<10.0	<10.0	NA
SB-19@6'	9/16/2008	<10.0	<10.0	NA
SB-20@2'	9/16/2008	<10.0	<10.0	NA
SB-20@5'	9/16/2008	<10.0	<10.0	NA
SB-21@2'	9/16/2008	570[AC]	1,110	NA
SB-21@5'	9/16/2008	<10.0	<10.0	NA
SB-22@2'	9/16/2008	<10.0	<10.0	NA
SB-22@5'	9/16/2008	<10.0	<10.0	NA
SB-23@3'	9/16/2008	<10.0	<10.0	NA
SB-23@5'	9/16/2008	<10.0	<10.0	NA
SB-24@2'	9/16/2008	546[AC]	3,240	NA
SB-24@5'	9/16/2008	56.2[AC]	79.2	NA
SB-25@2'	9/16/2008	238	228	NA
SB-25@5'	9/16/2008	<10.0	<10.0	NA
SB-26@2'	9/17/2008	<10.0	48.3	NA
SB-26@5.5'	9/17/2008	52.2[AC]	84.1	NA
SB-27@2'	9/17/2008	98.3[AC]	283	NA
SB-27@5.5'	9/17/2008	32.4	24.0	NA
SB-28@2'	9/17/2008	936[AC]	1,780	NA
SB-28@5'	9/17/2008	<10.0	<10.0	NA
SB-29@2'	9/17/2008	2,340[AC]	3,570	NA
SB-29@5'	9/17/2008	<10.0	<10.0	NA
SB-30@2'	9/17/2008	1,150	621	NA
SB-30@4'	9/17/2008	474	280	NA
SB-30@7'	9/17/2008	<10.0	<10.0	NA
SB-30A@5'	9/24/2008	<10.0	<10.0	NA
SB-30B@5'	9/24/2008	<10.0	<10.0	NA
SB-31@2'	9/17/2008	318[AS]	715	NA
SB-31@5'	9/17/2008	<10.0	<10.0	NA
SB-32@2'	9/17/2008	<10.0	<10.0	NA
SB-32@5'	9/17/2008	<10.0	<10.0	NA
SB-33@2'	9/18/2008	<10.0	<10.0	NA
SB-33@5'	9/18/2008	50.2[AC]	138	NA

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
TPH-d, TPH-mo, and TPH-g
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	TPH-d (mg/kg)	TPH-mo (mg/kg)	TPH-g (mg/kg)
SB-34@2'	9/18/2008	32.3[AN]	<10.0	NA
SB-34@7'	9/18/2008	<10.0	<10.0	NA
SB-35@2'	9/18/2008	<10.0	<10.0	NA
SB-35@5'	9/18/2008	<10.0	<10.0	NA
SB-36@2'	9/18/2008	<10.0	<10.0	NA
SB-36@5'	9/18/2008	<10.0	<10.0	NA
SB-37@2'	9/18/2008	<10.0	<10.0	NA
SB-37@5'	9/18/2008	<10.0	<10.0	NA
SB-38@2'	9/18/2008	<10.0	<10.0	NA
SB-38@5'	9/18/2008	<10.0	<10.0	NA
SB-39@2'	9/18/2008	<10.0	<10.0	NA
SB-39@5'	9/18/2008	<10.0	<10.0	NA
SB-40@2'	9/19/2008	<10.0	<10.0	NA
SB-40@5'	9/19/2008	<10.0	<10.0	NA
SB-41@2'	9/19/2008	<10.0	<10.0	NA
SB-41@5'	9/19/2008	<10.0	<10.0	NA
SB-42@2'	9/19/2008	<10.0	<10.0	NA
SB-42@5'	9/19/2008	<10.0	<10.0	NA
SB-43@2'	9/19/2008	15.9	<10.0	NA
SB-43@5'	9/19/2008	<10.0	<10.0	NA
SB-44@2'	9/19/2008	<10.0	<10.0	NA
SB44@5'	9/19/2008	<10.0	46.0	NA
SB-45@2'	9/19/2008	<10.0	<10.0	NA
SB-45@5'	9/19/2008	<10.0	<10.0	NA
SB-45B@5'	9/23/2008	<10.0	<10.0	NA
SB-46@2'	9/19/2008	<10.0	<10.0	NA
SB-46@5'	9/19/2008	<10.0	<10.0	NA
SB-47@2'	9/22/2008	<10.0	<10.0	NA
SB47@5'	9/22/2008	<10.0	<10.0	NA
SB-48@2'	9/22/2008	44.2	<10.0	NA
SB-48@6'	9/22/2008	<10.0	<10.0	NA
SB-49@2'	9/22/2008	<10.0	<10.0	NA
SB-49@5'	9/22/2008	<10.0	<10.0	NA
SB-50@2'	9/22/2008	<10.0	<10.0	NA
SB-50@5'	9/22/2008	<10.0	<10.0	NA
SB-51@2'	9/22/2008	<10.0	<10.0	NA
SB-51@5'	9/22/2008	<10.0	<10.0	NA
SB-52@2'	9/22/2008	<10.0	<10.0	NA
SB-52@5'	9/22/2008	<10.0	<10.0	NA
SB-53@2'	9/22/2008	<10.0	<10.0	NA
SB-53@5'	9/22/2008	<10.0	<10.0	NA
SB-54@2'	9/23/2008	<10.0	<10.0	NA
SB-54@5'	9/23/2008	<10.0	<10.0	NA
SB-55@2'	9/23/2008	<10.0	<10.0	NA
SB-55@5'	9/23/2008	<10.0	<10.0	NA
SB-56@2'	9/23/2008	<10.0	38.9	NA
SB-56@5'	9/23/2008	52.7[AC]	126	NA
SB-57@2'	9/23/2008	<10.0	<10.0	NA
SB-57@5'	9/23/2008	<10.0	<10.0	NA
SB-58@2'	9/23/2008	<10.0	<10.0	NA
SB-58@5'	9/23/2008	<10.0	<10.0	NA
SB-59@2'	9/23/2008	2,270[AC]	3,550	NA
SB-59@5'	9/23/2008	<10.0	36.5	NA
SB-60@2'	9/23/2008	<10.0	<10.0	NA
SB-60@5'	9/23/2008	<10.0	<10.0	NA
SB-61@2'	9/23/2008	<10.0	<10.0	NA
SB-61@5'	9/23/2008	<10.0	<10.0	NA
S-N-GATE@2'	9/29/2008	2,530[AC]	3,400	NA
S-N-GATE@3'	9/29/2008	<10.0	<10.0	NA
S-FE@1'	9/29/2008	615[AK, AC]	1,060	402

NA = Not Analyzed
TPH-g = Total Petroleum Hydrocarbons as gasoline.
TPH-d = Total Petroleum Hydrocarbons as diesel.
TPH-mo = Total Petroleum Hydrocarbons as motor oil.
mg/kg = milligrams per kilogram.
AC = Heavier hydrocarbons contributing to diesel range quantitation.
AK = Lighter hydrocarbon than diesel.
AN = Unknown hydrocarbon with several peaks.

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS
POLYCYCLIC AROMATIC HYDROCARBONS
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	Acenaphthene	Acenaphthylene	Anthracene	Benzo (A) Anthracene	Benzo (B) Fluoranthene	Benzo (K) Fluoranthene	Benzo (A) Pyrene	Benzo (G,H,I) Perylene	Chrysene	Dibenzo (A,H) Anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-C,D) Pyrene	Naphthalene	Phenanthrene	Pyrene
		µg/kg															
SB-1A@7.5'	9/16/2008	212	102	<5.00	131	<5.00	<5.00	43.2	70.7	69.2	<20.0	32.6	85.3	28.1	82.3	18.5	139
SB-5A@2'	9/18/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-8A@2'	9/22/2008	<2.50	<2.50	3.33	8.39	4.89	4.58	11.5	<10.0	9.81	<10.0	14.2	<2.50	<10.0	<2.50	5.04	17.0
SB-8A@5'	9/22/2008	<2.50	<2.50	<2.50	3.99	<2.50	<2.50	3.26	<10.0	2.94	<10.0	3.25	<2.50	<10.0	<2.50	<2.50	3.55
SB-11@9.5'	9/24/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-11@15.5'	9/24/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-18@2'	9/16/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-25@2'	9/16/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-28@2'	9/17/2008	<25.0	<25.0	<25.0	34.6	<25.0	<25.0	360	670	79.4	<100	<25.0	<25.0	<100	<25.0	27.6	<25.0
SB-28@5'	9/17/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-34@2'	9/18/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-45@2'	9/19/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-47@2'	9/22/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-56@2'	9/23/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-60@2'	9/23/2008	<2.50	<2.50	<2.50	4.42	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	3.54	<2.50	<10.0	<2.50	<2.50	4.77
SB-61@2'	9/23/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50

µg/kg = micrograms per kilogram.

TABLE 3
SOIL SAMPLE ANALYTICAL RESULTS
CAM 17 Metals
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
		mg/kg																
SB-5A@2'	9/18/2008	<2.50	3.76	172	<2.50	<2.50	61.1	16.6	26.1	21.1	<0.100	<2.50	73.8	<2.50	<2.50	<2.50	59.0	46.6
SB-8A@2'	9/22/2008	<2.50	4.92	216	<2.50	<2.50	107	23.2	33.1	8.02	<0.100	<2.50	169	<2.50	<2.50	<2.50	64.8	63.8
SB-11@9.5'	9/25/2008	<2.50	2.69	191	<2.50	<2.50	119	16.9	22.6	6.82	<0.100	<2.50	141	<2.50	<2.50	<2.50	44.4	48.8
SB-11@15.5'	9/25/2008	<2.50	<2.50	161	<2.50	<2.50	83.7	10.7	23.4	6.82	<0.100	<2.50	117	<2.50	<2.50	<2.50	38.5	47.1
SB-18@2'	9/16/2008	<2.50	2.92	128	<2.50	<2.50	78.3	13.1	22.2	7.35	<0.100	<2.50	89.8	<2.50	<2.50	<2.50	43.2	46.0
SB-18@5'	9/16/2008	<2.50	5.25	185	<2.50	<2.50	98.2	17.9	24.5	5.60	<0.100	<2.50	135	<2.50	<2.50	<2.50	58.8	49.8
SB-25@2'	9/16/2008	<2.50	<2.50	71.5	<2.50	<2.50	30.5	9.88	33.9	20.6	<0.100	<2.50	54.3	<2.50	<2.50	<2.50	35.7	48.4
SB-28@2'	9/17/2008	<2.50	2.72	34.4	<2.50	<2.50	28.7	7.43	13.9	12.4	<0.100	<2.50	61.9	<2.50	<2.50	<2.50	24.5	26.4
SB-34@2'	9/18/2008	<2.50	2.84	170	<2.50	<2.50	63.7	14.0	23.6	6.58	<0.100	<2.50	79.1	<2.50	<2.50	<2.50	47.7	43.7
SB-45@2'	9/19/2008	<2.50	3.56	157	<2.50	<2.50	64.3	15.5	24.0	8.35	<0.100	<2.50	84.5	<2.50	<2.50	<2.50	47.1	44.7
SB-47@2'	9/22/2008	<2.50	3.94	168	<2.50	<2.50	62.8	18.0	22.5	5.98	<0.100	<2.50	91.2	<2.50	<2.50	<2.50	46.5	49.6
SB-56@2'	9/23/2008	<2.50	5.20	124	<2.50	<2.50	110	23.0	30.5	7.44	<0.100	<2.50	165	<2.50	<2.50	<2.50	64.3	61.2
SB-60@2'	9/23/2008	<2.50	5.03	147	<2.50	<2.50	79.1	18.9	48.2	86.0	0.255	<2.50	118	<2.50	<2.50	<2.50	54.3	49.1
SB-61@2'	9/23/2008	<2.50	4.95	209	<2.50	<2.50	107	22.6	31.8	8.53	<0.100	<2.50	154	<2.50	<2.50	<2.50	64.0	64.2

mg/kg = milligrams per kilogram.
CAM = California Assessment Manual.

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS
SMART Property, Santa Rosa, California

Sample ID	Date	Units	PCE	Other VOCs
SB-1A@7.5'	9/16/08	µg/kg	<200	*
SB-5A@2'	9/18/08	µg/kg	<1.45	ND
SB-5A@6'	9/18/08	µg/kg	<1.33	ND
SB-8A@2'	9/22/08	µg/kg	**4.55**	ND
SB-8A@5'	9/22/08	µg/kg	**5.86**	ND
SB-11@9.5'	9/24/08	µg/kg	<1.37	ND
SB-12@8'	9/23/08	µg/kg	<1.11	ND
SB-13@9'	9/23/08	µg/kg	**1.44**	ND
SB-13-W@5'	10/15/08	µg/kg	<1.35	ND
SB-14@11'	9/23/08	µg/kg	<1.35	ND
SB-18@2'	9/16/08	µg/kg	<1.27	ND
SB-18@5'	9/16/08	µg/kg	<1.21	ND
SB-25@2'	9/16/08	µg/kg	<1.27	ND
SB-28@2'	9/17/08	µg/kg	**1.87**	ND
SB-28@5'	9/17/08	µg/kg	**2.58**	ND
SB-28-W@10'	10/15/08	µg/kg	**4.10**	ND
SB-34@2'	9/18/08	µg/kg	<1.33	ND
SB-34@7'	9/18/08	µg/kg	<1.31	ND
SB-45@2'	9/19/08	µg/kg	<1.36	ND
SB-45@5'	9/19/08	µg/kg	<1.28	ND
SB-47@2'	9/22/08	µg/kg	<1.32	ND
SB-47@5'	9/22/08	µg/kg	<1.33	ND
SB-56@2'	9/23/08	µg/kg	<1.28	ND
SB-56@5'	9/23/08	µg/kg	<1.61	ND
SB-61@2'	9/23/08	µg/kg	**6.06**	ND
SB-61@5'	9/23/08	µg/kg	**2.94**	ND
SB-61-W@10'	10/15/08	µg/kg	**1.69**	ND
S-FE@1'	9/29/08	µg/kg	<400	**

PCE = Tetrachloroethene
VOCs = Volatile Organic Compounds
µg/kg = micrograms per kilogram.
ND = Not detected at or above the laboratory's Reporting Limit. Please refer to the Certified Analytical Reports for actual reporting limits.
* = bromomethane (480 µg/kg).
** = m+p xylene(422 µg/kg), o-xylene(443 µg/kg), n-propylbenzene(556 µg/kg), 1,3,5-trimethylbenzene(4,200 µg/kg), 1,2,4-trimethylbenzene(12,100 µg/kg), sec-butylbenzene(1,080 µg/kg), 4-isopropyltoluene(1,680 µg/kg), n-butylbenzene(919 µg/kg). Remaining VOCs for S-FE@1' were non-detect.

Quarterly Monitoring Report - Third Quarter 2013

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board
Case No. 1TSR196

Antea Group Project No. UPR8248
October 24, 2013

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Appendix D Groundwater Gradient and Flow Direction Data (Rose Diagram)
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Quarterly Monitoring Report - Third Quarter 2013

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board
Case No. 1TSR196

1.0 INTRODUCTION

On behalf of Union Pacific Railroad (UPRR), Antea®Group has prepared this *Quarterly Monitoring Report – Third Quarter 2013* for the referenced site located at 2 Fourth Street and 34 Sixth Street in Santa Rosa, California (**Figure 1**). The site is currently owned by Sonoma Marin Area Rail Transit (SMART) and is used as an equipment and supply storage area for SMART construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the "3 West Third Street and 60 West Sixth Street Warehouses", to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties (**Figure 2**). For a summary of the site's background and a history of previous environmental investigations that have been conducted at the subject site, refer to **Appendix A**.

The current well network consists of four groundwater monitoring wells (MW-1 through MW-4) that were installed at the site in May 2013. This report summarizes the data obtained from the third quarter 2013 groundwater monitoring event completed on August 30, 2013. Included herein are groundwater flow contours and trends, contaminant concentration maps, and historical data tables. This report has received a technical review by Ms. Lia Holden, California Professional Geologist #8584.

1.1 Work Performed in the Third Quarter 2013

1. Antea Group prepared and submitted the *Well Abandonment and Site Investigation Report* to the North Coast Regional Water Quality Board (NCRWQCB) on July 26, 2013.
2. Antea Group's subcontractor Blaine Tech Services, Inc. (Blaine Tech) conducted quarterly groundwater gauging and sampling activities on August 30, 2013.

1.2 Work Proposed for the Fourth Quarter 2013

1. Antea Group will submit the *Quarterly Monitoring Report – Third Quarter 2013* to the NCRWQCB (contained herein).
2. Blaine Tech will conduct the fourth quarterly groundwater sampling event in November 2013.

2.0 CURRENT PROJECT STATUS

Current phase of project:	Quarterly Groundwater Monitoring
Lead agency for cleanup oversight:	North Coast Regional Water Quality Control Board (Case No. 1TSR196)
Monitoring well gauging and sampling schedule:	Quarterly: MW-1, MW-2, MW-3, and MW-4
Total number of monitoring wells (**Table 1**):	Onsite: 4 wells (MW-1, MW-2, MW-3, MW-4)
Range of well depths (total depth below ground surface, bgs):	18.5 to 20.0 feet bgs
Historical depth to water range, in feet below top of casing (BTOC):	Min: 9.90 (MW-4, 5/29/13) Max: 14.94 (MW-1, 8/30/13)
Historical groundwater elevation range (ft):	Min: 136.92 (MW-1, 8/30/13) Max: 142.07 (MW-4, 5/29/13)

2.1 Regulatory Correspondence

On June 11, 2013, the NCRWQCB sent a letter approving the destruction of monitoring well SRMW-07 per Antea Group's April 24, 2013 *Well Abandonment Work Plan*. No other correspondence was exchanged during the third quarter 2013.

2.2 Groundwater Monitoring

For this groundwater monitoring event, all four onsite monitoring wells were gauged, purged, and sampled by subcontractor Blaine Tech per standard sampling protocol (**Appendix B**). Copies of Blaine Tech's field data sheets are included in **Appendix C**. The recent gauging and sampling data are summarized below.

Well gauging and sampling date:	August 30, 2013
Wells gauged:	MW-1, MW-2, MW-3 and MW-4
Wells sampled:	MW-1, MW-2, MW-3 and MW-4
Purge method:	Peristaltic pump
Sample collection method:	Dedicated equipment (tubing)
Groundwater parameters measured (**Appendix C; Table 2**):	Depth to water, temperature, pH, conductivity, oxidation-reduction potential (ORP), turbidity, and dissolved oxygen (DO)
Current depth to water range of wells (ft BTOC):	Min: 10.40 (MW-4) Max: 14.94 (MW-1)
Current groundwater elevation range of wells (ft):	Min: 136.92 (MW-1) Max: 141.66 (MW-3)
Groundwater flow direction and gradient:	West-northwest with an average gradient of 0.035 feet per foot (ft/ft)

2.2.1 Groundwater Flow Gradient and Directional Trends

Using the well gauging data from August 30, 2013 and the surveyed well casing elevations (**Table 1**), Antea Group calculated the groundwater table elevation at each monitoring well location (**Table 3**). These elevations were used to calculate and plot the groundwater flow direction and gradient across the site (**Figure 3**).

Based on the third quarter 2013 data, the groundwater flow direction at the site is to the west-northwest with an average hydraulic gradient of 0.035 ft/ft. The groundwater flow during the third quarter 2013 is similar to the first sampling event that occurred in May 2013. In historic reports, groundwater elevation contours prepared with the site's former (larger) well network showed somewhat variable localized flow patterns across the site with an overall flow toward the west-southwest, which is more directly toward Santa Rosa Creek. **Appendix D** includes flow and gradient data from both monitoring events tabulated and plotted on a rose diagram.

2.2.2 Groundwater Quality Data and Contaminant Trends

Groundwater samples collected during the third quarter 2013 sampling event were submitted under chain of custody protocol to TestAmerica Laboratories, Inc. (TestAmerica), a state of California certified laboratory (California Certification No. 2496). The submitted groundwater samples were analyzed for the following:

- Diesel range organics (DRO) by Environmental Protection Agency (EPA) Method 8015 with and without silica gel cleanup,
- Motor oil range organics (MORO) by EPA Method 8015 with and without silica gel cleanup, and
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM.

The complete laboratory analytical report is included in **Appendix E**. Groundwater analytical results are presented in **Table 3** (current) and **Table 4** (historical); a Groundwater Concentration Map is presented as **Figure 4**.

The laboratory reported one contaminant above the laboratory reporting limit (LRL). DRO was detected in monitoring well MW-4 without silica gel cleanup at a concentration of 150 µg/L; however, the concentration was not detected in the silica gel cleanup analysis, indicating that the DRO detection may be attributed to heavily weathered residual hydrocarbons or naturally occurring carbon from organic material decomposition.

2.2.4 Waste Disposal Summary

Well purge water generated during the third quarter 2013 sampling event was contained in a single Department of Transportation (DOT) approved 55-gallon drum. The drum is currently 1/4 full, labeled and safely stored at the site for use during the fourth quarter 2013 sampling event.

2.2.5 Quality Assurance / Quality Control (QA/QC)

QA/QC measures included use of a field duplicate sample and a detailed QA/QC data validation check on the TestAmerica laboratory analytical results for the August 2013 sampling event performed by Conestoga-Rovers and

Associates (CRA). The TestAmerica laboratory report and CRA validation is included as **Appendix E**. A summary of QA/QC information follows.

Duplicate (WG-2344-DUP1-300813):	The RPDs associated with the field duplicate samples were within acceptable ranges (See laboratory validation report in **Appendix E**)
Laboratory QA/QC Performed:	Yes (memo provided by CRA)
Laboratory Data Qualifiers:	No data qualifiers were indicated in the laboratory report.
Are the data valid for their intended purpose?	Yes, the data are valid

After review of the laboratory validation provided by CRA, Antea Group concludes that the laboratory data obtained during this groundwater sampling event are valid for their intended purpose.

3.0 CONCLUSIONS AND RECOMMENDATIONS

The four recently installed monitoring wells were sampled during the third quarter 2013 monitoring event. The only detection in groundwater was DRO (without silica gel cleanup) in monitoring well MW-4. The sample analyzed using silica gel cleanup was below the LRL. An evaluation of current analytical data indicates minimal hydrocarbon impact in groundwater and that the site conditions are comparable to those known at the time of the site's 2007 case closure.

One year of groundwater monitoring was proposed for the site. The third quarter 2013 sampling event marks the second consecutive sampling event.

Quarterly groundwater monitoring will continue at the site with a fourth quarter 2013 sampling event scheduled for November 2013. If conditions continue to remain stable following two additional monitoring events, Antea Group will request that the NCRWQCB consider the site for environmental case closure.

4.0 LIMITATIONS

The findings contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc. does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

Prepared by:

FOR

Renee Ransom
Staff Professional
Antea Group

Sara Sichley
Project Professional
Antea Group

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:

PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/15
STATE OF CALIFORNIA

Lia N. Holden
Senior Project Manager
California Registered Professional Geologist No. 8584
Antea Group

cc: GeoTracker (upload)

Figures

Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3 Groundwater Elevation Contour Map – August 30, 2013
Figure 4 Groundwater Concentration Map – August 30, 2013





North

0 1000 2000 FT

SCALE

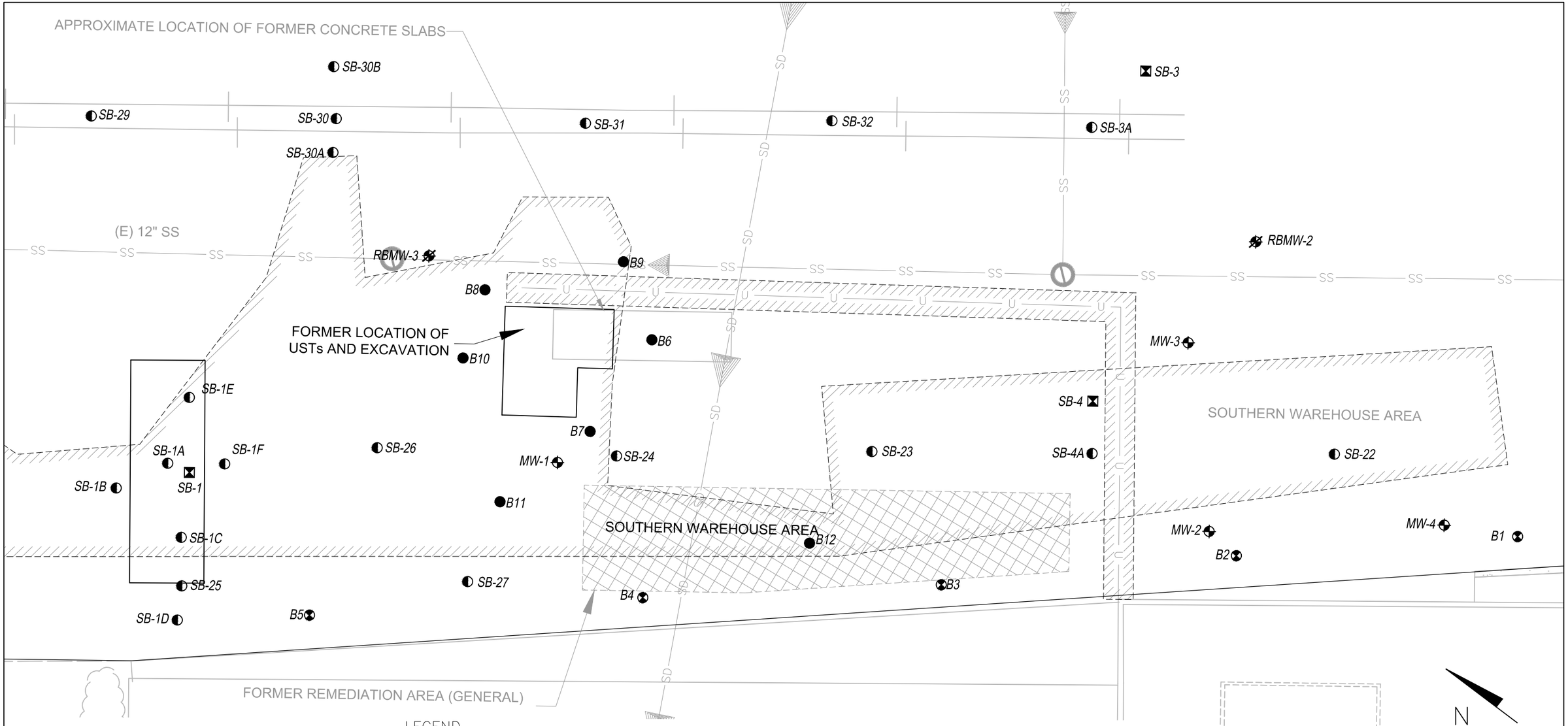
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup



LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- MONITORING WELL
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

N

0 20 FT

SCALE

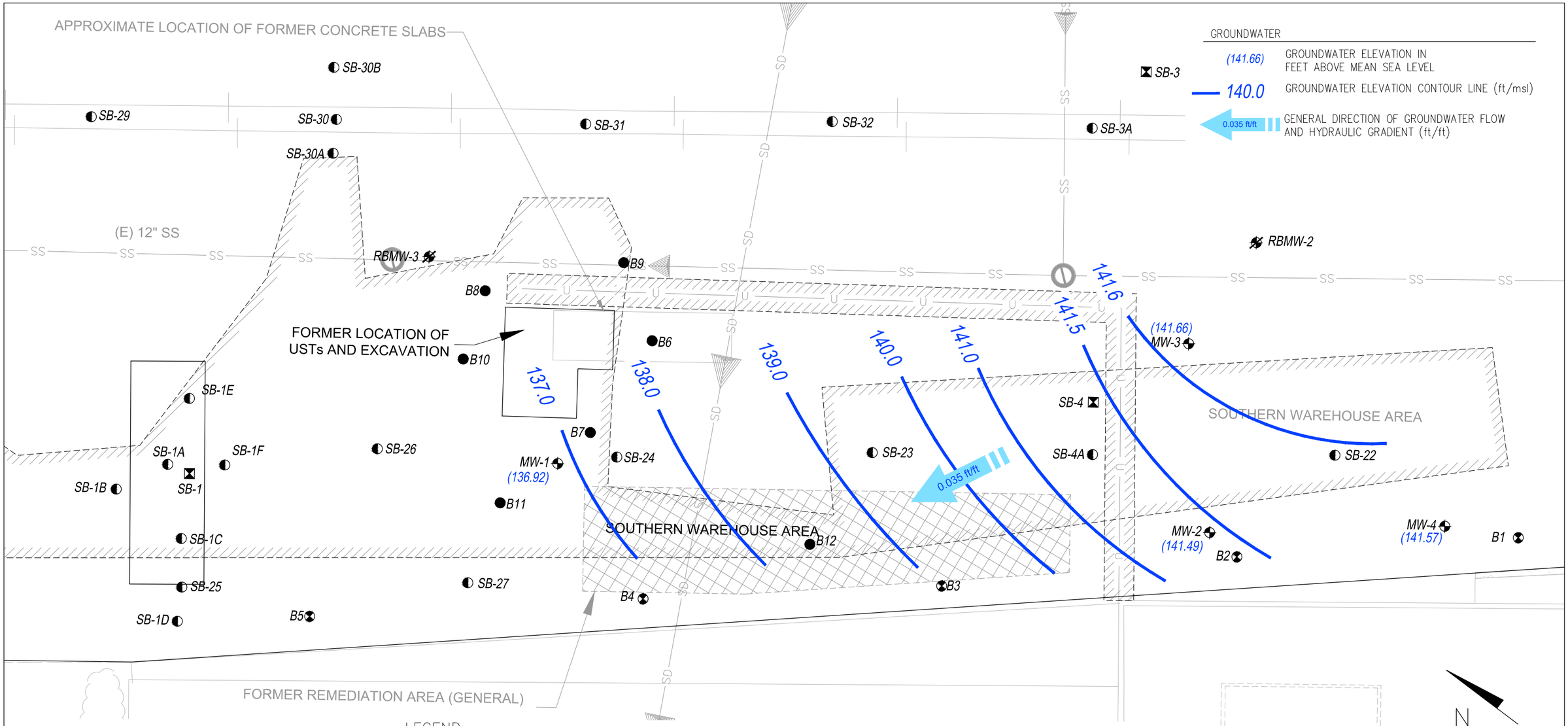
ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
10/11/13	LH	UPR8248-Site

anteagroup



ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

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- SOIL BORINGS (B1 THROUGH B5)
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- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP
AUGUST 30, 2013
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
10/11/13	LH	UPR8248-Site

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APPROXIMATE LOCATION OF FORMER CONCRETE SLABS

SB-30B

SB-29

SB-30

SB-31

SB-32

SB-3

SB-3A

SB-30A

(E) 12" SS

RBMW-3

B9

B8

B6

FORMER LOCATION OF USTs AND EXCAVATION

B10

B7

MW-1

SB-24

SB-1E

SB-1A

SB-1F

SB-26

SB-1B

SB-1

B11

SB-1C

SB-25

SB-27

SB-1D

B5

SOUTHERN WAREHOUSE AREA

B12

B4

B3

SB-4

SB-4A

SB-23

SOUTHERN WAREHOUSE AREA

SB-22

RBMW-2

MW-3

MW-2

B2

MW-4

B1

FORMER REMEDIATION AREA (GENERAL)

MW-1	DRO	DRO(SG)	MORO	MORO(SG)
8/30/13	<55	<110	<110	<220

MW-3	DRO	DRO(SG)	MORO	MORO(SG)
8/30/13	<54	<110	<110	<220

MW-2	DRO	DRO(SG)	MORO	MORO(SG)
8/30/13	<54	<110	<110	<220

MW-4	DRO	DRO(SG)	MORO	MORO(SG)
8/30/13	150	<110	<110	<210

GROUNDWATER

NOTES:
DRO = DIESEL RANGE ORGANICS
MORO = MOTOR OIL RANGE ORGANICS
SG = SILICA GEL
< = LESS THAN LABORATORY INDICATED REPORTING LIMITS

CONCENTRATIONS N MICROGRAMS PER LITER (µg/L).

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
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- CMP CORRUGATED METAL PIPE

FIGURE 4
GROUNDWATER CONCENTRATION MAP
AUGUST 30, 2013
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
10/11/13	LH	UPR8248-Site

antea group

Tables

Table 1 Groundwater Monitoring Well Construction Details
Table 2 Field Parameter Data
Table 3 Current Groundwater Gauging Analytical Data
Table 4 Historical Groundwater Gauging Analytical Data

TABLE 1
SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Updated 10/2/2013

Well ID	Well/Boring Completion Date	TOC Elevation[1] (ft)	Well/Boring Depth (ft bgs)	Well Casing Diameter (in)	Well Casing Material	Well Screen Slot Size (in)	Well Screen Interval (ft bgs)	Cement Grout Seal Interval (ft bgs)	Bentonite Seal Interval (ft bgs)	Filter Pack Interval (ft bgs)	Comments
Soil Borings											
B1	Apr-12	NA	20.0	NA	PVC	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B2	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B3	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B4	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B5	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B6	Apr-12	NA	20.2	NA	NA	NA	NA to NA	NA to 20.2	NA to NA	NA to NA	COT/UVOST Boring
B7	Apr-12	NA	22.1	NA	NA	NA	NA to NA	NA to 22.1	NA to NA	NA to NA	COT/UVOST Boring
B8	Apr-12	NA	22.3	NA	NA	NA	NA to NA	NA to 22.3	NA to NA	NA to NA	COT/UVOST Boring
B9	Apr-12	NA	23.2	NA	NA	NA	NA to NA	NA to 23.2	NA to NA	NA to NA	COT/UVOST Boring
B10	Apr-12	NA	22.1	NA	NA	NA	NA to NA	NA to 22.1	NA to NA	NA to NA	COT/UVOST Boring
B11	Apr-12	NA	20.2	NA	NA	NA	NA to NA	NA to 20.2	NA to NA	NA to NA	COT/UVOST Boring
B12	Apr-12	NA	20.3	NA	NA	NA	NA to NA	NA to 20.3	NA to NA	NA to NA	COT/UVOST Boring
Groundwater Monitoring Wells											
MW-1	May-13	151.86	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-2	May-13	152.79	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-3	May-13	153.44	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	
MW-4	May-13	151.97	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	

Notes:

ft = feet

in = inches

TOC = Top of Casing

bgs = below ground surface

--- = information not available

B = Boring

MW = Monitoring Well

[1] = TOC Elevations were surveyed to the North American Vertical Datum of 1988 (NAVD 88).

NA - Not Applicable

CPT = Cone Penetration Test

UVOST = Ultra-Violet Optical Screening Tool

TABLE 2
FIELD PARAMETER DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	Field Parameters						
						Temperature, ambient (ºC)	Temperature, sample (ºC)	Turbidity (NTU)	Dissolved oxygen (mg/L)	Oxidation reduction potential (mV)	pH	Conductivity (µS/cm)
MW1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	20	18.5	54	3.03	131.9	6.6	487
	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	25	18.1	10	1.11	59	6.49	555
MW2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	20	17.1	8	0.58	85.2	6.6	386
	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	25	17.6	7	0.4	47.5	6.83	462
MW3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	20	18.9	5	0.18	44	6.7	462
	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	25	18.8	8	0.81	44.1	6.81	547
MW4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	20	16.5	10	0.41	60.5	7	511
	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	25	17.1	9	0.3	-68.3	7	409

Notes:

NTU	Nephelometric Turbidity Unit
uS/cm	microsiemens per centimeter
mg/l	milligrams per liter
mV	millivolts
ºC	Degrees Celcius

TABLE 3
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

						Petroleum Compounds				PAHs[2]															
Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	DRO (µg/L)	DRO[1] (Silica Gel) (µg/L)	MORO (µg/L)	MORO[1] (Silica Gel) (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno(1,2,3-cd) pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
MW-1	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	< 55	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW-2	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	< 54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW-3	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	< 54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW-4	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	**150**	< 110	< 110	< 210	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
DUP-1	WG-2344-DUP1-300813	08/30/2013	NA	NA	NA	--	< 51	--	< 100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

ug/L	micrograms per liter
NA	Not Applicable
<	Analyte not detected at the laboratory indicated reporting limit
Bolded Value	Indicates result of analysis is above the laboratory reporting limit
--	Not Analyzed

Analyte Definitions:

DRO - Diesel Range Organics, carbon range C_{10} - C_{28}
MORO - Motor Oil Range Organics, carbon range C_{24} - C_{36}
SGC - Silica Gel Cleanup
PAHs - Polycyclic Aromatic Hydrocarbons

Analytical Notes

1 - Analyzed by Environmental Protection Agency (EPA) Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8270C SIM

TABLE 4
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

						Petroleum Compounds				PAHs[2]															
Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	DRO (µg/L)	DRO[1] (Silica Gel) (µg/L)	MORO (µg/L)	MORO[1] (Silica Gel) (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno(1,2,3-cd)pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
MW1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	<55	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	<54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	<54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	**150**	< 110	< 110	< 210	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11

Notes:

ug/L	micrograms per liter
<	Analyte not detected at the laboratory indicated reporting limit
Bolded Value	Indicates result of analysis is above the laboratory reporting limit
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DRO - Diesel Range Organics, carbon range C_{10} - C_{28}
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Analytical Notes

1 - Analyzed by Environmental Protection Agency (EPA) Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8270C SIM

Appendix A

Site Details and Summary of Previous Environmental Investigations

SITE DETAILS

Currently, the site is being used as a construction equipment supply storage area for Sonoma Marin Area Rail Transit (SMART) construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the 3 West Third Street and 60 West Sixth Street Warehouses, to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties.

There are currently four groundwater monitoring wells (MW-1 through MW-4) at the site; quarterly groundwater sampling and monitoring is underway.

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

Over the history of environmental activities at the site, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by Environmental Protection Agency (EPA) method 8015B or 8260B. Antea Group uses the designation GRO for total petroleum hydrocarbons as gasoline within the C_5 to C_{10} carbon range, DRO for total petroleum hydrocarbons as diesel within the C_{10} to C_{28} carbon range, and RRO for total petroleum hydrocarbons as residual range organics (oil) within the C_{24} to C_{40} carbon range.

Terms from previous reports may include total recoverable petroleum hydrocarbons (TRPH), total purgeable petroleum hydrocarbons (TPPH) for GRO, total extractable petroleum hydrocarbons (TEPH) for DRO, and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific historical terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO. Antea Group has left the original designation when summarizing historic data and the current designations when applied to recent investigations and summary discussions.

SITE HISTORY

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site. These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs (Industrial Compliance [IC], 1992).

In April 1990, the North Coast Regional Water Quality Control Board (RWQCB) drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (MW-2 and MW-3). Monitoring well MW-3 was located approximately 100 feet down gradient (to the southwest) of the former fuel oil UST. Based on

information presented in a July 1992 report by IC, analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1. However, oil and grease was present in the soil sample collected from boring B-1 at 12 feet bgs at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PAHs). Soil samples collected at depths of 6 and 16 feet below ground surface (bgs) from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively. No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3 (Geomatrix Consultants, Inc. [Geomatrix], 2000).

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes (BTEX compounds), or PAHs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX compounds were detected in the grab groundwater sample collected from IC-B6 (Geomatrix, 2000).

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995. In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHmo), PAHs, metals, and volatile organic compounds (VOCs). Soil samples collected for analyses of TPHd, PAHs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHmo at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHmo at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHmo was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHmo was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs (Geomatrix, 2000).

PAHs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure. Concentrations of PAHs detected at this time are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a

depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PAH concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)4 in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs. No TPHd, TPHmo, or VOCs were detected in groundwater above laboratory reporting limits. The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These items, which are the focus of the work described herein, include additional evaluation of historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations (Geomatrix, 2000).

In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An up-gradient, single-screen monitoring well was installed on the eastern portion of the property in vicinity of the main line railroad tracks.

Extensive investigative activities were performed in 2002 on the northwest area of the project site at the historical location of the Santa Rosa Woolen Mills Facility. Soil samples collected as part of an investigation within this area reported significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former above ground fuel storage tank (AST), and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons. From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil (EBA, 2008b).

In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed, whereupon the excavation was advanced to a total depth of approximately 18 feet bgs. A significant amount of free-phase petroleum hydrocarbon product was encountered on the groundwater surface during the excavation activities. The product and water was subsequently pumped, treated, and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently terminated due to concerns of structure stability. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in the excavation sidewalls and groundwater in this area (EBA, 2008b).

Excavation activities in the northwestern portion of the property also included the removal off a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 350 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths below first encountered groundwater, which was encountered at approximately 19 feet bgs. The maximum depth attained by the excavation was approximately 22 feet bgs. Impacted groundwater encountered within the excavation pit, which included free-phase petroleum hydrocarbon product, was subsequently removed using pumps, treated, and disposed of to the sanitary sewer (EBA, 2008b).

Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area. Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the "southern warehouse area" (EBA, 2008b).

Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in a monitoring well identified as SRMW-13 located in the northwest corner of the property. In addition, the fuel oxygenate methyl tert-butyl ether (MTBE) was detected in SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored (EBA, 2008b).

The RWQCB issued a *No Further Action* (NFA) letter for the previous case at the site on August 31, 2007. In 2008, Sonoma Marin Area Rail Transit District (SMART) granted an option to purchase the site, formerly owned by Northwestern Pacific Railroad Authority (NWRPA) to New Railroad Square Associates, LLC for transit-oriented development purposes. In anticipation of property ownership for the site, New Railroad Square Associates, LLC (with consent from SMART) contracted the services of EBA Engineering (EBA) to perform environmental assessment activities. EBA's November 2008 *Comprehensive Report on Findings* concluded that on-site hazardous materials presently exist at various locations on the property. These materials include an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and impacted shallow soil across the site. The RWQCB reopened the environmental case for the site on January 16, 2009 based on EBA's findings.

In a letter dated February 4, 2011, the RWQCB directed UPRR to remove the oil UST on the property due to SMARTs site improvement activities planned for the site. Another letter, dated July 22, 2011, was submitted to UPRR from the RWQCB which directed them to remove "known shallow impacts", soil impacts encountered during property development and removal of impacted soil in the vicinity of SB-1 in addition to the removal of the oil UST. In November 2011, United Pumping Services (UPS) removed the UST as directed. However, during the initial day-lighting activities of the oil UST, an additional 500-gallon UST containing oil was discovered adjacent and west of the known tank. UPS evacuated, cleaned and removed the second UST in conjunction with the known UST. UPS

excavated and disposed of approximately 213.03 tons of impacted soil surrounding the USTs, and pumped approximately 500 gallons of oil impacted groundwater from the excavation. Antea Group collected 16 soil samples and one grab groundwater sample from within the excavation. Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears that a release from the removed USTs only affected the immediate soils surrounding the USTs. Sidewall samples NWB and SWB collected at 15 feet bgs reported concentrations of VOCs and PAHs not found in any other (shallower) samples collected. From the available data, soil VOCs and PAHs impacts appear to be the result of impacted groundwater within the capillary fringe, originating from outside of the excavated area, and not due to a release from the USTs at that location.

In a letter dated January 19, 2012, the RWQCB directed UPRR to address their remaining concerns from their July 22, 2011 directive letter. The remaining concerns included the removal of known shallow impacts and removal of impacted soil in the vicinity of SB-1. In addition, further investigation around the UST tank pit was directed since evidence of discharge was noted during the removal of the UST in November 2011. In April 2012, Antea Group advanced five soil borings (B1 through B5) on the southwestern boundary of the site and seven qualitative borings (B6 through B12) utilizing cone penetration testing (CPT) tip and Ultra-Violet Optical Screening Tool (UVOST) technology around the tank pit area. The borings were advanced to further investigate impacts of the UST removal and determine any contamination near the site boundaries and their origin. Soil samples were collected and submitted for laboratory analysis. Of the detection above the LRLs, only two concentrations are above their San Francisco Bay RWQCB environmental screening levels (ESLs). The DRO concentration in sample B2-11' [240 milligrams per kilogram (mg/kg)] and the concentration of DRO (810 mg/kg) detected in B4-12' exceeded the ESL of 83 mg/kg. Analysis of the UVOST data suggests that the only boring displaying minor indications of hydrocarbon impacts is boring B7 at approximately 5 to 10 feet bgs.

On July 9 through July 13, 2012 UPS and Antea Group conducted soil excavation in the area of former EBA soil boring SB-1. The results of the sidewall and base samples of the excavation in the vicinity of EBA boring SB-1 indicate that only samples from the southwest portion of the excavation exceed commercial/industrial ESLs for DRO and MORO.

On February 26, 2013, the RWQCB directed UPRR to install four monitoring wells on the site to further investigate groundwater impacts on their origin (potentially from off-site sources). Antea Group had proposed this work in their Site Remedial Action and Investigation Report dated October 16, 2012 and the RWQCB concurred. On May 5 and 6, 2013, Antea Group installed four groundwater monitoring wells (MW-1 through MW-4).

SENSITIVE RECEPTORS

Geomatrix performed a well survey in 2000. Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which is

fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use (Geomatrix, 2003).

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site. Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically down-gradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately up gradient and two approximately down gradient. Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use (Geomatrix, 2003).

Information about the possible presence of an additional water-producing well located near the site was provided by the RWQCB. This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek; its actual location has not been field-verified. At this time the well is not in use, and based on a conversation with the site redeveloper, the well will not be used in the future and will be appropriately destroyed (Geomatrix, 2003).

Appendix B

Blaine Tech Services' Groundwater Sampling Procedures

Blaine Tech Services, Inc.
Standard Operating Procedure

LOW-FLOW SAMPLING

1. Calibrate YSI Flow Cell as per manufacturer's specifications. Thoroughly rinse probe and cup between parameters. Calibration order as follows:

    A. pH (use 3-point calibration of 7, 4, 10)
    B. Oxygen Reduction Potential (ORP)
    C. Specific Conductance
    D. Dissolved Oxygen (DO) (calibrate simulating 100% oxygen saturation)

2. Remove dedicated PE tubing from the well or start with new PE tubing cut to the required length.
3. Gently lower the PE tubing into the well, placing the intake at the center of the screened interval. Take care to minimize disturbance to the water column.
4. Attach the PE tubing to the Peristaltic Pump.
5. Direct effluent line into YSI 556 Flow Cell.
6. Set Peristaltic Pump speed at 100 - 500 ml/min.
7. Collect water quality parameter measurements for temperature, pH, conductivity, turbidity, DO and ORP every 3-5 minutes.
8. Monitor drawdown during purging with electronic water level meter. Record water level with each parameter measurement. MAXIMUM DRAWDOWN IS 0.33 FEET.
9. Collect parameter measurements until stability is achieved. Stability is defined as three consecutive measurements where:

Temp	± 1° Celsius
pH	± 0.1
Conductivity	± 3%
Turbidity	± 10% NTU
DO	± 0.3 mg/l
ORP	± 10 Mv

10. Disconnect effluent line from YSI 556 Flow Cell.
11. Sample through effluent line while maintaining constant flow rate.

Appendix C

Blaine Tech Services' Quarterly Groundwater Sampling Field Data Sheets

WELL GAUGING DATA

Project # ~~130873~~ 130830-cu1 Date 8/30/13 Client ANTEA

Site 2 4th St, & 34 6th St, SANTA ROSA

Well ID	Well Size (in.)	Time Gauged	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or (TOC)
MW-1	2	0852					14.94	19.90	
MW-2	2	0855					11.30	19.68	
MW-3	2	0900					11.78	18.21	
MW-4	2	0904					10.40	18.22	

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344-MW1-300813	Sample Date: (mm/dd/yy)	08/30/13
Sampler Name:	COREY KILPATRICK	Sample Time (hhmm):	0930
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-1

Name of Duplicate Sample: ——— MS/MSD collected (yes/no)?: N

Purging Equipment: ____ 2" Disposable bailer ____ Submersible pump

X Peristaltic Pump ____ Dedicated bailer

____ 4" PVC bailer ____ Centrifugal pump

Sampled with: Disposable bailer ____ Teflon bailer ____

Disposable Tubing ____ Dedicated Equip. X

Well Diameter:	2"	4"	6"	8"
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 0910 @ 100 mL/min Depth to Water When Sampled: 15.05

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: uS	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: mL
0913	6.60	18.0	562	16	60.6	1.10	300
0916	6.53	18.0	558	12	59.6	1.13	600
0919	6.50	18.0	556	12	59.3	1.12	900
0922	6.49	18.1	556	10	59.2	1.12	1200
0925	6.49	18.1	555	10	59.0	1.11	1500

Lock Present (yes/no)?: N

Fixtures Replaced: NO

Weather Conditions/Ambient Temperature: SUNNY CLEAR

Comments: Fe^{2+}: 0.0 mg/L

Signature of Sampler:

anteagroup

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344-MW2-300813	Sample Date: (mm/dd/yy)	08/30/13
Sampler Name:	Corey Kilpatrick	Sample Time (hhmm):	1000
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-2

Name of Duplicate Sample: — MS/MSD collected (yes/no)?: —

Purging Equipment: ____ 2" Disposable bailer ____ Submersible pump

X Peristaltic Pump ____ Dedicated bailer

____ 4" PVC bailer ____ Centrifugal pump

Sampled with: Disposable bailer ____ Teflon bailer ____

Disposable Tubing ____ Dedicated Equip. X

Well Diameter:	2"	4"	6"	8"
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 0942 @ 100 mL/min Depth to Water When Sampled: 11.45

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: µS	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: mL
0945	7.02	17.8	467	13	39.6	0.45	300
0948	6.90	17.7	463	10	45.3	0.42	600
0951	6.84	17.7	463	9	46.9	0.41	900
0954	6.83	17.7	463	7	47.3	0.40	1200
0957	6.83	17.6	462	7	47.5	0.40	1500

Lock Present (yes/no)?: Yes

Fixtures Replaced: —

Weather Conditions/Ambient Temperature: SUNNY CLEAR

Comments: Fe^{2+}: 0.0 mg/L

Signature of Sampler:

anteagroup

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344- MW3 - 300813	Sample Date: (mm/dd/yy)	08/30/13
Sampler Name:	Corey Kirkpatrick	Sample Time (hhmm):	1035
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-3

Name of Duplicate Sample: — MS/MSD collected (yes/no)?: —

Purging Equipment: ____ 2" Disposable bailer ____ Submersible pump

X Peristaltic Pump ____ Dedicated bailer

____ 4" PVC bailer ____ Centrifugal pump

Sampled with: Disposable bailer ____ Teflon bailer ____

Disposable Tubing ____ Dedicated Equip. X

Well Diameter:	2" X	4"	6"	8"
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 1015 @ 100 mL/min Depth to Water When Sampled: 11.86

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: mS	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: mL
1018	7.03	18.5	553	13	40.0	0.85	300
1021	6.83	18.5	548	10	42.1	0.80	600
1024	6.82	18.8	548	9	43.3	0.81	900
1027	6.81	18.8	547	8	43.9	0.81	1200
1030	6.81	18.8	547	8	44.1	0.81	1500

Lock Present (yes/no)?: YES

Fixtures Replaced: —

Weather Conditions/Ambient Temperature: SUNNY CLEAR

Comments: Fe^{2+}: 0.0 mg/L

Signature of Sampler: [signature]

anteagroup

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344-MW4-300813	Sample Date: (mm/dd/yy)	08/30/13
Sampler Name:	CURTIS KILPATRICK	Sample Time (hhmm):	1105
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-4

Name of Duplicate Sample: WG-2344-DUP1-300813 @1110 MS/MSD collected (yes/no)?: —

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter: 2" X 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier: (gal/ft.) 0.16 0.65 1.47 2.61

Start purge: 1045 @ 100 mL/min Depth to Water When Sampled: 10.51

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: uS	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: mL
1048	7.18	17.2	418	15	-63.3	0.38	300
1051	7.06	17.2	412	13	-66.0	0.33	600
1054	6.99	17.1	410	10	-67.1	0.31	900
1057	6.99	17.1	409	9	-68.0	0.31	1200
1100	7.00	17.1	409	9	-68.3	0.30	1500

Lock Present (yes/no)?: YES

Fixtures Replaced: —

Weather Conditions/Ambient Temperature: SUNNY CLEAR

Comments: FCL = 0.0 mg/L

Signature of Sampler: [signature]

anteagroup

Test America- Pleasanton

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 1155 North 1st Street, Suite 201 San Jose, CA 95112	Santa, Rosa - 2 Fourth Street and 24 Sixth Street PEDD_2344-6-Rev1
Project Manager/Phone Number: Lia Holden / 408-606-4919 Sampler: Blaine Tech Services	Phone Number: Fax Number:

CCP

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO & MORO (SW8015)	PAHs (8270C SIM)								Special Instructions
WG-2344-MW1- 300813	WG	Various	4	8/30/13 0930	Various	X	X								With and Without Silica Gel Clean-up
WG-2344-MW2- 300813	WG	Various	4	8/30/13 1000	Various	X	X								
WG-2344-MW3- 300813	WG	Various	4	8/30/13 1035	Various	X	X								
WG-2344-MW4- 300813	WG	Various	4	8/30/13 1105	Various	X	X								
WG-2344-DUP1- 300813	WG	Various	2	8/30/13 1110	Various	X									With Silica Gel only
[redacted]															

Relinquished By: Date/Time: Cofer Kilpatrick 8/30/13 1645	Received by: Date/Time: Cofer Kilpatrick (S.C.) 8/30/13 1645	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time:	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Date/Time:	Sample Integrity: (Check) Intact _____ On Ice: _____ Custody Seal: _____

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

WELLHEAD INSPECTION CHECKLIST

Client ANTEA Date 8/30/13

Site Address 2 4th St & 34 6th St, SANTA ROSA

Job Number 130830-cm1 Technician CM

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	X							
MW-2	X							
MW-3	X							
MW-4	X							

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME ANTEA URF SANTA ROSA				PROJECT NUMBER 130830-CA1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI PRO PLUS	10B100295	9/30/13 0615	3900 µS CONDUCT	3893	YES		CA
			D/O 100%	95.8%	YES		CA
			pH 7.00 10.00 4.00	7.03 +0.05 3.97	YES		CA
			ORP 240	241.2	YES	17 °C	CA

SPH or Purge Water Drum Log

Client: Antea

Site Address: UPRR @ Santa Rosa, CA

STATUS OF DRUM(S) UPON ARRIVAL

Date	5/20/13	5/29/13	8/30.13			
Number of drum(s) empty:	—					
Number of drum(s) 1/4 full:	—					
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—	1				
Number of drum(s) full:	8	9				
Total drum(s) on site:	8	10	0			
Are the drum(s) properly labeled?	yes	yes	—			
Drum ID & Contents:	soil cutting H2O	soil H2O	—			
If any drum(s) are partially or totally filled, what is the first use date:	5/16/13	5/16/13	—			

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE

Date	5/21/13	5/29/13	8/30.13			
Number of drums empty:	—					
Number of drum(s) 1/4 full:	—		1			
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—					
Number of drum(s) full:	10	10	10			
Total drum(s) on site:	10	10	1			
Are the drum(s) properly labeled?	Yes	Yes	YES			
Drum ID & Contents:	Soil Purge H2O	Soil Purge H2O	Purge H2O			

LOCATION OF DRUM(S)

Describe location of drum(s): Next to MW-3

FINAL STATUS

Number of new drum(s) left on site this event	2	0	1			
Date of inspection:	5/21/13	5/29/13	8/30.13			
Drum(s) labelled properly:	Yes	Yes	YES			
Logged by BTS Field Tech:	[signature]	[signature]	CK			
Office reviewed by:	[signature]	[signature]	[signature]			

Appendix D

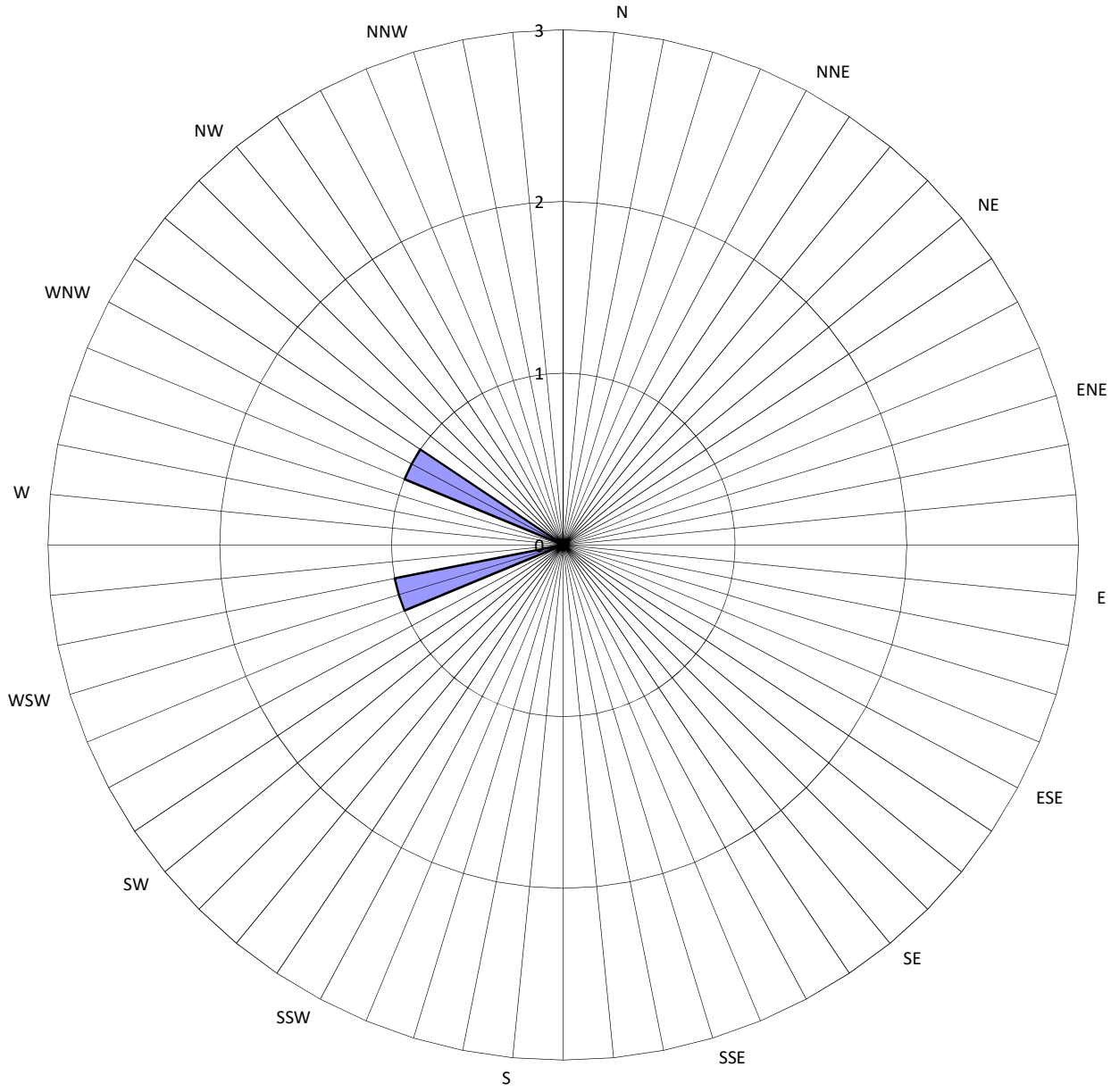
Historical Groundwater Gradient and Flow Direction Data (Rose Diagram)

GROUNDWATER GRADIENT AND FLOW DIRECTION DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Monitoring Date	Groundwater Flow Direction	Groundwater Gradient (foot per foot)
May-13	West-Southwest	0.031
Aug-13	West-Northwest	0.035
		Average: **0.033**

Notes:
Number of monitoring events = 2
- Data included in this table are from current and historical monitoring reports.

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA



Legend:
Each concentric gridline represents the number of monitoring events.
The diagram includes data from the Second and Third Quarter 2013.

Groundwater Flow Direction

Appendix E

Certified Laboratory Analytical Report and Lab Validation Memo

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-52065-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
1155 North 1st Street
Suite 201
San Jose, California 95112

Attn: Ms. Lia Holden

Authorized for release by:
9/13/2013 2:55:10 PM

Dimple Sharma, Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Job ID: 720-52065-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-52065-1

Comments
No additional comments.

Receipt
The samples were received on 9/3/2013 6:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 2.4º C.

GC/MS Semi VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Client Sample ID: WG-2344-MW1-300813 — Lab Sample ID: 720-52065-1

No Detections.

Client Sample ID: WG-2344-MW2-300813 — Lab Sample ID: 720-52065-2

No Detections.

Client Sample ID: WG-2344-MW3-300813 — Lab Sample ID: 720-52065-3

No Detections.

Client Sample ID: WG-2344-MW4-300813 — Lab Sample ID: 720-52065-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	150		53		ug/L	1		8015B	Total/NA

Client Sample ID: WG-2344-DUP1-300813 — Lab Sample ID: 720-52065-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Client Sample ID: WG-2344-MW1-300813
Date Collected: 08/30/13 09:30
Date Received: 09/03/13 18:25

Lab Sample ID: 720-52065-1
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Acenaphthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Acenaphthylene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Fluorene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Phenanthrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Benzo[a]anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Chrysene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Benzo[a]pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Benzo[b]fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Benzo[k]fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*61*		*29 - 120*	*09/06/13 15:55*	*09/08/13 17:27*	*1*
Terphenyl-d14	*59*		*45 - 120*	*09/06/13 15:55*	*09/08/13 17:27*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		55		ug/L		09/05/13 08:24	09/05/13 17:27	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		09/05/13 08:24	09/05/13 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*72*		*23 - 156*	*09/05/13 08:24*	*09/05/13 17:27*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		110		ug/L		09/05/13 08:24	09/07/13 18:16	1
Motor Oil Range Organics [C24-C36]	ND		220		ug/L		09/05/13 08:24	09/07/13 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.05*		*0 - 5*	*09/05/13 08:24*	*09/07/13 18:16*	*1*
p-Terphenyl	*70*		*31 - 150*	*09/05/13 08:24*	*09/07/13 18:16*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Client Sample ID: WG-2344-MW2-300813
Date Collected: 08/30/13 10:00
Date Received: 09/03/13 18:25

Lab Sample ID: 720-52065-2
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Acenaphthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Acenaphthylene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Fluorene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Phenanthrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Benzo[a]anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Chrysene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Benzo[a]pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Benzo[b]fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Benzo[k]fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*52*		*29 - 120*	*09/06/13 15:55*	*09/08/13 17:50*	*1*
Terphenyl-d14	*60*		*45 - 120*	*09/06/13 15:55*	*09/08/13 17:50*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		54		ug/L		09/05/13 08:24	09/05/13 17:52	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		09/05/13 08:24	09/05/13 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*77*		*23 - 156*	*09/05/13 08:24*	*09/05/13 17:52*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		110		ug/L		09/05/13 08:24	09/07/13 17:27	1
Motor Oil Range Organics [C24-C36]	ND		220		ug/L		09/05/13 08:24	09/07/13 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*09/05/13 08:24*	*09/07/13 17:27*	*1*
p-Terphenyl	*57*		*31 - 150*	*09/05/13 08:24*	*09/07/13 17:27*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Client Sample ID: WG-2344-MW3-300813
Date Collected: 08/30/13 10:35
Date Received: 09/03/13 18:25

Lab Sample ID: 720-52065-3
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Acenaphthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Acenaphthylene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Fluorene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Phenanthrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Benzo[a]anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Chrysene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Benzo[a]pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Benzo[b]fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Benzo[k]fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*45*		*29 - 120*	*09/06/13 15:55*	*09/08/13 18:13*	*1*
Terphenyl-d14	*49*		*45 - 120*	*09/06/13 15:55*	*09/08/13 18:13*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		54		ug/L		09/05/13 08:24	09/05/13 18:16	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		09/05/13 08:24	09/05/13 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*67*		*23 - 156*	*09/05/13 08:24*	*09/05/13 18:16*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		110		ug/L		09/05/13 08:24	09/07/13 17:52	1
Motor Oil Range Organics [C24-C36]	ND		220		ug/L		09/05/13 08:24	09/07/13 17:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*09/05/13 08:24*	*09/07/13 17:52*	*1*
p-Terphenyl	*62*		*31 - 150*	*09/05/13 08:24*	*09/07/13 17:52*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Client Sample ID: WG-2344-MW4-300813
Date Collected: 08/30/13 11:05
Date Received: 09/03/13 18:25

Lab Sample ID: 720-52065-4
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Acenaphthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Acenaphthylene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Fluorene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Phenanthrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Benzo[a]anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Chrysene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Benzo[a]pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Benzo[b]fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Benzo[k]fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Fluoranthene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Pyrene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		09/06/13 15:55	09/08/13 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*41*		*29 - 120*	*09/06/13 15:55*	*09/08/13 18:36*	*1*
Terphenyl-d14	*51*		*45 - 120*	*09/06/13 15:55*	*09/08/13 18:36*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**150**		53		ug/L		09/05/13 08:24	09/05/13 18:40	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		09/05/13 08:24	09/05/13 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*75*		*23 - 156*	*09/05/13 08:24*	*09/05/13 18:40*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		110		ug/L		09/05/13 08:24	09/07/13 18:16	1
Motor Oil Range Organics [C24-C36]	ND		210		ug/L		09/05/13 08:24	09/07/13 18:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 5*	*09/05/13 08:24*	*09/07/13 18:16*	*1*
p-Terphenyl	*64*		*31 - 150*	*09/05/13 08:24*	*09/07/13 18:16*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Client Sample ID: WG-2344-DUP1-300813
Date Collected: 08/30/13 11:10
Date Received: 09/03/13 18:25

Lab Sample ID: 720-52065-5
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		09/06/13 18:13	09/07/13 15:01	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		09/06/13 18:13	09/07/13 15:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.2*		*0 - 5*	*09/06/13 18:13*	*09/07/13 15:01*	*1*
p-Terphenyl	*85*		*31 - 150*	*09/06/13 18:13*	*09/07/13 15:01*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-143763/1-A
Matrix: Water
Analysis Batch: 143816

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 143763

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Acenaphthene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Acenaphthylene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Fluorene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Phenanthrene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Anthracene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Benzo[a]anthracene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Chrysene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Benzo[a]pyrene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Benzo[b]fluoranthene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Benzo[k]fluoranthene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Fluoranthene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Pyrene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		09/06/13 15:55	09/08/13 15:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*56*		*29 - 120*	*09/06/13 15:55*	*09/08/13 15:53*	*1*
Terphenyl-d14	*71*		*45 - 120*	*09/06/13 15:55*	*09/08/13 15:53*	*1*

Lab Sample ID: LCS 720-143763/2-A
Matrix: Water
Analysis Batch: 143816

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 143763

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	4.69		ug/L		47	29 - 120
Acenaphthene	10.0	5.53		ug/L		55	42 - 120
Acenaphthylene	10.0	5.56		ug/L		56	39 - 120
Fluorene	10.0	5.91		ug/L		59	45 - 120
Phenanthrene	10.0	5.83		ug/L		58	46 - 120
Anthracene	10.0	6.04		ug/L		60	53 - 120
Benzo[a]anthracene	10.0	5.92		ug/L		59	48 - 120
Chrysene	10.0	5.68		ug/L		57	47 - 120
Benzo[a]pyrene	10.0	5.06		ug/L		51	43 - 120
Benzo[b]fluoranthene	10.0	6.00		ug/L		60	42 - 120
Benzo[k]fluoranthene	10.0	4.74		ug/L		47	42 - 120
Benzo[g,h,i]perylene	10.0	4.40		ug/L		44	24 - 120
Indeno[1,2,3-cd]pyrene	10.0	4.62		ug/L		46	25 - 120
Fluoranthene	10.0	6.19		ug/L		62	57 - 120
Pyrene	10.0	5.87		ug/L		59	47 - 120
Dibenz(a,h)anthracene	10.0	4.44		ug/L		44	21 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*55*		*29 - 120*
Terphenyl-d14	*56*		*45 - 120*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-143763/3-A
Matrix: Water
Analysis Batch: 143816

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 143763

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			10.0	5.18		ug/L		52	29 - 120	10	35
Acenaphthene			10.0	5.99		ug/L		60	42 - 120	8	35
Acenaphthylene			10.0	6.07		ug/L		61	39 - 120	9	35
Fluorene			10.0	6.12		ug/L		61	45 - 120	3	35
Phenanthrene			10.0	6.34		ug/L		63	46 - 120	8	35
Anthracene			10.0	6.54		ug/L		65	53 - 120	8	35
Benzo[a]anthracene			10.0	6.47		ug/L		65	48 - 120	9	35
Chrysene			10.0	6.05		ug/L		61	47 - 120	6	35
Benzo[a]pyrene			10.0	5.59		ug/L		56	43 - 120	10	35
Benzo[b]fluoranthene			10.0	6.89		ug/L		69	42 - 120	14	35
Benzo[k]fluoranthene			10.0	5.56		ug/L		56	42 - 120	16	35
Benzo[g,h,i]perylene			10.0	5.12		ug/L		51	24 - 120	15	35
Indeno[1,2,3-cd]pyrene			10.0	5.20		ug/L		52	25 - 120	12	35
Fluoranthene			10.0	6.59		ug/L		66	57 - 120	6	35
Pyrene			10.0	6.43		ug/L		64	47 - 120	9	35
Dibenz(a,h)anthracene			10.0	4.99		ug/L		50	21 - 120	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*60*		*29 - 120*
Terphenyl-d14	*59*		*45 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-143640/1-A
Matrix: Water
Analysis Batch: 143638

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 143640

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		09/05/13 08:24	09/05/13 18:40	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		09/05/13 08:24	09/05/13 18:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*67*		*23 - 156*	*09/05/13 08:24*	*09/05/13 18:40*	*1*

Lab Sample ID: LCS 720-143640/2-A
Matrix: Water
Analysis Batch: 143720

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 143640

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1030		ug/L		41	40 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*67*		*23 - 156*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-143640/3-A
Matrix: Water
Analysis Batch: 143720

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 143640

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1140		ug/L		46	40 - 150	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*76*		*23 - 156*

Lab Sample ID: MB 720-143740/1-A
Matrix: Water
Analysis Batch: 143792

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 143740

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		09/06/13 10:31	09/07/13 12:34	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		09/06/13 10:31	09/07/13 12:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 5*	*09/06/13 10:31*	*09/07/13 12:34*	*1*
p-Terphenyl	*76*		*31 - 150*	*09/06/13 10:31*	*09/07/13 12:34*	*1*

Lab Sample ID: LCS 720-143740/2-A
Matrix: Water
Analysis Batch: 143792

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 143740

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1120		ug/L		45	32 - 119		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*71*		*31 - 150*

Lab Sample ID: LCSD 720-143740/3-A
Matrix: Water
Analysis Batch: 143792

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 143740

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1110		ug/L		45	32 - 119	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*66*		*31 - 150*

Lab Sample ID: MB 720-143800/1-A
Matrix: Water
Analysis Batch: 143791

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 143800

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		99		ug/L		09/05/13 08:24	09/07/13 17:52	1
Motor Oil Range Organics [C24-C36]	ND		200		ug/L		09/05/13 08:24	09/07/13 17:52	1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 720-143800/1-A
Matrix: Water
Analysis Batch: 143791

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 143800

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0.005		0 - 5	09/05/13 08:24	09/07/13 17:52	1
p-Terphenyl	73		31 - 150	09/05/13 08:24	09/07/13 17:52	1

Lab Sample ID: LCS 720-143800/2-A
Matrix: Water
Analysis Batch: 143791

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 143800

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	829		ug/L		33	32 - 119		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	64		31 - 150

Lab Sample ID: LCSD 720-143800/3-A
Matrix: Water
Analysis Batch: 143791

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 143800

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1050		ug/L		42	32 - 119	23	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
p-Terphenyl	77		31 - 150

GC/MS Semi VOA

Prep Batch: 143763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-52065-1	WG-2344-MW1-300813	Total/NA	Water	3510C	
720-52065-2	WG-2344-MW2-300813	Total/NA	Water	3510C	
720-52065-3	WG-2344-MW3-300813	Total/NA	Water	3510C	
720-52065-4	WG-2344-MW4-300813	Total/NA	Water	3510C	
LCS 720-143763/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-143763/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-143763/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 143816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-52065-1	WG-2344-MW1-300813	Total/NA	Water	8270C SIM	143763
720-52065-2	WG-2344-MW2-300813	Total/NA	Water	8270C SIM	143763
720-52065-3	WG-2344-MW3-300813	Total/NA	Water	8270C SIM	143763
720-52065-4	WG-2344-MW4-300813	Total/NA	Water	8270C SIM	143763
LCS 720-143763/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	143763
LCSD 720-143763/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	143763
MB 720-143763/1-A	Method Blank	Total/NA	Water	8270C SIM	143763

GC Semi VOA

Analysis Batch: 143637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-52065-1	WG-2344-MW1-300813	Total/NA	Water	8015B	143640
720-52065-2	WG-2344-MW2-300813	Total/NA	Water	8015B	143640
720-52065-3	WG-2344-MW3-300813	Total/NA	Water	8015B	143640
720-52065-4	WG-2344-MW4-300813	Total/NA	Water	8015B	143640

Analysis Batch: 143638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-143640/1-A	Method Blank	Total/NA	Water	8015B	143640

Prep Batch: 143640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-52065-1	WG-2344-MW1-300813	Total/NA	Water	3510C	
720-52065-2	WG-2344-MW2-300813	Total/NA	Water	3510C	
720-52065-3	WG-2344-MW3-300813	Total/NA	Water	3510C	
720-52065-4	WG-2344-MW4-300813	Total/NA	Water	3510C	
LCS 720-143640/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-143640/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-143640/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 143720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-143640/2-A	Lab Control Sample	Total/NA	Water	8015B	143640
LCSD 720-143640/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	143640

Prep Batch: 143740

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-52065-5	WG-2344-DUP1-300813	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-143740/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	

GC Semi VOA (Continued)

Prep Batch: 143740 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-143740/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-143740/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 143791

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-52065-1	WG-2344-MW1-300813	Silica Gel Cleanup	Water	8015B	143800
720-52065-5	WG-2344-DUP1-300813	Silica Gel Cleanup	Water	8015B	143740
LCS 720-143800/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	143800
LCSD 720-143800/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	143800
MB 720-143800/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	143800

Analysis Batch: 143792

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-52065-2	WG-2344-MW2-300813	Silica Gel Cleanup	Water	8015B	143800
720-52065-3	WG-2344-MW3-300813	Silica Gel Cleanup	Water	8015B	143800
720-52065-4	WG-2344-MW4-300813	Silica Gel Cleanup	Water	8015B	143800
LCS 720-143740/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	143740
LCSD 720-143740/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	143740
MB 720-143740/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	143740

Prep Batch: 143800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-52065-1	WG-2344-MW1-300813	Silica Gel Cleanup	Water	3510C SGC	
720-52065-2	WG-2344-MW2-300813	Silica Gel Cleanup	Water	3510C SGC	
720-52065-3	WG-2344-MW3-300813	Silica Gel Cleanup	Water	3510C SGC	
720-52065-4	WG-2344-MW4-300813	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-143800/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-143800/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-143800/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Client Sample ID: WG-2344-MW1-300813

Lab Sample ID: 720-52065-1

Date Collected: 08/30/13 09:30

Matrix: Water

Date Received: 09/03/13 18:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			143763	09/06/13 15:55	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	143816	09/08/13 17:27	MQL	TAL PLS
Total/NA	Prep	3510C			143640	09/05/13 08:24	MRP	TAL PLS
Total/NA	Analysis	8015B		1	143637	09/05/13 17:27	DCH	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			143800	09/05/13 08:24	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	143791	09/07/13 18:16	DCH	TAL PLS

Client Sample ID: WG-2344-MW2-300813

Lab Sample ID: 720-52065-2

Date Collected: 08/30/13 10:00

Matrix: Water

Date Received: 09/03/13 18:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			143763	09/06/13 15:55	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	143816	09/08/13 17:50	MQL	TAL PLS
Total/NA	Prep	3510C			143640	09/05/13 08:24	MRP	TAL PLS
Total/NA	Analysis	8015B		1	143637	09/05/13 17:52	DCH	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			143800	09/05/13 08:24	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	143792	09/07/13 17:27	DCH	TAL PLS

Client Sample ID: WG-2344-MW3-300813

Lab Sample ID: 720-52065-3

Date Collected: 08/30/13 10:35

Matrix: Water

Date Received: 09/03/13 18:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			143763	09/06/13 15:55	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	143816	09/08/13 18:13	MQL	TAL PLS
Total/NA	Prep	3510C			143640	09/05/13 08:24	MRP	TAL PLS
Total/NA	Analysis	8015B		1	143637	09/05/13 18:16	DCH	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			143800	09/05/13 08:24	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	143792	09/07/13 17:52	DCH	TAL PLS

Client Sample ID: WG-2344-MW4-300813

Lab Sample ID: 720-52065-4

Date Collected: 08/30/13 11:05

Matrix: Water

Date Received: 09/03/13 18:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			143763	09/06/13 15:55	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	143816	09/08/13 18:36	MQL	TAL PLS
Total/NA	Prep	3510C			143640	09/05/13 08:24	MRP	TAL PLS
Total/NA	Analysis	8015B		1	143637	09/05/13 18:40	DCH	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			143800	09/05/13 08:24	DFR	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	143792	09/07/13 18:16	DCH	TAL PLS

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Client Sample ID: WG-2344-DUP1-300813
Date Collected: 08/30/13 11:10
Date Received: 09/03/13 18:25

Lab Sample ID: 720-52065-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3510C SGC			143740	09/06/13 18:13	MRP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	143791	09/07/13 15:01	DCH	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-52065-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-52065-1	WG-2344-MW1-300813	Water	08/30/13 09:30	09/03/13 18:25
720-52065-2	WG-2344-MW2-300813	Water	08/30/13 10:00	09/03/13 18:25
720-52065-3	WG-2344-MW3-300813	Water	08/30/13 10:35	09/03/13 18:25
720-52065-4	WG-2344-MW4-300813	Water	08/30/13 11:05	09/03/13 18:25
720-52065-5	WG-2344-DUP1-300813	Water	08/30/13 11:10	09/03/13 18:25

Test America- Pleasanton

148359

720-52065

Client Name/Address	Project / PO Number
Antea Group/UPRR 1155 North 1st Street, Suite 201 San Jose, CA 95112	Santa, Rosa - 2 Fourth Street and 24 Sixth Street PEDD_2344-6-Rev1
Project Manager/Phone Number Lia Holden / 408-606-4919 Sampler: Blaine Tech Services	**Phone Number** Fax Number

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO & MORO (SW8015)	PAHs (8270C SIM)								Special Instructions
WG-2344-MW1- 300813	WG	Various	4	8/30/13 0930	Various	X	X								With and Without Silica Gel Clean-up
WG-2344-MW2- 300813	WG	Various	4	8/30/13 1000	Various	X	X								
WG-2344-MW3- 300813	WG	Various	4	8/30/13 1035	Various	X	X								
WG-2344-MW4- 300813	WG	Various	4	8/30/13 1105	Various	X	X								
WG-2344-DUP1- 300813	WG	Various	2	8/30/13 1110	Various	X									With Silica Gel only
[redacted]															

720-52065 Chain of Custody

Relinquished By: Date/Time: Colen Kleparice 8/30/13 1645	Received by: Date/Time: Colen Kleparice (S.C.) 8/30/13 1645	Turnaround Time: (check)
Relinquished By: Date/Time: BTS (Sample Custody) 9/3/13 @ 1650	Received by: Date/Time: (TAP) 09/03/13 @ 1650	Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time: 09/03/13 @ 1825	Received in Lab by: Date/Time: 9/3/13 1825	Sample Integrity. (Check) Intact _____ On Ice _____ Custody Seal: _____

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

2.4°c

9/13/2013

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-52065-1

Login Number: 52065

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CONESTOGA-ROVERS & ASSOCIATES

20818 44th Avenue West, Suite 190
Lynnwood, WA 98036
Telephone: (206) 914-3141
www.CRAworld.com

MEMORANDUM

TO: Lia Holden

REF. NO.: 058324-2344

FROM: Jeffrey Cloud/eew/428-NF

DATE: October 3, 2013

C.C.: Jesse Orth, Julie Lidstone

E-Mail and Hard Copy if Requested

RE: Data Quality Assessment and Validation of Report J52065
Quarterly Groundwater Sampling
UPRR - 2 Fourth Street and 34 Sixth Street
Santa Rosa California
January 2013

INTRODUCTION

The following document details a reduced validation of analytical data resulting from the August 2013 collection of groundwater samples in Santa Rosa, California. Samples were submitted to Test America Laboratories (TA), located in Pleasanton, California. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS) and field QC samples.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and the document entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

These guidelines are collectively referred to as "Guidelines" in this Memorandum.

SAMPLE HOLDING TIME AND PRESERVATION

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 2. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

All samples were properly preserved and delivered on ice, stored by the laboratory at the required temperature (<6°C).

REGISTERED COMPANY FOR ISO 9001 ENGINEERING DESIGN

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

LABORATORY METHOD BLANK ANALYSES

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

SURROGATE SPIKE RECOVERIES

In accordance with the methods employed, all samples, blanks and QC samples analyzed for semivolatile organic compounds (SVOCs) and diesel range organics/oil range organics (DRO/ORO) are spiked with the appropriate number of surrogate compounds prior to sample extraction. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

LABORATORY CONTROL SAMPLE (LCS) ANALYSES

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries and relative percent differences were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

FIELD QA/QC SAMPLES

The field QA/QC consisted of one field duplicate sample set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 and 100 percent for water and soil samples, respectively. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criteria is one time the PQL value for water samples.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

ANALYTE REPORTING

The laboratory did not report any detected concentrations below the laboratory's practical quantitation limit (PQL)/reporting limit (RL).

CONCLUSION

Based on this assessment of the information provided, the data produced by TA were found to exhibit acceptable levels of accuracy and precision and may be used without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
UPRR - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
AUGUST 2013

Sample Identification	*Location*	*Matrix*	*QC Samples*	*Collection Date*	*Collection Time*	*Analysis/Parameters*	
						DRO	*SVOCs*
WG-2344-MW1-300813	MW1	Water		08/30/2013	09:30	X	X
WG-2344-MW2-300813	MW2	Water		08/30/2013	10:00	X	X
WG-2344-MW3-300813	MW3	Water		08/30/2013	10:35	X	X
WG-2344-MW4-300813	MW4	Water		08/30/2013	11:05	X	X
WG-2344-DUP1-300813	MW4	Water	FD(WG-2344-MW4-300813)	08/30/2013	11:10	X	

Notes:

FD Field duplicate sample of sample in parenthesis.
DRO Diesel range organics.
QC Quality control.
SVOCs Semivolatile organic compounds.

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
QUARTERLY GROUNDWATER SAMPLING
UPRR - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
AUGUST 2013

Parameter	*Method* [1]	*Matrix*	*Holding Time*	*Preservation*
Semivolatile Organic Compounds (SVOCs)	SW-846 8270C	Water	14 days from sample collection to extraction 40 days from extraction to completion of analysis	pH < 2 and Iced, ≤ 6° C
Diesel Range Organics (DRO) / Motor Oil Range Organics (ORO)	SW-846 8015B	Water	14 days from sample collection to extraction 40 days from extraction to completion of analysis	pH < 2 and Iced, ≤ 6° C

Notes:
[1] Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical / Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

TABLE 3

ANALYTICAL RESULTS SUMMARY
QUARTERLY GROUNDWATER SAMPLING
UPRR - 2 FOURTH STREET & 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JANUARY 2013

Sample Location:		*MW1*	*MW2*	*MW3*	*MW4*	*MW4*
Sample ID:		*WG-2344-MW1-300813*	*WG-2344-MW2-300813*	*WG-2344-MW3-300813*	*WG-2344-MW4-300813*	*WG-2344-DUP1-300813*
Sample Date:		*8/30/2013*	*8/30/2013*	*8/30/2013*	*8/30/2013*	*8/30/2013*
						Duplicate
	Units					
Parameters						
Semi-volatile Organic Compounds						
Acenaphthene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Acenaphthylene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Anthracene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(a)anthracene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(a)pyrene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(b)fluoranthene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(g,h,i)perylene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Benzo(k)fluoranthene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Chrysene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Dibenz(a,h)anthracene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Fluoranthene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Fluorene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Indeno(1,2,3-cd)pyrene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Naphthalene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Phenanthrene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Pyrene	µg/L	<0.11	<0.11	<0.11	<0.11	-
Petroleum Products						
Total Petroleum Hydrocarbons (C10-C28) DRO	µg/L	<55	<54	<54	150	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	<110	<110	<110	<110	<51
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	µg/L	<110	<110	<110	<110	-
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L	<220	<220	<220	<210	<100

Quarterly Monitoring Report - Fourth Quarter 2013

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board
Case No. 1TSR196

Antea Group Project No. UPR8248
January 16, 2014

Prepared for:
Janice Goebel
California Water Quality Control Board
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Inogen Environmental Alliance

Antea USA, Inc.

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Appendix B Blaine Tech Services' Groundwater Sampling Procedures
Appendix C Blaine Tech Services' Quarterly Groundwater Sampling Field Data Sheets
Appendix D Groundwater Gradient and Flow Direction Data (Rose Diagram)
Appendix E Certified Laboratory Analytical Report and Validation Memo

Quarterly Monitoring Report - Fourth Quarter 2013

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board
Case No. 1TSR196

1.0 INTRODUCTION

On behalf of Union Pacific Railroad (UPRR), Antea®Group has prepared this *Quarterly Monitoring Report – Fourth Quarter 2013* for the referenced site located at 2 Fourth Street and 34 Sixth Street in Santa Rosa, California (**Figure 1**). The site is currently owned by Sonoma Marin Area Rail Transit (SMART) and is used as an equipment and supply storage area for SMART construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the "3 West Third Street and 60 West Sixth Street Warehouses", to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties (**Figure 2**). For a summary of the site's background and a history of previous environmental investigations that have been conducted at the subject site, refer to **Appendix A**.

The current well network consists of four groundwater monitoring wells (MW-1 through MW-4) that were installed at the site in May 2013. This report summarizes the data obtained from the fourth quarter 2013 groundwater monitoring event completed on November 20, 2013. Included herein are groundwater flow contours and trends, contaminant concentration maps, and historical data tables. This report has received a technical review by Ms. Lia Holden, California Professional Geologist #8584.

1.1 Work Performed in the Fourth Quarter 2013

1. Antea Group submitted the *Quarterly Monitoring Report – Third Quarter 2013* to the North Coast Regional Water Quality Control Board (NCRWQCB) on October 24, 2013.
2. Antea Group's subcontractor Blaine Tech Services, Inc. (Blaine Tech) conducted quarterly groundwater gauging and sampling activities on November 20, 2013.

1.2 Work Proposed for the First Quarter 2014

1. Antea Group will submit the *Quarterly Monitoring Report – Fourth Quarter 2013* to the NCRWQCB (contained herein).
2. Blaine Tech will conduct the first quarter groundwater sampling event in February 2014.

2.0 CURRENT PROJECT STATUS

Current phase of project:	Quarterly Groundwater Monitoring
Lead agency for cleanup oversight:	North Coast Regional Water Quality Control Board (Case No. 1TSR196)
Monitoring well gauging and sampling schedule:	Quarterly: MW-1, MW-2, MW-3, and MW-4
Total number of monitoring wells (**Table 1**):	Onsite: 4 wells (MW-1, MW-2, MW-3, MW-4)
Range of well depths (total depth below ground surface, bgs):	18.5 to 20.0 feet bgs
Historical depth to water range, in feet below top of casing (BTOC):	Min: 9.90 (MW-4, 5/29/13) Max: 15.53 (MW-1, 11/20/13)
Historical groundwater elevation range (ft):	Min: 136.33 (MW-1, 11/20/13) Max: 142.07 (MW-4, 5/29/13)

2.1 Regulatory Correspondence

No correspondence was exchanged during the fourth quarter 2013.

2.2 Groundwater Monitoring

For this groundwater monitoring event, all four onsite monitoring wells were gauged, purged, and sampled by subcontractor Blaine Tech per standard sampling protocol (**Appendix B**). Copies of Blaine Tech's field data sheets are included in **Appendix C**. The recent gauging and sampling data are summarized below.

Well gauging and sampling date:	November 20, 2013
Wells gauged:	MW-1, MW-2, MW-3 and MW-4
Wells sampled:	MW-1, MW-2, MW-3 and MW-4
Purge method:	Peristaltic pump
Sample collection method:	Dedicated equipment (tubing)
Groundwater parameters measured (**Appendix C; Table 2**):	Depth to water, temperature, pH, conductivity, oxidation-reduction potential (ORP), turbidity, and dissolved oxygen (DO)
Current depth to water range of wells (ft BTOC):	Min: 10.48 (MW-4) Max: 15.53 (MW-1)
Current groundwater elevation range of wells (ft):	Min: 136.33 (MW-1) Max: 141.74 (MW-2)
Groundwater flow direction and gradient:	West-northwest with an average gradient of 0.042 feet per foot (ft/ft)

2.2.1 Groundwater Flow Gradient and Directional Trends

Using the well gauging data from November 20, 2013 and the surveyed well casing elevations (**Table 1**), Antea Group calculated the groundwater table elevation at each monitoring well location (**Table 3**). These elevations were used to calculate and plot the groundwater flow direction and gradient across the site (**Figure 3**).

Based on the fourth quarter 2013 data, the groundwater flow direction at the site is to the west-northwest with an average hydraulic gradient of 0.042 feet per foot (ft/ft). The groundwater flow during the fourth quarter 2013 is

similar to the two previous sampling events, but there appears to be localized variation in the groundwater elevation in the eastern portion of the site. In historic reports, groundwater elevation contours prepared with the site's former (larger) well network showed somewhat variable localized flow patterns across the site with an overall flow toward the west-southwest, which is more directly toward Santa Rosa Creek. **Appendix D** includes flow and gradient data from both monitoring events tabulated and plotted on a rose diagram.

2.2.2 Groundwater Quality Data and Contaminant Trends

Groundwater samples collected during the fourth quarter 2013 sampling event were submitted under chain of custody protocol to TestAmerica Laboratories, Inc. (TestAmerica), a state of California certified laboratory (California Certification No. 2496). The submitted groundwater samples were analyzed for the following:

- Diesel range organics (DRO) by Environmental Protection Agency (EPA) Method 8015 with and without silica gel cleanup,
- Motor oil range organics (MORO) by EPA Method 8015 with and without silica gel cleanup, and
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM.

The complete laboratory analytical report is included in **Appendix E**. Groundwater analytical results are presented in **Table 3** (current) and **Table 4** (historical); a groundwater concentration map is presented as **Figure 4**.

The laboratory reported four detections above the laboratory reporting limit (LRL). DRO was detected in monitoring wells MW-2 and MW-4 without silica gel cleanup at concentrations of 68 micrograms per liter (µg/L) and 210 µg/L, respectively; MORO was detected in monitoring wells MW-2 and MW-4 at concentrations of 140 µg/L and 110 µg/L, respectively. With silica gel cleanup, DRO and MORO were not reported above the LRL in any of the wells, indicating that the DRO and MORO detections may be attributed to heavily weathered residual hydrocarbons or naturally occurring carbon from organic material decomposition. PAHs were not detected above the LRL in any of the groundwater samples during the fourth quarter 2013 event.

2.2.3 Waste Disposal Summary

Well purge water generated during the fourth quarter 2013 sampling event was contained in a single Department of Transportation (DOT) approved 55-gallon drum and was temporarily stored at the site. Antea Group coordinated drum pickup and removal with subcontractor United Pumping Services; the drum was removed from the site on December 17, 2013. The manifest was not available at the time of report submittal. Antea Group will include the fully executed manifest in the next quarterly monitoring report.

2.2.4 Quality Assurance / Quality Control (QA/QC)

QA/QC measures included use of a field duplicate sample and a detailed QA/QC data validation check on the TestAmerica laboratory analytical results for the November 2013 sampling event performed by Conestoga-Rovers

and Associates (CRA). The TestAmerica laboratory report and CRA validation memo is included as **Appendix E**. A summary of QA/QC information follows.

Duplicate (WG-2344-DUP1-201113) collected at parent sample MW-4:	Contaminant concentrations were not detected above the LRL for both the parent and duplicate sample (See validation memo in **Appendix E**)
Laboratory QA/QC Performed:	Yes (memo provided by CRA)
Laboratory Data Qualifiers:	No data qualifiers were indicated in the laboratory report
Are the data valid for their intended purpose?	Yes, the data are valid

After review of the laboratory validation provided by CRA, Antea Group concludes that the laboratory data obtained during this groundwater sampling event are valid for their intended purpose.

3.0 CONCLUSIONS AND RECOMMENDATIONS

All site monitoring wells were sampled during the fourth quarter 2013 monitoring event. The only detections in groundwater were DRO and MORO (without silica gel cleanup) in monitoring wells MW-2 and MW-4. The samples were also analyzed using silica gel cleanup, and were below the LRL. An evaluation of current analytical data indicates minimal hydrocarbon impact in groundwater and that the site conditions are comparable to those known at the time of the site's 2007 case closure.

One year of groundwater monitoring was proposed for the site. The fourth quarter 2013 sampling event marks the third consecutive sampling event. Quarterly groundwater monitoring will continue at the site with a first quarter 2014 sampling event scheduled for February 2014. If conditions continue to remain stable following the next monitoring event, Antea Group will request that the NCRWQCB consider the site for environmental case closure.

4.0 LIMITATIONS

The findings contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc. does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

Prepared by:

David Sisak
Staff Professional
Antea Group

Sara Sichley
Project Professional
Antea Group

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:

Lia N. Holden
Senior Project Manager
California Registered Professional Geologist No. 8584
Antea Group

PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/15
STATE OF CALIFORNIA

cc: GeoTracker (upload)

Figures

Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3 Groundwater Elevation Contour Map – November 20, 2013
Figure 4 Groundwater Concentration Map – November 20, 2013





North

0 1000 2000 FT

SCALE

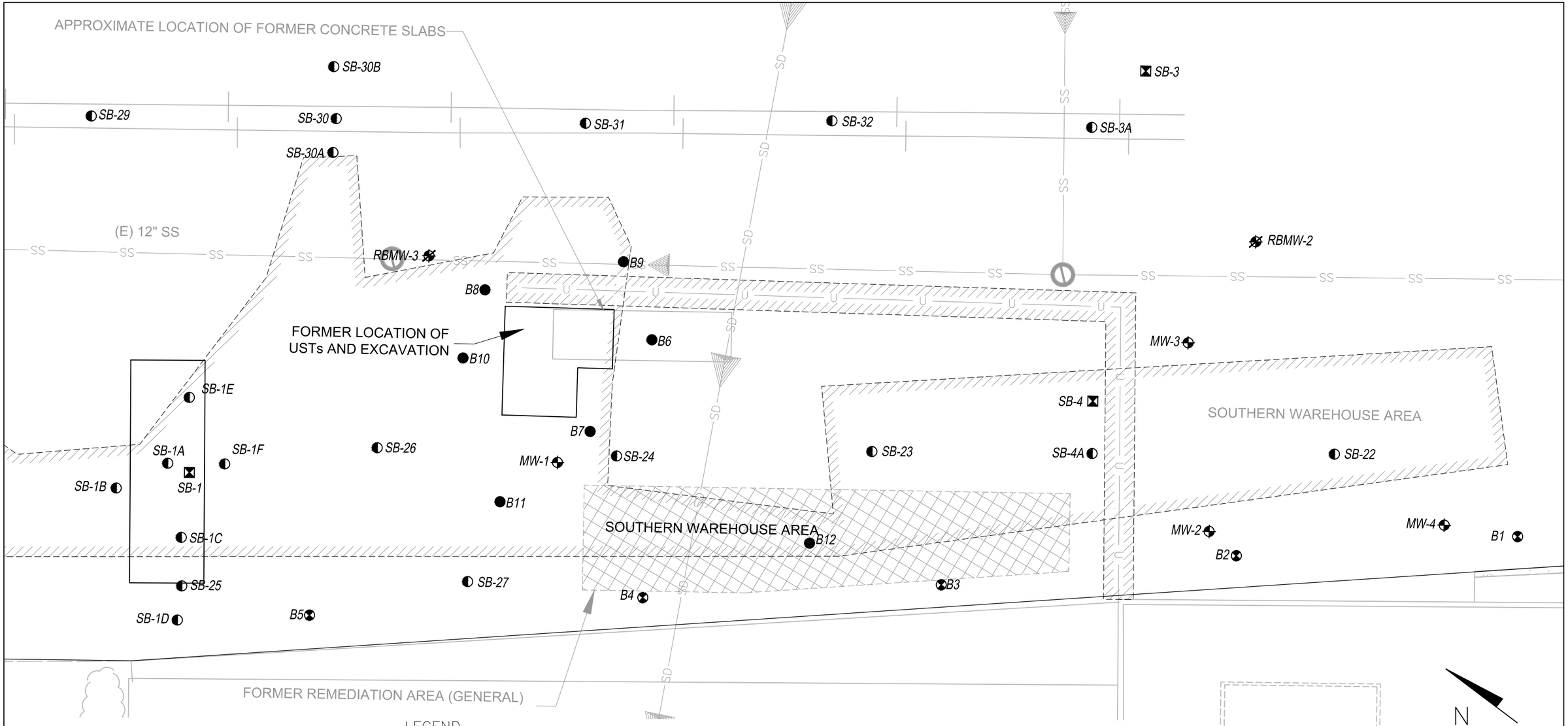
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup



LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- MONITORING WELL
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
10/11/13	LH	UPR8248-Site

anteagroup

APPROXIMATE LOCATION OF FORMER CONCRETE SLABS

SB-30B

SB-29

SB-30

SB-31

SB-32

SB-3

SB-3A

SB-30A

(E) 12" SS

RBMW-3

RBMW-2

B9

B8

FORMER LOCATION OF USTs AND EXCAVATION

B10

B6

137.0

138.0

139.0

140.0

141.0

141.5

MW-3 (141.52)

SB-1E

SB-4

SOUTHERN WAREHOUSE AREA

SB-1A

SB-1F

SB-26

B7

MW-1 (136.33)

SB-24

SB-23

SB-4A

SB-22

0.042 ft/ft

SB-1B

SB-1

B11

SB-1C

SOUTHERN WAREHOUSE AREA

B12

MW-2 (141.74)

MW-4 (141.49)

141.5

B1

B2

SB-25

SB-27

B4

B3

SB-1D

B5

FORMER REMEDIATION AREA (GENERAL)

GROUNDWATER

(141.47) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

140.0 GROUNDWATER ELEVATION CONTOUR LINE (ft/msl)

0.042 ft/ft GENERAL DIRECTION OF GROUNDWATER FLOW AND HYDRAULIC GRADIENT (ft/ft)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- MONITORING WELL
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 3
GROUNDWATER ELEVATION CONTOUR MAP NOVEMBER 20, 2013
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DS	JH
DATE	REVIEWED BY	FILE NAME
12/11/13	LH	UPR8248-Site

antea group

APPROXIMATE LOCATION OF FORMER CONCRETE SLABS

SB-30B

SB-29

SB-30

SB-31

SB-32

SB-3

SB-3A

SB-30A

(E) 12" SS

RBMW-3

B9

B8

B6

FORMER LOCATION OF USTs AND EXCAVATION

B10

B7

MW-1

SB-24

SB-1E

SB-1A

SB-1F

SB-26

SB-1B

SB-1

B11

SB-1C

SB-25

SB-27

SB-1D

B5

SOUTHERN WAREHOUSE AREA

B12

B4

B3

SB-4

SB-4A

SB-23

SOUTHERN WAREHOUSE AREA

SB-22

RBMW-2

MW-3

MW-2

B2

MW-4

B1

FORMER REMEDIATION AREA (GENERAL)

MW-1	DRO	DRO(SG)	MORO	MORO(SG)
11/20/13	<50	<51	<99	<100

MW-3	DRO	DRO(SG)	MORO	MORO(SG)
11/20/13	<51	<50	<100	<99

MW-2	DRO	DRO(SG)	MORO	MORO(SG)
11/20/13	68	<51	140	<100

MW-4	DRO	DRO(SG)	MORO	MORO(SG)
11/20/13	210	<52	110	<100

GROUNDWATER

NOTES:
DRO = DIESEL RANGE ORGANICS
MORO = MOTOR OIL RANGE ORGANICS
SG = SILICA GEL
< = LESS THAN LABORATORY INDICATED REPORTING LIMITS

CONCENTRATIONS N MICROGRAMS PER LITER (µg/L).

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- MONITORING WELL
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
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UTILITIES

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- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

FIGURE 4
GROUNDWATER CONCENTRATION MAP
NOVEMBER 20, 2013
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DS	JH
DATE	REVIEWED BY	FILE NAME
12/11/13	LH	UPR8248-Site

antea group

Tables

Table 1 Soil Boring and Monitoring Well Construction Details
Table 2 Field Parameter Data
Table 3 Current Groundwater Gauging and Analytical Data
Table 4 Historical Groundwater Gauging and Analytical Data

TABLE 1
SOIL BORING AND MONITORING WELL CONSTRUCTION DETAILS
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Updated 10/2/2013

Well ID	Well/Boring Completion Date	TOC Elevation[1] (ft)	Well/Boring Depth (ft bgs)	Well Casing Diameter (in)	Well Casing Material	Well Screen Slot Size (in)	Well Screen Interval (ft bgs)	Cement Grout Seal Interval (ft bgs)	Bentonite Seal Interval (ft bgs)	Filter Pack Interval (ft bgs)	Comments
Soil Borings											
B1	Apr-12	NA	20.0	NA	PVC	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B2	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B3	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B4	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B5	Apr-12	NA	20.0	NA	NA	NA	NA to NA	NA to 20.0	NA to NA	NA to NA	
B6	Apr-12	NA	20.2	NA	NA	NA	NA to NA	NA to 20.2	NA to NA	NA to NA	COT/UVOST Boring
B7	Apr-12	NA	22.1	NA	NA	NA	NA to NA	NA to 22.1	NA to NA	NA to NA	COT/UVOST Boring
B8	Apr-12	NA	22.3	NA	NA	NA	NA to NA	NA to 22.3	NA to NA	NA to NA	COT/UVOST Boring
B9	Apr-12	NA	23.2	NA	NA	NA	NA to NA	NA to 23.2	NA to NA	NA to NA	COT/UVOST Boring
B10	Apr-12	NA	22.1	NA	NA	NA	NA to NA	NA to 22.1	NA to NA	NA to NA	COT/UVOST Boring
B11	Apr-12	NA	20.2	NA	NA	NA	NA to NA	NA to 20.2	NA to NA	NA to NA	COT/UVOST Boring
B12	Apr-12	NA	20.3	NA	NA	NA	NA to NA	NA to 20.3	NA to NA	NA to NA	COT/UVOST Boring
Groundwater Monitoring Wells											
MW-1	May-13	151.86	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-2	May-13	152.79	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-3	May-13	153.44	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	
MW-4	May-13	151.97	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	

Notes:

ft = feet

in = inches

TOC = Top of Casing

bgs = below ground surface

--- = information not available

B = Boring

MW = Monitoring Well

[1] = TOC Elevations were surveyed to the North American Vertical Datum of 1988 (NAVD 88).

NA - Not Applicable

CPT = Cone Penetration Test

UVOST = Ultra-Violet Optical Screening Tool

TABLE 2
FIELD PARAMETER DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	Field Parameters						
						Temperature, ambient (°C)	Temperature, sample (°C)	Turbidity (NTU)	Dissolved oxygen (mg/L)	Oxidation reduction potential (mV)	pH	Conductivity (uS/cm)
MW1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	20	18.5	54	3.03	131.9	6.6	487
	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	25	18.1	10	1.11	59	6.49	555
	WG-2344-MW1-201113	11/20/2013	151.86	15.53	136.33	15	13.6	17	1.18	213.9	6.66	673
MW2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	20	17.1	8	0.58	85.2	6.6	386
	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	25	17.6	7	0.4	47.5	6.83	462
	WG-2344-MW2-201113	11/20/2013	152.79	11.05	141.74	18	14.3	10	1.02	167.4	6.62	385.1
MW3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	20	18.9	5	0.18	44	6.7	462
	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	25	18.8	8	0.81	44.1	6.81	547
	WG-2344-MW3-201113	11/20/2013	153.44	11.92	141.52	18.3	13.8	14	1.06	179.7	6.7	580.1
MW4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	20	16.5	10	0.41	60.5	7	511
	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	25	17.1	9	0.3	-68.3	7	409
	WG-2344-MW4-201113	11/20/2013	151.97	10.48	141.49	18	12.4	11	1.1	91.8	7.02	501.9

Notes:
NTU = Nephelometric Turbidity Unit
uS/cm = microsiemens per centimeter
mg/l = milligrams per liter
mV = millivolts
°C = Degrees Celsius

TABLE 3
CURRENT GROUNDWATER GAUGING AND ANALYTICAL DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	Petroleum Compounds				PAHs[2]															
						DRO (µg/L)	DRO[1] (Silica Gel) (µg/L)	MORO (µg/L)	MORO[1] (Silica Gel) (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno(1,2,3-cd) pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
MW1	WG-2344-MW1-201113	11/20/2013	151.86	15.53	136.33	< 50	< 51	< 99	< 100	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
MW2	WG-2344-MW2-201113	11/20/2013	152.79	11.05	141.74	**68**	< 51	**140**	< 100	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW3	WG-2344-MW3-201113	11/20/2013	153.44	11.92	141.52	< 51	< 50	< 100	< 99	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
MW4	WG-2344-MW4-201113	11/20/2013	151.97	10.48	141.49	**210**	< 52	**110**	< 100	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
DUP-1	WG-2344-DUP1-201113	11/20/2013	NA	NA	NA	--	< 52	--	< 100	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

µg/L = micrograms per liter

NA = Not Applicable

< Analyte not detected at the laboratory indicated reporting limit

Bolded Value = Indicates result of analysis is above the laboratory reporting limit

-- = Not Analyzed

a. DUP-1 collected from MW-4.

Analyte Definitions:

DRO = Diesel Range Organics, carbon range C10 - C28

MORO = Motor Oil Range Organics, carbon range C_{24} - C_{36}

SGC = Silica Gel Cleanup

PAHs = Polycylic Aromatic Hydrocarbons

Analytical Notes:

[1] - Analyzed by Environmental Protection Agency (EPA) Method 8015B with Silica Gel Cleanup

[2] - Analyzed by EPA Method 8270C SIM

TABLE 4
HISTORICAL GROUNDWATER GAUGING AND ANALYTICAL DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

						Petroleum Compounds				PAHs[2]															
Sample Location	Sample ID	Sample Date	PVC Elevation	Depth to Water	Groundwater Elevation	DRO (µg/L)	DRO[1] (Silica Gel) (µg/L)	MORO (µg/L)	MORO[1] (Silica Gel) (µg/L)	Acenaphthene (µg/L)	Acenaphthylene (µg/L)	Anthracene (µg/L)	Benzo(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(g,h,i) perylene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Fluoranthene (µg/L)	Fluorene (µg/L)	Indeno(1,2,3-cd)pyrene (µg/L)	Naphthalene (µg/L)	Phenanthrene (µg/L)	Pyrene (µg/L)
MW1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW1-300813	08/30/2013	151.86	14.94	136.92	<55	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW1-201113	11/20/2013	151.86	15.53	136.33	<50	<51	<99	<100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-300813	08/30/2013	152.79	11.30	141.49	<54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW2-201113	11/20/2013	152.79	11.05	141.74	**68**	<51	**140**	<100	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
MW3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW3-300813	08/30/2013	153.44	11.78	141.66	<54	< 110	< 110	< 220	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW3-201113	11/20/2013	153.44	11.92	141.52	<51	<50	<100	<99	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	--	< 53	--	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-300813	08/30/2013	151.97	10.40	141.57	**150**	< 110	< 110	< 210	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11
	WG-2344-MW4-201113	11/20/2013	151.97	10.48	141.49	**210**	<52	**110**	<100	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11

Notes:

ug/L	micrograms per liter
<	Analyte not detected at the laboratory indicated reporting limit
Bolded Value	Indicates result of analysis is above the laboratory reporting limit
--	Not Analyzed

Analyte Definitions:

DRO - Diesel Range Organics, carbon range C_{10} - C_{28}
MORO - Motor Oil Range Organics, carbon range C_{24} - C_{36}
SGC - Silica Gel Cleanup
PAHs - Polycyclic Aromatic Hydrocarbons

Analytical Notes

1 - Analyzed by Environmental Protection Agency (EPA) Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8270C SIM

Appendix A

Site Details and Summary of Previous Environmental Investigations

SITE DETAILS

Currently, the site is being used as a construction equipment supply storage area for Sonoma Marin Area Rail Transit (SMART) construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the 3 West Third Street and 60 West Sixth Street Warehouses, to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties.

There are currently four groundwater monitoring wells (MW-1 through MW-4) at the site; quarterly groundwater sampling and monitoring is underway.

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

Over the history of environmental activities at the site, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by Environmental Protection Agency (EPA) method 8015B or 8260B. Antea Group uses the designation GRO for total petroleum hydrocarbons as gasoline within the C_5 to C_{10} carbon range, DRO for total petroleum hydrocarbons as diesel within the C_{10} to C_{28} carbon range, and RRO for total petroleum hydrocarbons as residual range organics (oil) within the C_{24} to C_{40} carbon range.

Terms from previous reports may include total recoverable petroleum hydrocarbons (TRPH), total purgeable petroleum hydrocarbons (TPPH) for GRO, total extractable petroleum hydrocarbons (TEPH) for DRO, and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific historical terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO. Antea Group has left the original designation when summarizing historic data and the current designations when applied to recent investigations and summary discussions.

SITE HISTORY

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site. These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs (Industrial Compliance [IC], 1992).

In April 1990, the North Coast Regional Water Quality Control Board (RWQCB) drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (MW-2 and MW-3). Monitoring well MW-3 was located approximately 100 feet down gradient (to the southwest) of the former fuel oil UST. Based on

information presented in a July 1992 report by IC, analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1. However, oil and grease was present in the soil sample collected from boring B-1 at 12 feet bgs at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PAHs). Soil samples collected at depths of 6 and 16 feet below ground surface (bgs) from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively. No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3 (Geomatrix Consultants, Inc. [Geomatrix], 2000).

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes (BTEX compounds), or PAHs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX compounds were detected in the grab groundwater sample collected from IC-B6 (Geomatrix, 2000).

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995. In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHmo), PAHs, metals, and volatile organic compounds (VOCs). Soil samples collected for analyses of TPHd, PAHs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHmo at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHmo at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHmo was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHmo was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs (Geomatrix, 2000).

PAHs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure. Concentrations of PAHs detected at this time are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a

depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PAH concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)4 in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs. No TPHd, TPHmo, or VOCs were detected in groundwater above laboratory reporting limits. The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These items, which are the focus of the work described herein, include additional evaluation of historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations (Geomatrix, 2000).

In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An up-gradient, single-screen monitoring well was installed on the eastern portion of the property in vicinity of the main line railroad tracks.

Extensive investigative activities were performed in 2002 on the northwest area of the project site at the historical location of the Santa Rosa Woolen Mills Facility. Soil samples collected as part of an investigation within this area reported significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former above ground fuel storage tank (AST), and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons. From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil (EBA, 2008b).

In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed, whereupon the excavation was advanced to a total depth of approximately 18 feet bgs. A significant amount of free-phase petroleum hydrocarbon product was encountered on the groundwater surface during the excavation activities. The product and water was subsequently pumped, treated, and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently terminated due to concerns of structure stability. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in the excavation sidewalls and groundwater in this area (EBA, 2008b).

Excavation activities in the northwestern portion of the property also included the removal off a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 350 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths below first encountered groundwater, which was encountered at approximately 19 feet bgs. The maximum depth attained by the excavation was approximately 22 feet bgs. Impacted groundwater encountered within the excavation pit, which included free-phase petroleum hydrocarbon product, was subsequently removed using pumps, treated, and disposed of to the sanitary sewer (EBA, 2008b).

Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area. Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the "southern warehouse area" (EBA, 2008b).

Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in a monitoring well identified as SRMW-13 located in the northwest corner of the property. In addition, the fuel oxygenate methyl tert-butyl ether (MTBE) was detected in SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored (EBA, 2008b).

The RWQCB issued a *No Further Action* (NFA) letter for the previous case at the site on August 31, 2007. In 2008, Sonoma Marin Area Rail Transit District (SMART) granted an option to purchase the site, formerly owned by Northwestern Pacific Railroad Authority (NWRPA) to New Railroad Square Associates, LLC for transit-oriented development purposes. In anticipation of property ownership for the site, New Railroad Square Associates, LLC (with consent from SMART) contracted the services of EBA Engineering (EBA) to perform environmental assessment activities. EBA's November 2008 *Comprehensive Report on Findings* concluded that on-site hazardous materials presently exist at various locations on the property. These materials include an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and impacted shallow soil across the site. The RWQCB reopened the environmental case for the site on January 16, 2009 based on EBA's findings.

In a letter dated February 4, 2011, the RWQCB directed UPRR to remove the oil UST on the property due to SMARTs site improvement activities planned for the site. Another letter, dated July 22, 2011, was submitted to UPRR from the RWQCB which directed them to remove "known shallow impacts", soil impacts encountered during property development and removal of impacted soil in the vicinity of SB-1 in addition to the removal of the oil UST. In November 2011, United Pumping Services (UPS) removed the UST as directed. However, during the initial day-lighting activities of the oil UST, an additional 500-gallon UST containing oil was discovered adjacent and west of the known tank. UPS evacuated, cleaned and removed the second UST in conjunction with the known UST. UPS

excavated and disposed of approximately 213.03 tons of impacted soil surrounding the USTs, and pumped approximately 500 gallons of oil impacted groundwater from the excavation. Antea Group collected 16 soil samples and one grab groundwater sample from within the excavation. Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears that a release from the removed USTs only affected the immediate soils surrounding the USTs. Sidewall samples NWB and SWB collected at 15 feet bgs reported concentrations of VOCs and PAHs not found in any other (shallower) samples collected. From the available data, soil VOCs and PAHs impacts appear to be the result of impacted groundwater within the capillary fringe, originating from outside of the excavated area, and not due to a release from the USTs at that location.

In a letter dated January 19, 2012, the RWQCB directed UPRR to address their remaining concerns from their July 22, 2011 directive letter. The remaining concerns included the removal of known shallow impacts and removal of impacted soil in the vicinity of SB-1. In addition, further investigation around the UST tank pit was directed since evidence of discharge was noted during the removal of the UST in November 2011. In April 2012, Antea Group advanced five soil borings (B1 through B5) on the southwestern boundary of the site and seven qualitative borings (B6 through B12) utilizing cone penetration testing (CPT) tip and Ultra-Violet Optical Screening Tool (UVOST) technology around the tank pit area. The borings were advanced to further investigate impacts of the UST removal and determine any contamination near the site boundaries and their origin. Soil samples were collected and submitted for laboratory analysis. Of the detection above the LRLs, only two concentrations are above their San Francisco Bay RWQCB environmental screening levels (ESLs). The DRO concentration in sample B2-11' [240 milligrams per kilogram (mg/kg)] and the concentration of DRO (810 mg/kg) detected in B4-12' exceeded the ESL of 83 mg/kg. Analysis of the UVOST data suggests that the only boring displaying minor indications of hydrocarbon impacts is boring B7 at approximately 5 to 10 feet bgs.

On July 9 through July 13, 2012 UPS and Antea Group conducted soil excavation in the area of former EBA soil boring SB-1. The results of the sidewall and base samples of the excavation in the vicinity of EBA boring SB-1 indicate that only samples from the southwest portion of the excavation exceed commercial/industrial ESLs for DRO and MORO.

On February 26, 2013, the RWQCB directed UPRR to install four monitoring wells on the site to further investigate groundwater impacts on their origin (potentially from off-site sources). Antea Group had proposed this work in their Site Remedial Action and Investigation Report dated October 16, 2012 and the RWQCB concurred. On May 5 and 6, 2013, Antea Group installed four groundwater monitoring wells (MW-1 through MW-4).

SENSITIVE RECEPTORS

Geomatrix performed a well survey in 2000. Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which is

fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use (Geomatrix, 2003).

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site. Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically down-gradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately up gradient and two approximately down gradient. Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use (Geomatrix, 2003).

Information about the possible presence of an additional water-producing well located near the site was provided by the RWQCB. This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek; its actual location has not been field-verified. At this time the well is not in use, and based on a conversation with the site redeveloper, the well will not be used in the future and will be appropriately destroyed (Geomatrix, 2003).

Appendix B

Blaine Tech Services' Groundwater Sampling Procedures

Blaine Tech Services, Inc.
Standard Operating Procedure

LOW-FLOW SAMPLING

1. Calibrate YSI Flow Cell as per manufacturer's specifications. Thoroughly rinse probe and cup between parameters. Calibration order as follows:

    A. pH (use 3-point calibration of 7, 4, 10)
    B. Oxygen Reduction Potential (ORP)
    C. Specific Conductance
    D. Dissolved Oxygen (DO) (calibrate simulating 100% oxygen saturation)

2. Remove dedicated PE tubing from the well or start with new PE tubing cut to the required length.
3. Gently lower the PE tubing into the well, placing the intake at the center of the screened interval. Take care to minimize disturbance to the water column.
4. Attach the PE tubing to the Peristaltic Pump.
5. Direct effluent line into YSI 556 Flow Cell.
6. Set Peristaltic Pump speed at 100 - 500 ml/min.
7. Collect water quality parameter measurements for temperature, pH, conductivity, turbidity, DO and ORP every 3-5 minutes.
8. Monitor drawdown during purging with electronic water level meter. Record water level with each parameter measurement. MAXIMUM DRAWDOWN IS 0.33 FEET.
9. Collect parameter measurements until stability is achieved. Stability is defined as three consecutive measurements where:

Temp	± 1° Celsius
pH	± 0.1
Conductivity	± 3%
Turbidity	± 10% NTU
DO	± 0.3 mg/l
ORP	± 10 Mv

10. Disconnect effluent line from YSI 556 Flow Cell.
11. Sample through effluent line while maintaining constant flow rate.

Appendix C

Blaine Tech Services' Quarterly Groundwater Sampling Field Data Sheets

WELL GAUGING DATA

Project # 131120-BP1 Date 11-20-13 Client Antea

Site UPRR Santa Rosa 24th St & 34 6th St

Well ID	Well Size (in.)	Time Gauged	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-1	2	0900					15.53	19.80	
MW-2	2	0908					11.05	19.61	
MW-3	2	0904					11.92	18.21	
MW-4	2	0913					10.48	18.19	

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344- MW1-201113	Sample Date: (mm/dd/yy)	11-20-13
Sampler Name:	Ben Powell	Sample Time (hhmm):	0937
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-1

Name of Duplicate Sample: ~~—~~ MS/MSD collected (yes/no)?: NO

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter: 2" X 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier (gal/ft.): 0.16 0.65 1.47 2.61

Start purge: 0919 @ 150 mL/min Depth to Water When Sampled: 15.61

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: uA	Turbidity Unit:	ORP Unit: mV	DO Unit:	Volume Unit: mL
0922	6.64	14.2	763	17	231.5	1.11	450
0925	6.65	13.5	676	19	228.4	1.14	900
0928	6.66	13.7	656	17	220.7	1.15	1350
0931	6.66	13.9	666	19	217.1	1.17	1800
0934	6.66	13.6	673	17	213.9	1.18	2250

Lock Present (yes/no)?: yes

Fixtures Replaced: NO

Weather Conditions/Ambient Temperature: over cast, light rain

Comments: Fe^{2+}: 0.0 mg/L

Signature of Sampler: BR

anteagroup

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344- MW2-201113	Sample Date: (mm/dd/yy)	11-20-13
Sampler Name:	Ben Pannell	Sample Time (hhmm):	1057
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-2

Name of Duplicate Sample: none MS/MSD collected (yes/no)?: —

Purging Equipment: ____ 2" Disposable bailer ____ Submersible pump

X Peristaltic Pump ____ Dedicated bailer

____ 4" PVC bailer ____ Centrifugal pump

Sampled with: Disposable bailer ____ Teflon bailer ____

Disposable Tubing ____ Dedicated Equip. X

	2"	4"	6"	8"
Well Diameter:	X			
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 1039 @ 150 mL/min Depth to Water When Sampled: 11.21

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: C°	Cond. Unit: µS	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: mL
1042	6.99	14.3	389.9	20	163.1	1.17	450
1045	6.60	14.2	394.1	14	164.0	1.06	900
1048	6.63	14.2	389.1	12	165.3	1.01	1350
1051	6.62	14.3	386.9	11	166.3	1.03	1800
1054	6.62	14.3	385.1	10	167.4	1.02	2250

Lock Present (yes/no)?: yes

Fixtures Replaced: no

Weather Conditions/Ambient Temperature: overcast, light rain 18°C

Comments: Fe2+: 0.0 mg/L

Signature of Sampler: BPC

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Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344- MW3-201113	Sample Date: (mm/dd/yy)	11.20.13
Sampler Name:	Ben Powell	Sample Time (hhmm):	1019
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-3

Name of Duplicate Sample: none MS/MSD collected (yes/no)?: —

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

Well Diameter:	2" X	4"	6"	8"
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 1001 @ 200 mL/min Depth to Water When Sampled: 11.97

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: C°	Cond. Unit: µS	Turbidity Unit: NTUs	ORP Unit: mV	DO Unit: mg/L	Volume Unit: mL
1004	6.81	14.2	593.7	17	184.2	1.30	600
1007	6.74	14.0	589.5	13	183.1	1.11	1200
1010	6.73	13.9	587.1	13	181.6	1.01	1800
1013	6.73	13.9	583.0	12	180.3	1.04	2400
1016	6.70	13.8	580.1	14	179.7	1.06	3000

Lock Present (yes/no)?: yes

Fixtures Replaced: no

Weather Conditions/Ambient Temperature: overcast, light rain, 18.3°C

Comments: Fe 2+: 0.0 mg/L

Signature of Sampler: [signature]

anteagroup

Groundwater Sampling Form

EPIC Site Name:	Santa Rosa, CA- 2 Fourth Street and 34 Sixth Street	Site ID:	2344
Sample ID:	WG-2344- MW4-201113	Sample Date: (mm/dd/yy)	11-20-13
Sampler Name:	Ben Pane III	Sample Time (hhmm):	1134 DUP @ 1139
Laboratory (Location):	Test America-San Francisco (Pleasanton Lab)	Sample Type: (Matrix/grab or composite?)	WG/GRAB

State-Specific Well ID: MW-4

Name of Duplicate Sample: WG-2344-DUP1-201113 MS/MSD collected (yes/no)?: no

Purging Equipment: _____ 2" Disposable bailer _____ Submersible pump

X Peristaltic Pump _____ Dedicated bailer

_____ 4" PVC bailer _____ Centrifugal pump

Sampled with: Disposable bailer _____ Teflon bailer _____

Disposable Tubing _____ Dedicated Equip. X

	2"	4"	6"	8"
Well Diameter:	X			
Purge Vol. Multiplier: (gal/ft.)	0.16	0.65	1.47	2.61

Start purge: 1116 @ 200mL/min Depth to Water When Sampled: 10.63

Record the measurement and applicable unit associated with each field parameter on the below table: Stabilization within EPA low-flow standards

Time	pH	Temp Unit: °C	Cond. Unit: uS	Turbidity Unit: NTU	ORP Unit: mV	DO Unit: mg/L	Volume Unit: mL
1119	7.02	12.9	507.7	13	129.6	1.12	600
1122	7.04	12.8	512.2	11	110.7	1.22	1200
1125	7.04	12.4	506.1	10	103.6	1.15	1800
1128	7.03	12.4	502.1	12	96.7	1.13	2400
1131	7.02	12.4	501.9	11	91.8	1.10	3000

Lock Present (yes/no)?: yes

Fixtures Replaced: no

Weather Conditions/Ambient Temperature: overcast, light rain 18°C

Comments: Fe 2+: 0.2 mg/L

Signature of Sampler: BPE

anteagroup

Test America- Pleasanton

Client Name/Address:	Project / PO Number:
Antea Group/UPRR **1155 North 1st Street, Suite 201** **San Jose, CA 95112**	**Santa, Rosa - 2 Fourth Street and 24 Sixth Street** **PEDD_2344-7-Rev1**
Project Manager/Phone Number: **Lia Holden / 408-606-4919** Sampler: Blaine Tech Services	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO & MORO (SW8015)	PAHs (8270C SIM)								Special Instructions
WG-2344-MW1- 201113	WG	Various	4	11-20-13 @ 0934	Various	X	X								With and Without Silica Gel Clean-up
WG-2344-MW2- 201113	WG	Various	4	11-20-13 @ 1057	Various	X	X								
WG-2344-MW3- 201113	WG	Various	4	11-20-13 @ 1019	Various	X	X								
WG-2344-MW4- 201113	WG	Various	4	11-20-13 @ 1134	Various	X	X								
WG-2344-DUP1- 201113	WG	Various	~~2~~ 4 DUP	11-20-13 @ 1139	Various	X									With Silica Gel only
~~WG-2344-FB- 201113~~	~~WG~~	~~Various~~		~~11-20-13 @~~		~~X~~									

Relinquished By: Date/Time: B Dell 11/21/13 1700	Received by: Date/Time: B Dell (Sample custodian) 11/21/13 1700	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time:	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Date/Time:	Sample Integrity: (Check) Intact _____ On Ice: _____ Custody Seal: _____

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

WELLHEAD INSPECTION CHECKLIST

Client Arden Date 11-20-13

Site Address UPRR Santa Rosa 2400 & 3416 4th St

Job Number 131120-BP1 Technician BP

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	X							
MW-2	X							
MW-3	X							
MW-4	X							

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME UPRR Santa Rosa				PROJECT NUMBER 13 11 20- BP1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. °C	INITIALS
YSI ProPlus	10B100592	11-20-13 @ 0825	pH 7.00	7.05	✓	12.3	BP
			pH 10.00	10.03	✓	12.4	BP
			pH 4.00	4.01	✓	12.3	BP
			cond 3900 µs	3897	✓	11.7	BP
			ORP 248 mV	248.8 mV	✓	11.9	BP
			DO 100%	101.1%	✓	15.4	BP

SPH or Purge Water Drum Log

Client: Antea

Site Address: UPRR @ Santa Rosa, CA

STATUS OF DRUM(S) UPON ARRIVAL						
Date	5/20/13	5/29/13	8/30/13	11.20.13		
Number of drum(s) empty:	—					
Number of drum(s) 1/4 full:	—					
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—	1				
Number of drum(s) full:	8	9				
Total drum(s) on site:	8	10	0	1		
Are the drum(s) properly labeled?	Yes	Yes	—	Yes		
Drum ID & Contents:	soil cuttings H2O	soil H2O	—	purge H2O		
If any drum(s) are partially or totally filled, what is the first use date:	5/16/13	5/16/13	—	8.30.13		

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	5/21/13	5/29/13	8/30/13	11.20.13		
Number of drums empty:	—					
Number of drum(s) 1/4 full:	—		1	1		
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—					
Number of drum(s) full:	10	10	~~10~~			
Total drum(s) on site:	10	10	1	1		
Are the drum(s) properly labeled?	Yes	Yes	Yes	Yes		
Drum ID & Contents:	soil Purge H2O	soil purge H2O	purge H2O	purge H2O		

LOCATION OF DRUM(S)
Describe location of drum(s): Next to MW-3

FINAL STATUS						
Number of new drum(s) left on site this event	2	0	1	0		
Date of inspection:	5/21/13	5/29/13	8/30/13	11.20.13		
Drum(s) labelled properly:	Yes	Yes	Yes	Yes		
Logged by BTS Field Tech:			CK	BP		
Office reviewed by:						

Appendix D

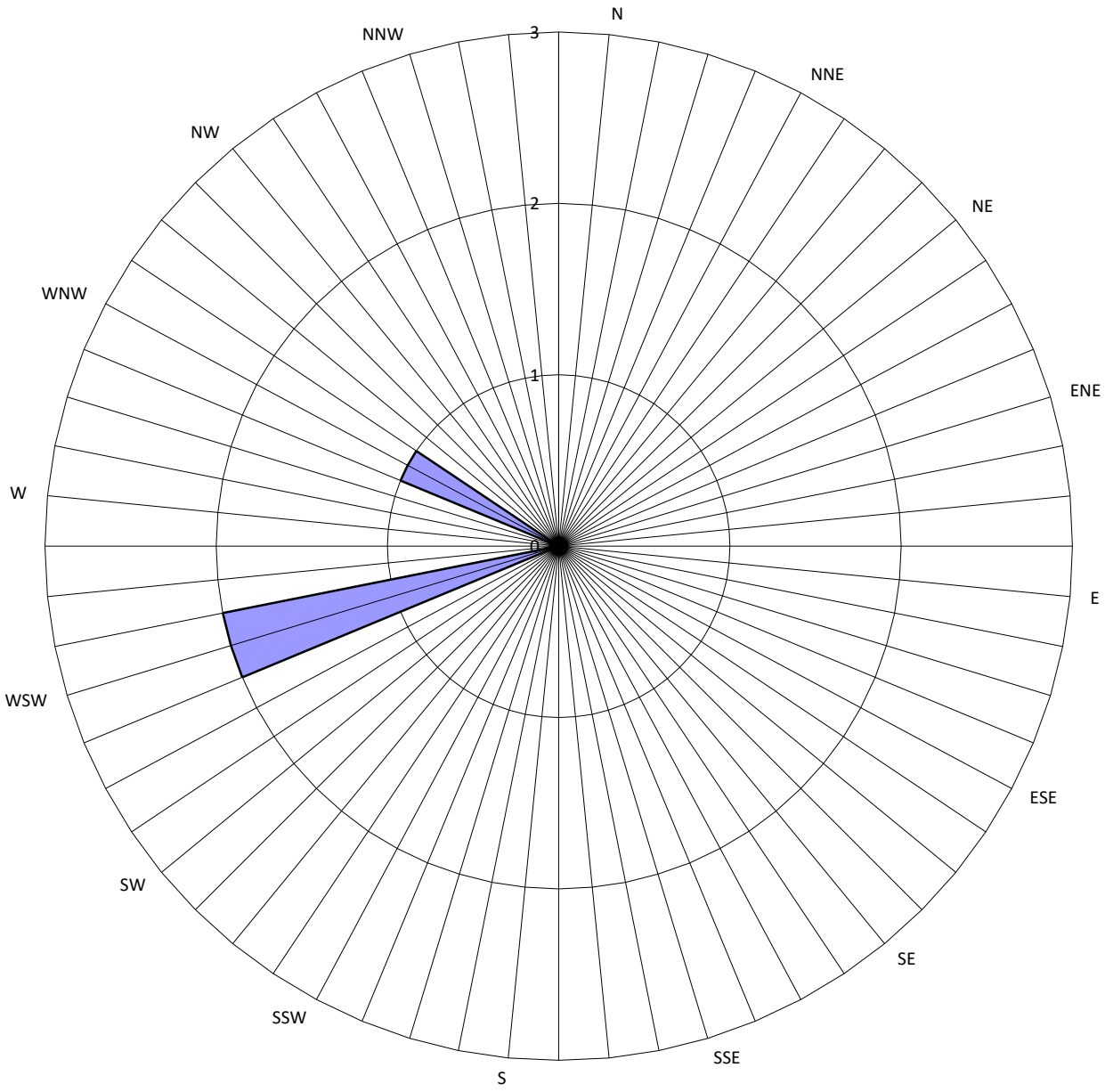
Groundwater Gradient and Flow Direction Data (Rose Diagram)

GROUNDWATER GRADIENT AND FLOW DIRECTION DATA
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Monitoring Date	Groundwater Flow Direction	Groundwater Gradient (foot per foot)
May-13	West-Southwest	0.031
Aug-13	West-Northwest	0.035
Nov-13	West-Northwest	0.042
		Average: 0.036

Notes:
Number of monitoring events = 2
- Data included in this table are from current and historical monitoring reports.

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA



Legend:
Each concentric gridline represents the number of monitoring events.
The diagram includes data from the Second and Fourth Quarter 2013.

Groundwater Flow Direction

Appendix E

Certified Laboratory Analytical Report and Lab Validation Memo

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



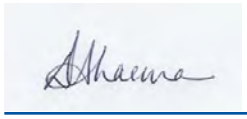
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-53966-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
1155 North 1st Street
Suite 201
San Jose, California 95112

Attn: Ms. Lia Holden



Authorized for release by:
12/6/2013 12:16:52 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-53966-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-53966-1

Comments
No additional comments.

Receipt
The samples were received on 11/22/2013 10:25 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS Semi VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Client Sample ID: WG-2344-MW1-201113 — Lab Sample ID: 720-53966-1

No Detections.

Client Sample ID: WG-2344-MW2-201113 — Lab Sample ID: 720-53966-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	68		51		ug/L	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	140		100		ug/L	1		8015B	Total/NA

Client Sample ID: WG-2344-MW3-201113 — Lab Sample ID: 720-53966-3

No Detections.

Client Sample ID: WG-2344-MW4-201113 — Lab Sample ID: 720-53966-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	210		51		ug/L	1		8015B	Total/NA
Motor Oil Range Organics [C24-C36]	110		100		ug/L	1		8015B	Total/NA

Client Sample ID: WG-2344-DUP1-201113 — Lab Sample ID: 720-53966-5

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Client Sample ID: WG-2344-MW1-201113
Date Collected: 11/20/13 09:37
Date Received: 11/22/13 10:25

Lab Sample ID: 720-53966-1
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Acenaphthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Acenaphthylene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Fluorene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Phenanthrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Benzo[a]anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Chrysene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Benzo[a]pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Benzo[b]fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Benzo[k]fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*37*		*29 - 120*	*11/27/13 18:02*	*11/29/13 15:36*	*1*
Terphenyl-d14	*53*		*45 - 120*	*11/27/13 18:02*	*11/29/13 15:36*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		11/26/13 08:48	11/26/13 19:58	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		11/26/13 08:48	11/26/13 19:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*114*		*23 - 156*	*11/26/13 08:48*	*11/26/13 19:58*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		11/27/13 07:51	11/27/13 17:31	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		11/27/13 07:51	11/27/13 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.01*		*0 - 5*	*11/27/13 07:51*	*11/27/13 17:31*	*1*
p-Terphenyl	*103*		*31 - 150*	*11/27/13 07:51*	*11/27/13 17:31*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Client Sample ID: WG-2344-MW2-201113
Date Collected: 11/20/13 10:57
Date Received: 11/22/13 10:25

Lab Sample ID: 720-53966-2
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Acenaphthene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Acenaphthylene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Fluorene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Phenanthrene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Anthracene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Benzo[a]anthracene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Chrysene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Benzo[a]pyrene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Benzo[b]fluoranthene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Benzo[k]fluoranthene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Fluoranthene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Pyrene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 15:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*44*		*29 - 120*	*11/27/13 18:02*	*11/29/13 15:59*	*1*
Terphenyl-d14	*58*		*45 - 120*	*11/27/13 18:02*	*11/29/13 15:59*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**68**		51		ug/L		11/26/13 08:48	11/26/13 20:27	1
Motor Oil Range Organics [C24-C36]	**140**		100		ug/L		11/26/13 08:48	11/26/13 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*106*		*23 - 156*	*11/26/13 08:48*	*11/26/13 20:27*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		11/27/13 07:51	11/27/13 18:00	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		11/27/13 07:51	11/27/13 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 5*	*11/27/13 07:51*	*11/27/13 18:00*	*1*
p-Terphenyl	*105*		*31 - 150*	*11/27/13 07:51*	*11/27/13 18:00*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Client Sample ID: WG-2344-MW3-201113
Date Collected: 11/20/13 10:19
Date Received: 11/22/13 10:25

Lab Sample ID: 720-53966-3
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Acenaphthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Acenaphthylene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Fluorene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Phenanthrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Benzo[a]anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Chrysene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Benzo[a]pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Benzo[b]fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Benzo[k]fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*44*		*29 - 120*	*11/27/13 18:02*	*11/29/13 16:22*	*1*
Terphenyl-d14	*63*		*45 - 120*	*11/27/13 18:02*	*11/29/13 16:22*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		11/26/13 08:48	11/26/13 20:56	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		11/26/13 08:48	11/26/13 20:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*103*		*23 - 156*	*11/26/13 08:48*	*11/26/13 20:56*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		11/27/13 07:51	11/27/13 18:29	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		11/27/13 07:51	11/27/13 18:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 5*	*11/27/13 07:51*	*11/27/13 18:29*	*1*
p-Terphenyl	*102*		*31 - 150*	*11/27/13 07:51*	*11/27/13 18:29*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Client Sample ID: WG-2344-MW4-201113
Date Collected: 11/20/13 11:34
Date Received: 11/22/13 10:25

Lab Sample ID: 720-53966-4
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Acenaphthene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Acenaphthylene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Fluorene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Phenanthrene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Anthracene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Benzo[a]anthracene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Chrysene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Benzo[a]pyrene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Benzo[b]fluoranthene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Benzo[k]fluoranthene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Fluoranthene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Pyrene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		11/27/13 18:02	11/29/13 16:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*41*		*29 - 120*	*11/27/13 18:02*	*11/29/13 16:45*	*1*
Terphenyl-d14	*50*		*45 - 120*	*11/27/13 18:02*	*11/29/13 16:45*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**210**		51		ug/L		11/26/13 08:48	11/26/13 21:26	1
Motor Oil Range Organics [C24-C36]	**110**		100		ug/L		11/26/13 08:48	11/26/13 21:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*105*		*23 - 156*	*11/26/13 08:48*	*11/26/13 21:26*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		11/27/13 07:51	11/27/13 18:59	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		11/27/13 07:51	11/27/13 18:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 5*	*11/27/13 07:51*	*11/27/13 18:59*	*1*
p-Terphenyl	*103*		*31 - 150*	*11/27/13 07:51*	*11/27/13 18:59*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Client Sample ID: WG-2344-DUP1-201113
Date Collected: 11/20/13 11:39
Date Received: 11/22/13 10:25

Lab Sample ID: 720-53966-5
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		11/26/13 16:08	11/26/13 23:58	1
Motor Oil Range Organics [C24-C36]	ND		100		ug/L		11/26/13 16:08	11/26/13 23:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.05*		*0 - 5*	*11/26/13 16:08*	*11/26/13 23:58*	*1*
p-Terphenyl	*80*		*31 - 150*	*11/26/13 16:08*	*11/26/13 23:58*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-149173/1-A
Matrix: Water
Analysis Batch: 149207

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149173

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Acenaphthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Acenaphthylene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Fluorene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Phenanthrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Benzo[a]anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Chrysene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Benzo[a]pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Benzo[b]fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Benzo[k]fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Fluoranthene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Pyrene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		11/27/13 18:02	11/29/13 14:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*43*		*29 - 120*	*11/27/13 18:02*	*11/29/13 14:01*	*1*
Terphenyl-d14	*65*		*45 - 120*	*11/27/13 18:02*	*11/29/13 14:01*	*1*

Lab Sample ID: LCS 720-149173/2-A
Matrix: Water
Analysis Batch: 149207

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149173

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	4.79		ug/L		48	19 - 120
Acenaphthene	10.0	5.45		ug/L		55	24 - 120
Acenaphthylene	10.0	5.53		ug/L		55	24 - 120
Fluorene	10.0	5.86		ug/L		59	27 - 120
Phenanthrene	10.0	5.91		ug/L		59	31 - 120
Anthracene	10.0	6.64		ug/L		66	44 - 120
Benzo[a]anthracene	10.0	7.23		ug/L		72	48 - 120
Chrysene	10.0	7.15		ug/L		71	47 - 120
Benzo[a]pyrene	10.0	7.23		ug/L		72	43 - 120
Benzo[b]fluoranthene	10.0	7.37		ug/L		74	42 - 120
Benzo[k]fluoranthene	10.0	7.06		ug/L		71	42 - 120
Benzo[g,h,i]perylene	10.0	6.67		ug/L		67	35 - 120
Indeno[1,2,3-cd]pyrene	10.0	6.87		ug/L		69	36 - 120
Fluoranthene	10.0	7.03		ug/L		70	43 - 120
Pyrene	10.0	6.65		ug/L		67	47 - 120
Dibenz(a,h)anthracene	10.0	7.01		ug/L		70	33 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*46*		*29 - 120*
Terphenyl-d14	*68*		*45 - 120*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-149173/3-A
Matrix: Water
Analysis Batch: 149207

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 149173

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			10.0	4.55		ug/L		46	19 - 120	5	35
Acenaphthene			10.0	5.04		ug/L		50	24 - 120	8	35
Acenaphthylene			10.0	5.28		ug/L		53	24 - 120	5	35
Fluorene			10.0	5.65		ug/L		57	27 - 120	4	35
Phenanthrene			10.0	5.55		ug/L		56	31 - 120	6	35
Anthracene			10.0	6.03		ug/L		60	44 - 120	10	35
Benzo[a]anthracene			10.0	6.76		ug/L		68	48 - 120	7	35
Chrysene			10.0	6.72		ug/L		67	47 - 120	6	35
Benzo[a]pyrene			10.0	6.57		ug/L		66	43 - 120	10	35
Benzo[b]fluoranthene			10.0	6.53		ug/L		65	42 - 120	12	35
Benzo[k]fluoranthene			10.0	6.48		ug/L		65	42 - 120	9	35
Benzo[g,h,i]perylene			10.0	5.97		ug/L		60	35 - 120	11	35
Indeno[1,2,3-cd]pyrene			10.0	6.18		ug/L		62	36 - 120	11	35
Fluoranthene			10.0	6.62		ug/L		66	43 - 120	6	35
Pyrene			10.0	6.46		ug/L		65	47 - 120	3	35
Dibenz(a,h)anthracene			10.0	6.03		ug/L		60	33 - 120	15	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*43*		*29 - 120*
Terphenyl-d14	*62*		*45 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-149025/1-A
Matrix: Water
Analysis Batch: 149111

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 149025

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		11/26/13 08:48	11/27/13 11:09	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		11/26/13 08:48	11/27/13 11:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
p-Terphenyl	*90*		*23 - 156*	*11/26/13 08:48*	*11/27/13 11:09*	*1*

Lab Sample ID: LCS 720-149025/2-A
Matrix: Water
Analysis Batch: 149076

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 149025

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1900		ug/L		76	34 - 115		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*117*		*23 - 156*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-149025/3-A
Matrix: Water
Analysis Batch: 149076

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 149025

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	2060		ug/L		83	34 - 115	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*122*		*23 - 156*

Lab Sample ID: MB 720-149063/1-A
Matrix: Water
Analysis Batch: 149013

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 149063

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		11/26/13 15:16	11/27/13 02:00	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		11/26/13 15:16	11/27/13 02:00	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.004*		*0 - 5*	*11/26/13 15:16*	*11/27/13 02:00*	*1*
p-Terphenyl	*82*		*31 - 150*	*11/26/13 15:16*	*11/27/13 02:00*	*1*

Lab Sample ID: LCS 720-149063/2-A
Matrix: Water
Analysis Batch: 149013

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 149063

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1140		ug/L		46	32 - 119		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*82*		*31 - 150*

Lab Sample ID: LCSD 720-149063/3-A
Matrix: Water
Analysis Batch: 149013

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 149063

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1090		ug/L		44	32 - 119	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*85*		*31 - 150*

Lab Sample ID: MB 720-149118/1-A
Matrix: Water
Analysis Batch: 149111

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 149118

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		11/27/13 07:51	11/27/13 20:26	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		11/27/13 07:51	11/27/13 20:26	1

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 720-149118/1-A
Matrix: Water
Analysis Batch: 149111

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 149118

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	0		0 - 5	11/27/13 07:51	11/27/13 20:26	1
p-Terphenyl	101		31 - 150	11/27/13 07:51	11/27/13 20:26	1

Lab Sample ID: LCS 720-149118/2-A
Matrix: Water
Analysis Batch: 149111

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 149118

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1740		ug/L		70	32 - 119		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	132		31 - 150

Lab Sample ID: LCSD 720-149118/3-A
Matrix: Water
Analysis Batch: 149111

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 149118

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1820		ug/L		73	32 - 119	4	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
p-Terphenyl	134		31 - 150

GC/MS Semi VOA

Prep Batch: 149173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53966-1	WG-2344-MW1-201113	Total/NA	Water	3510C	
720-53966-2	WG-2344-MW2-201113	Total/NA	Water	3510C	
720-53966-3	WG-2344-MW3-201113	Total/NA	Water	3510C	
720-53966-4	WG-2344-MW4-201113	Total/NA	Water	3510C	
LCS 720-149173/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-149173/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-149173/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 149207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53966-1	WG-2344-MW1-201113	Total/NA	Water	8270C SIM	149173
720-53966-2	WG-2344-MW2-201113	Total/NA	Water	8270C SIM	149173
720-53966-3	WG-2344-MW3-201113	Total/NA	Water	8270C SIM	149173
720-53966-4	WG-2344-MW4-201113	Total/NA	Water	8270C SIM	149173
LCS 720-149173/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	149173
LCSD 720-149173/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	149173
MB 720-149173/1-A	Method Blank	Total/NA	Water	8270C SIM	149173

GC Semi VOA

Analysis Batch: 149013

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53966-5	WG-2344-DUP1-201113	Silica Gel Cleanup	Water	8015B	149063
LCS 720-149063/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	149063
LCSD 720-149063/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	149063
MB 720-149063/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	149063

Prep Batch: 149025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53966-1	WG-2344-MW1-201113	Total/NA	Water	3510C	
720-53966-2	WG-2344-MW2-201113	Total/NA	Water	3510C	
720-53966-3	WG-2344-MW3-201113	Total/NA	Water	3510C	
720-53966-4	WG-2344-MW4-201113	Total/NA	Water	3510C	
LCS 720-149025/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-149025/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-149025/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 149063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53966-5	WG-2344-DUP1-201113	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-149063/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-149063/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-149063/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 149076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-149025/2-A	Lab Control Sample	Total/NA	Water	8015B	149025
LCSD 720-149025/3-A	Lab Control Sample Dup	Total/NA	Water	8015B	149025

GC Semi VOA (Continued)

Analysis Batch: 149077

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53966-1	WG-2344-MW1-201113	Total/NA	Water	8015B	149025
720-53966-2	WG-2344-MW2-201113	Total/NA	Water	8015B	149025
720-53966-3	WG-2344-MW3-201113	Total/NA	Water	8015B	149025
720-53966-4	WG-2344-MW4-201113	Total/NA	Water	8015B	149025

Analysis Batch: 149111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53966-1	WG-2344-MW1-201113	Silica Gel Cleanup	Water	8015B	149118
720-53966-2	WG-2344-MW2-201113	Silica Gel Cleanup	Water	8015B	149118
720-53966-3	WG-2344-MW3-201113	Silica Gel Cleanup	Water	8015B	149118
720-53966-4	WG-2344-MW4-201113	Silica Gel Cleanup	Water	8015B	149118
LCS 720-149118/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	149118
LCSD 720-149118/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	149118
MB 720-149025/1-A	Method Blank	Total/NA	Water	8015B	149025
MB 720-149118/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	149118

Prep Batch: 149118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-53966-1	WG-2344-MW1-201113	Silica Gel Cleanup	Water	3510C SGC	
720-53966-2	WG-2344-MW2-201113	Silica Gel Cleanup	Water	3510C SGC	
720-53966-3	WG-2344-MW3-201113	Silica Gel Cleanup	Water	3510C SGC	
720-53966-4	WG-2344-MW4-201113	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-149118/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-149118/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-149118/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Client Sample ID: WG-2344-MW1-201113

Lab Sample ID: 720-53966-1

Date Collected: 11/20/13 09:37

Matrix: Water

Date Received: 11/22/13 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			149173	11/27/13 18:02	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	149207	11/29/13 15:36	MQL	TAL PLS
Total/NA	Prep	3510C			149025	11/26/13 08:48	BB	TAL PLS
Total/NA	Analysis	8015B		1	149077	11/26/13 19:58	JL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			149118	11/27/13 07:51	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	149111	11/27/13 17:31	DCH	TAL PLS

Client Sample ID: WG-2344-MW2-201113

Lab Sample ID: 720-53966-2

Date Collected: 11/20/13 10:57

Matrix: Water

Date Received: 11/22/13 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			149173	11/27/13 18:02	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	149207	11/29/13 15:59	MQL	TAL PLS
Total/NA	Prep	3510C			149025	11/26/13 08:48	BB	TAL PLS
Total/NA	Analysis	8015B		1	149077	11/26/13 20:27	JL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			149118	11/27/13 07:51	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	149111	11/27/13 18:00	DCH	TAL PLS

Client Sample ID: WG-2344-MW3-201113

Lab Sample ID: 720-53966-3

Date Collected: 11/20/13 10:19

Matrix: Water

Date Received: 11/22/13 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			149173	11/27/13 18:02	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	149207	11/29/13 16:22	MQL	TAL PLS
Total/NA	Prep	3510C			149025	11/26/13 08:48	BB	TAL PLS
Total/NA	Analysis	8015B		1	149077	11/26/13 20:56	JL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			149118	11/27/13 07:51	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	149111	11/27/13 18:29	DCH	TAL PLS

Client Sample ID: WG-2344-MW4-201113

Lab Sample ID: 720-53966-4

Date Collected: 11/20/13 11:34

Matrix: Water

Date Received: 11/22/13 10:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			149173	11/27/13 18:02	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	149207	11/29/13 16:45	MQL	TAL PLS
Total/NA	Prep	3510C			149025	11/26/13 08:48	BB	TAL PLS
Total/NA	Analysis	8015B		1	149077	11/26/13 21:26	JL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			149118	11/27/13 07:51	NVP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	149111	11/27/13 18:59	DCH	TAL PLS

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Client Sample ID: WG-2344-DUP1-201113
Date Collected: 11/20/13 11:39
Date Received: 11/22/13 10:25

Lab Sample ID: 720-53966-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3510C SGC			149063	11/26/13 16:08	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	149013	11/26/13 23:58	JL	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-53966-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-53966-1	WG-2344-MW1-201113	Water	11/20/13 09:37	11/22/13 10:25
720-53966-2	WG-2344-MW2-201113	Water	11/20/13 10:57	11/22/13 10:25
720-53966-3	WG-2344-MW3-201113	Water	11/20/13 10:19	11/22/13 10:25
720-53966-4	WG-2344-MW4-201113	Water	11/20/13 11:34	11/22/13 10:25
720-53966-5	WG-2344-DUP1-201113	Water	11/20/13 11:39	11/22/13 10:25

Test America- Pleasanton

150285

720-53966

Client Name/Address:	Project / PO Number:
Antea Group/UPRR **1155 North 1st Street, Suite 201** **San Jose, CA 95112**	**Santa, Rosa - 2 Fourth Street and 24 Sixth Street** **PEDD_2344-7-Rev1**
Project Manager/Phone Number: **Lia Holden / 408-606-4919**	Phone Number:
Sampler: Blaine Tech Services	Fax Number.

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO & MORO (SW8015)	PAHs (8270C SIM)								Special Instructions
WG-2344-MW1- 201113	WG	Various	4	11-20-13 @ 0934	Various	X	X								With and Without Silica Gel Clean-up
WG-2344-MW2- 201113	WG	Various	4	11-20-13 @ 1057	Various	X	X								
WG-2344-MW3- 201113	WG	Various	4	11-20-13 @ 1019	Various	X	X								
WG-2344-MW4- 201113	WG	Various	4	11-20-13 @ 1134	Various	X	X								
WG-2344-DUP1- 201113	WG	Various	2 (MS)	11-20-13 @ 1139	Various	X									With Silica Gel only
~~WG-2344-MW5- 201113~~	~~WG~~	~~Various~~		11-20-13 @		X									

720-53966 Chain of Custody

Relinquished By: Date/Time: 11/21/13 1700	Received by: Date/Time: (sample custodian) 11/21/13 1700	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____
Relinquished By: Date/Time: (SAMPLE CUSTODIAN) 11/22/13 0925	Received by: Date/Time: (TAP) 11/22/13 @ 0925	48 hours _____ normal X
Relinquished By: Date/Time: 11/22/13 1025	Received in Lab by: Date/Time: 11-22-13 1025	Sample Integrity: (Check) 2.5c Intact _____ On Ice: _____ Custody Seal: _____

Note By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

12/6/2013

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-53966-1

Login Number: 53966

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Thomas, Bryan

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CONESTOGA-ROVERS & ASSOCIATES

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MEMORANDUM

TO:	Lia Holden (lia.holden@anteagroup.com)	REF. NO.:	058324-2344
FROM:	Andrew Klos/adh/eew/454-NF	DATE:	January 6, 2014
CC:	Jeffrey Cloud, Jesse Orth, Julie Lidstone		

RE: Analytical Results and Reduced Validation
Groundwater Monitoring and Sampling
Union Pacific Railroad (UPRR) – Fourth Street and 34 Sixth Street
Santa Rosa, California
November 2013

1.0 Introduction

The following document details a reduced validation of analytical results for groundwater samples collected in support of the Groundwater Monitoring and Sampling at the Fourth Street and 34 Sixth Street Site in Santa Rosa, California during November 2013. Samples were submitted to TestAmerica, located in Pleasanton, California. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody forms, finished report forms, method blank data, duplicate data, recovery data from surrogate spikes, laboratory control samples (LCS).

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 3 and applicable guidance from the documents entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-08-01, June 2008

This item will subsequently be referred to as the "Guidelines" in this Memorandum.

2.0 Sample Holding Time and Preservation

The sample holding time criteria for the analyses are summarized in Table 2. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

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All samples were properly preserved, delivered on ice, and stored by the laboratory at the required temperature (<6°C).

3.0 Laboratory Method Blank Analyses

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

4.0 Surrogate Spike Recoveries - Organic Analyses

In accordance with the methods employed, all samples, blanks, and QC samples analyzed for organics are spiked with surrogate compounds prior to sample extraction and analysis. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

All samples submitted for semi-volatile organic compound (SVOC) analysis were spiked with the appropriate number of surrogate compounds prior to sample extraction and analysis.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against the associated control limits. All surrogate recoveries met the above criteria.

5.0 Laboratory Control Sample Analyses

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of 1 per 20 investigative samples and/or 1 per analytical batch.

Organic Analyses

The LCS/LCSD contained all the compounds of interest. All LCS recoveries and RPDs were within the associated control limits, demonstrating acceptable analytical accuracy and precision.

6.0 Field QA/QC Samples

The field QA/QC consisted of one field duplicate sample set.

Field Duplicate Sample Analysis

To assess the analytical and sampling protocol precision, one field duplicate sample was collected and submitted "blind" to the laboratory, as specified in Table 1. The RPDs associated with these duplicate samples must be less than 50 and 100 percent for water and soil samples, respectively. If the reported concentration in either the investigative sample or its duplicate is less than five times the practical quantitation limit (PQL), the evaluation criteria is one or two times the PQL value for water and soil samples, respectively.

All field duplicate results were within acceptable agreement, demonstrating acceptable sampling and analytical precision.

7.0 Analyte Reporting

The laboratory did not report any detected concentrations below the laboratory's PQL/reporting limit (RL).

8.0 Conclusion

Based on the assessment detailed in the foregoing, the summarized data are acceptable without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
GROUNDWATER MONITORING AND SAMPLING
UNION PACIFIC RAILROAD (UPRR) - FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2013

					Analysis/Parameters		
Sample Identification	***Location***	***Matrix***	***Collection Date (mm/dd/yyyy)***	***Collection Time (hr:min)***	***PAH by SIM***	***DRO***	***Comments***
WG-2344-MW1-201113	MW1	Water	11/20/2013	09:37	x	x	
WG-2344-MW2-201113	MW2	Water	11/20/2013	10:57	x	x	
WG-2344-MW3-201113	MW3	Water	11/20/2013	10:19	x	x	
WG-2344-MW4-201113	MW4	Water	11/20/2013	11:34	x	x	
WG-2344-DUP1-201113	MW4	Water	11/20/2013	11:39		x	Field Dup of MW4

Notes:

PAH - Polynuclear aromatic hydrocarbon
SIM - Selected ion monitoring
DRO - Diesel range organics

TABLE 2

ANALYTICAL METHODS AND HOLDING TIME CRITERIA
GROUNDWATER MONITORING AND SAMPLING
UNION PACIFIC RAILROAD (UPRR) - FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2013

				Holding Time	
	Parameter	***Method***	***Matrix***	***Collection to Extraction (Days)***	***Collection or Extraction to Analysis (Days)***
SVOC	PAH by SIM	SW-846 8270C	Water	7	40
SVOC	Diesel Range Organics	SW-846 8015B	Water	7	40

Notes:

PAH - Polynuclear aromatic hydrocarbon
SIM - Selected ion monitoring
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition, 1986, with subsequent revisions.
SVOC - Semi-volatile organic compound

TABLE 3

ANALYTICAL RESULTS SUMMARY
GROUNDWATER MONITORING AND SAMPLING
UNION PACIFIC RAILROAD (UPRR) - FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2013

Sample Location:		*MW1*	*MW2*	*MW3*	*MW4*	*MW4*
Sample ID:		*WG-2344-MW1-201113*	*WG-2344-MW2-201113*	*WG-2344-MW3-201113*	*WG-2344-MW4-201113*	*WG-2344-DUP1-201113*
Sample Date:		*11/20/2013*	*11/20/2013*	*11/20/2013*	*11/20/2013*	*11/20/2013*
						Duplicate
Parameters	***Units***					
Semi-volatile Organic Compounds						
Acenaphthene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Acenaphthylene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Anthracene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Benzo(a)anthracene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Benzo(a)pyrene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Benzo(b)fluoranthene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Benzo(g,h,i)perylene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Benzo(k)fluoranthene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Chrysene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Dibenz(a,h)anthracene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Fluoranthene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Fluorene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Indeno(1,2,3-cd)pyrene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Naphthalene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Phenanthrene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Pyrene	µg/L	<0.10	<0.11	<0.10	<0.11	-
Petroleum Products						
Total Petroleum Hydrocarbons (C10-C28) DRO	µg/L	<50	68	<51	210	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	<51	<51	<50	<52	<52
Total Petroleum Hydrocarbons (C24-C36) Motor Oil	µg/L	<99	140	<100	110	-
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L	<100	<100	<99	<100	<100

Notes:

- Not analyzed

Kennedy/Jenks Consultants

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916-362-3251
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Source Area Removal Report
Santa Rosa Station
Santa Rosa, California

29 January 2004

Prepared for

Union Pacific Railroad Company
Environmental Management Group
9451 Atkinson Street, Suite 10
Roseville, CA 95747-9711

K/J Project No. 032777.14

Source Area Removal Report
Santa Rosa Station
Santa Rosa, California

29 January 2004

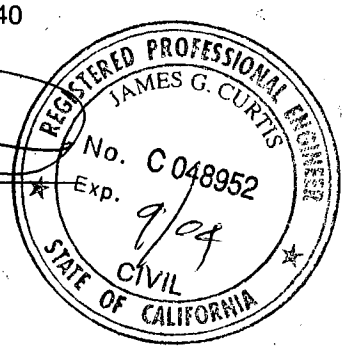
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Jim Curtis, P.E.
Program Director



K/J Project No. 032777.14

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A Copies of the Laboratory Analytical Reports and Chain-of-Custody Records

Section 1: Introduction

Kennedy/Jenks Consultants (Kennedy/Jenks) has prepared this *Source Area Removal Report* (Report) on behalf of the Union Pacific Railroad Company (Union Pacific) and the Northwestern Pacific Railroad Authority (NWPRA). The Report documents source area investigation and source area removal actions completed at the Santa Rosa Station (Site) in October and November 2003. Kennedy/Jenks conducted the source area removals along a former underground petroleum pipeline and wooden underground storage tank (UST) in the Northwestern Area, selected areas within the Fenced Enclosure, and selected areas near a Southern Warehouse. Nineteen soil borings were advanced along the eastern boundary of the 6th Street Warehouse in order to conduct a source area investigation. Kennedy/Jenks coordinated the services of the drilling contractor, the construction contractor and laboratory services and worked in cooperation with and at the direction of the North Coast Regional Water Quality Control Board (Regional Board) and the Santa Rosa Fire Department (SRFD) to conduct the source area removals.

The Site is located in Santa Rosa, California between 3rd and 6th Streets, west of Wilson Street, in Railroad Square (Figure 1). The Site is vacant except for the Fenced Enclosure area in the eastern section of the Site (Figure 2). The area surrounding the Site is primarily commercial and residential. As part of the source removal actions, the Site was enclosed with a 6-foot chain link fence with lockable access gates on 3rd Street and 6th Street.

In order to maintain consistency with past investigative reports and the documentation collected during the source removal actions, project north and project south are referring to 6th and 3rd Streets, respectively. Project east is in the direction of the NWPRA right-of-way, and project west is in the direction of the Santa Rosa Creek.

The Site has been used for railroad operations since before 1900. Northwestern Pacific Railroad originally owned the Site and used it as a water and fueling station. Site ownership was transferred to the Southern Pacific Railroad Company (SPTCo) in 1906. Union Pacific purchased SPTCo in 1996, and thus acquired ownership of the Site. Site ownership is to transfer to NWPRA in the near future.

Additional details on the Site, site description and history, and the findings of previous investigations are provided in the *Environmental Site Conditions and Proposed Action Plan* (Geomatrix Consultants, January 2003) and *Limited Source Area Removal and Investigation Work Plan* (Kennedy/Jenks, 8 September 2003).

Section 2: General Investigation and Source Area Removal Information

2.1 Prefield Activities

Prior to initiating the field activities for both the 6th Street Warehouse source area investigation and the source area removal activities, the following activities were completed:

- The planned source removal areas and investigation area were marked in white paint. USA Alert was notified and a private utility locating firm surveyed the area for subsurface utilities.
- Turn-key Construction Services, Inc. (Turn-key) obtained permits for the planned soil excavation and for the removal to the buried wooden tank (assumed to be an underground storage tank) from the SRFD.
- Turn-key obtained a grading permit from the City of Santa Rosa Building Department.
- Kennedy/Jenks obtained soil boring permits from the County of Sonoma Department of Health Services Environmental Health Division.
- A site control grid was established to facilitate locating the positions of the soil sampling locations. The site control grid consisted of 40-foot grid sections across the entire Site. The 0.0 point was the juncture of northeast corner of the 6th Street Warehouse and 6th Street. The grid sections moved to the south and to the east, designated by letters (north-south orientation) and numbers (east-west orientation). The site control grid is shown on Figure 2.
- The Site was fenced during the week of 6 October 2003 prior to initiating field activities.
- Turn-key obtained a one-time wastewater discharge permit from the City of Santa Rosa Utilities Department for the discharge of groundwater to the City's sanitary sewer.
- Turn-key mobilized two 21,000-gallon storage tanks to the Site for the temporary storage of groundwater pumped from the excavations.

2.2 Laboratory Analysis

Excelchem Environmental Labs (State Certification No. 2119) (Excelchem) mobilized a mobile laboratory to the Site on 13 October 2003. The mobile laboratory was used to provide onsite and rapid turnaround analysis of total petroleum hydrocarbons as diesel (TPHd) and total petroleum hydrocarbons as motor oil (TPHmo) analysis during the source area investigation and source area removal actions to assist with removal decisions. Excelchem also provided fixed laboratory services for analyses that could not be conducted in the mobile laboratory.

The soil and groundwater samples collected during the source area investigation and source area removal actions were analyzed for various constituents depending on the area of the Site from which they were collected and the findings of previous investigations. The analytical methods used were:

- Total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 8015, TPHd and TPHmo analysis by EPA Method 8015 following silica gel cleanup by EPA Method 3630.
- Arsenic and lead analysis by EPA Method 6010B.
- Benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method 8020.

Samples collected from the soil stockpiles for profiling and disposal were also selectively analyzed for:

- Semivolatile organic compounds, including polycyclic aromatic hydrocarbons by EPA Method 8270.
- Volatile organic compounds (VOCs) by EPA Method 8260.
- Title 22 metals by EPA Method 6010 series.
- Mercury by EPA Method 4770A.

The analysis of the stockpiled soil was at the direction of the disposal facilities and was reduced to just TPHd and TPHmo for the last stockpiles. The laboratory analytical results are presented in tables and referenced in specific sections herein. Copies of the laboratory analytical reports and chain-of-custody records are presented in Appendix A.

2.3 General Source Area Excavation Notes

Source area removal actions were conducted from 15 October 2003 until 13 November 2003. The removal actions moved between the Northwestern Area, the Southern Warehouse area and the Fenced Enclosure based on construction access considerations, the availability of Regional Board and SRFD personnel to observe the confirmation sampling, and the concurrence of either the Regional Board or SRFD personnel that removal of impacted soil from a source area had been completed and the area could be backfilled.

The source area removal actions were interrupted by periods of rain resulting in unsafe working conditions, which delayed the remedial actions.

Excavated soils were stockpiled on plastic sheeting and covered with plastic sheeting at the end of each working day. Approximately 6,500 cubic yards of impacted soil were excavated and placed into 13 stockpiles of approximately 500 cubic yards each. The stockpiled soils are awaiting offsite disposal.

Investigation derived residuals (IDRs), including decontamination water from the confirmatory soil sampling and the source area investigation along the 6th Street Warehouse, were added to the "wet" stockpile, Stockpile No. 7. Turn-key established Stockpile No. 7 as a holding cell for

saturated soils ("wet") excavated from below groundwater. The holding cell was constructed by creating a berm from clean import material on the edges of the underlying plastic sheeting. The berm served to contain any liquid that may have drained out of the saturated soils.

Once either the Regional Board or SRFD gave their concurrence that removal actions at each of the areas were complete, the excavations were backfilled with clean import material. Stonypoint Quarry in Cotati, California provided the backfill material. Fill material below groundwater was a 1-1/2-inch drain rock. Fill material above groundwater was a 3/4-inch minus quarry material. A total of 866 tons of drain rock, and 6,252 tons of quarry material was used to backfill the excavations. The backfill material was placed in approximately 12-inch lifts and compacted to a minimum of 90% compaction from the bottom of the excavation to the ground surface. Construction materials testing provided compaction testing to Turn-key.

Selected figures, identified in specific sections of this Report, present the laboratory analytical data generated during the investigation and remedial action field activities conducted in October and November 2003. In addition and where applicable and informative, analytical data from previous investigations is included. Refer to the legend on Figure 2 for identification of the symbols used to differentiate the data sets.

Removal action and confirmatory soil sampling identification was recorded by the area of collection (Southern Warehouse [SW], Fenced Enclosure [FE], Northwestern Area [NW]), the grid number, sequential number of sample collected and depth below ground surface (bgs). For example, the ninth sample collected overall from Northwestern Area during the wooden tank removal action from a depth of 7 feet bgs in grid section B2, was identified as NW-B2-9C-7. Confirmatory soil samples were collected during the source area removal actions under the direction of either the Regional Board or the SRFD. The confirmatory samples are designated by a "C" in the accompanying tables and figures. Additional soil samples were collected during the source area removal actions without the assistance of the Regional Board or SRFD to guide the excavation procedures and are referred to herein as removal action samples. The soil sampling designation is truncated on the figures to only the sequential number of the sample, and the letter "C" if it was a confirmatory sample, to save space and provide clarity.

Removal action and confirmation soil samples were collected in 2-inch by 3-inch brass tubes by pushing the tube into the soil in the excavator bucket (for samples collected from depths greater than 5 feet below ground surface [bgs]) or the bottom or sidewalls of the excavation. The tubes were sealed with Teflon™ tape, capped, recorded onto a chain-of-custody record.

The soil samples collected from the 6th Street Warehouse investigation were identified by the boring number and depth bgs. The reconnaissance groundwater samples were identified by the boring number, or by the boring number followed by the letter "w".

Section 3: 6th Street Warehouse Source Area Investigation

Nineteen soil borings were advanced at the locations shown on Figure 3 on 14 and 15 October 2003. The borings were advanced within grid sections A1 through F1 and identified as SRB-104 through SRB-122.

Vironex Environmental Field Services (C-57 License No. 705927) provided drilling services. The borings were advanced into the first encountered groundwater using a hydraulic push rig. Groundwater was encountered at approximately 20 to 21 feet bgs in the 6th Street Warehouse Source Area Investigation area.

A continuous soil core was collected from each boring in an acetate liner to allow visual observation of the core. Soil samples were removed from the core for laboratory analysis based on the visual observation. A minimum of three soil samples were collected from each core at depths of approximately depths of 5 feet, 10 feet, 15 feet or 20 feet bgs (or until groundwater was encountered). A reconnaissance groundwater sample was collected from each boring by inserting a 1-inch diameter screened polyvinyl chloride (PVC) pipe into the borehole and lowering a bailer into the PVC pipe. The recovered groundwater was decanted into a 1-liter amber bottle and delivered to the mobile laboratory. At the completion of each boring, the boring was backfilled with a cement bentonite slurry to the ground surface.

The soil and reconnaissance groundwater samples were analyzed for TPHd and TPHmo by Excelchem in the mobile laboratory. The analytical results are summarized in Tables 1 and 2.

The results of the field investigation indicated elevated concentrations of TPHd or TPHmo, or both, generally from just below the ground surface to groundwater in soil borings SRB-114, SRB-113, SRB-112, SRB-111 and SRB-118. Visual inspection of the soil cores removed from these borings generally showed that these cores contained evidence of petroleum hydrocarbon contained within the soil pores. The petroleum hydrocarbon varied from crystalline and dry, with a dull appearance to a more liquid state that glistened and reflected daylight. In all cases, the observed petroleum hydrocarbons in the soil cores was highly viscous and not readily flowing through the soil column.

Reconnaissance groundwater samples collected from soil borings SRB-112, SRB-118, SRB-105, SRB-106 and SRB-122 contained non-aqueous phase liquids (NAPL) which is reflected in the elevated TPHd and TPHmo concentrations (from 2,200,000 micrograms per liter [µg/l] to 66,000,000 µg/l) reported by the laboratory for those samples. TPHd and TPHmo were detected in other reconnaissance groundwater samples collected during the investigation, but at lower concentrations (from less than 50 µg/l to 8,100 µg/l). Reconnaissance groundwater samples typically contain suspended soil particles, so the results may be due to NAPL or to chemicals in soil rather than chemicals in groundwater. None of the reconnaissance groundwater samples were filtered in the field or in the laboratory at the direction of the Regional Board and the results of samples collected from soil borings SRB-112, SRB-118, SRB-105, SRB-106, and SRB-122 are not considered indicative of dissolved phase TPHd or TPHmo.

Section 4: Source Area Removals

4.1 Southern Warehouse

Limited source area removals were planned in the general vicinity of the Southern Warehouse within grid sections L1, M1 and N1. Based on the results of previous investigations, soils in the vicinity of boring locations SRB-21, SRB-40 and SRB-41 contain TPHd and TPHmo. In addition, arsenic was detected above background in samples collected from both SRB-40 and SRB-41 to depths of approximately 8 feet bgs. The excavation was guided by visual observation of staining and the results of the removal action soil sampling analytical results. Confirmatory soil sampling was conducted in the presence of the Regional Board and the SRFD. Excavation continued until the combined removal action and confirmatory soil sampling analytical results indicated that the impacted soil had been removed and the Regional Board and the SRFD gave their approval to backfill the excavations.

The limits and depths of the Southern Warehouse excavations, the analytical results from the removal action soil sampling, previous investigations and the confirmatory soil sampling are shown on Figures 4 and 5. Approximately 270 cubic yards of soil were removed from these two excavations.

The laboratory analytical results from this removal action are summarized in Table 3. The confirmatory soil samples collected from the Southern Warehouse excavations were analyzed in the mobile laboratory for TPHd and TPHmo. The deeper confirmatory samples from the vicinity of SRB-40 and SRB-41 excavations were analyzed by at Excelchem's fixed laboratory for arsenic on a rush turnaround basis.

4.2 Fenced Enclosure

Limited source area removals were planned in the Fenced Enclosure within grid sections L6 and M6. Based on the results of previous investigations, soils in the vicinity of boring locations SRB-70, SRB-71 and SRB-96 contained TPHg, TPHd, TPHmo, and BTEX. The excavation was guided by visual observation of staining and the results of the removal action soil sampling analytical results. Confirmatory soil sampling was conducted in the presence of the Regional Board or the SRFD. Excavation continued until the combined removal action and confirmatory soil sampling analytical results indicated that the impacted soil had been removed and the Regional Board and the SRFD gave their approval to backfill the excavations.

The limits and depths of the Fenced Enclosure excavations, the analytical results from the removal action soil sampling, previous investigations and the confirmatory soil sampling are shown on Figure 6. Approximately 62 cubic yards of soil were removed from the Fenced Enclosure. The presence of an energized power pole located inside the Fenced Enclosure and just to the northeast of the trailer precluded sufficient excavation to remove TPHmo impacted soil from this immediate area. TPHmo at a concentration of 1,100 milligrams per kilogram (mg/kg) remain beneath the power pole at a depth of 0.5 feet bgs. Attempts to coordinate with the power pole owner to have the power pole de-energized and the pole removed to allow additional excavation to proceed in this area was unsuccessful during the removal actions.

Based on the other removal actions conducted in the Fenced Enclosure, the remaining TPHd at the base of the power pole is likely to be limited in extent and shallow.

The laboratory analytical results from the Fenced Enclosure removal action are summarized in Tables 4 and 5. The confirmatory soil samples collected from Fenced Enclosure excavations were analyzed in the mobile laboratory for TPHg, TPHd and TPHmo. Analyses for BTEX and lead were conducted at Excelchem's fixed laboratory on a rush turnaround basis.

4.3 Northwestern Area

The previous investigations conducted in the Northwestern Area indicated the presence of petroleum hydrocarbons. The analytical data indicated isolated pockets of impacted soil and not a general distribution over the entire area. Elevated levels of TPHd and TPHmo had been detected in soil samples collected along the former underground petroleum pipeline trench at depths up to 5 feet bgs, particularly at the western end of the trench near sampling location PL-12. The observation of a wooden UST uncovered during a potholing investigation conducted in the early summer of 2003 indicated that soils in the tank and surrounding area contain visually impacted soil. The reported elevated levels of TPHd and TPHmo in soil samples collected from borings SRB-75, SRB-99 and SRB-100 supported the observations of soil conditions around the wooden tank. The findings of the previous investigations were supported by the 6th Street Warehouse Source Area Investigation conducted as part of these field activities.

Source area removals along the pipeline trench, the wooden tank and the overall Northwestern Area proceeded to the limits shown on Figures 7 through 14. The areas of excavations became known as the UST excavation (wooden tank area), main pit excavation (encompassing and extending beyond soil borings SRB-114, SRB-112, SRB-111 and SRB-118), pipeline excavation, the GM excavation (at the southern end of the pipeline excavation) and the SRB-113 pit excavation. These areas are designated on the referenced drawings.

The laboratory analytical results for the removal action and confirmatory soil sampling analytical results are summarized in Table 6. The removal action and confirmatory soil samples were analyzed for TPHd and TPHmo by the mobile laboratory. The analytical results from the excavation pit dewatering conducted as part of the removal actions in the Northwestern Area are summarized in Table 7. The mobile laboratory performed groundwater TPHd and TPHmo analysis. Groundwater VOC analysis required by the City of Santa Rosa Utilities Department for the one-time discharge permit was performed at Excelchem's fixed laboratory.

4.3.1 UST Excavation

Source area removals began with a search for the wooden UST. Remnants of the wooden tank were encountered at approximately 10 feet bgs near intersection of grid lines B and 3 and near the location of SRB100 from a previous investigation. The wooden structure of the tank was rotted and could only be removed in small pieces. The tank remnants were added to the soil stockpiles for offsite disposal. The former tank was determined to be 18 feet in diameter. Excavation proceeded to remove visually impacted soil to a depth of approximately 18 to 19 feet bgs.

Groundwater began to seep into the excavation at 19 feet bgs. A gravel lens encountered at this depth in the northeastern corner of the excavation seeped NAPL into the excavation and onto the groundwater. The NAPL seepage from this location is in keeping with the NAPL observed in the reconnaissance groundwater sample collected from soil boring SRB-122. The soil samples collected from soil boring SRB-122 at depths of 5 feet, 10 feet and 20 feet bgs did not detect TPHd or TPHmo above the laboratory reporting limits (Table 1).

A ramp was excavated into the UST excavation from the south to allow excavation to greater depths. An additional 3 to 4 feet of material was removed from the bottom of the excavation and below the groundwater level. As much of the gravel lens that could be safely reached was removed as the excavation proceeded to the west, following the gravel lens.

The limits and depths of the UST excavation, the analytical results from the removal action soil sampling, previous investigations and the confirmatory soil sampling are shown on Figure 11. Approximately 700 cubic yards of soil were removed from the UST excavation. The presence of 6th Street to the north and the City of Santa Rosa sanitary sewer to the east presented site constraints to further excavations in these directions. The soil removal and confirmatory soil sample analytical results from the bottom and sidewalls of the UST excavation supported the decision that no further excavation was necessary. The Regional Board and the SRFD concurred with this decision.

Groundwater and NAPL seeping into the UST excavation was pumped into two 21,000-gallon temporary holding tanks on three occasions. The NAPL was observed to be floating on top of the groundwater and the water underneath the NAPL to be clear. Between each pumping event, Turn-key skimmed the NAPL from the top of the water with absorbent booms attached by ropes to the excavator bucket. A water sample was collected from the UST excavation by dropping a bailer into the excavation. The length of the bailer for collecting the water sample caused sediment from the bottom of the excavation to mix with the water resulting in a turbid sample. The elevated detections of TPHd and TPHmo in the UST Ex water sample are attributed to the sediment in the sample (Table 7). This water sample was not filtered in the field or the laboratory and the results are not considered indicative of dissolved phase TPHd or TPHmo.

Backfilling of the UST excavation began on 29 October 2003 with the concurrence of the Regional Board and the SRFD.

4.3.2 Pipeline and Main Pit Excavation

Almost simultaneously with the UST excavation, soil removal began at the northern end of the former petroleum pipeline trench. This pipeline and some soils had been previously removed from the area shown in general on Figure 2 and in detail on Figures 11 through 14. As the excavation along the pipeline trench proceeded south, visibly stained soil was removed and soil removal samples were collected to guide the excavation. The pipeline excavation expanded into the main pit excavation in the general vicinity of soil borings SRB-118, SRB-112 and SRB-111. The main pit excavation proceeded to the west until the halting at approximately 20 feet east of the 6th Street Warehouse.

Excavation along the pipeline trench along the southern edge of the main pit excavation was generally to depths ranging from 5 feet to 10 feet bgs. Just to the south of grid line E, between grid line 2 and 3, a layer of debris consisting of broken ceramics, bottles and rusted metal was encountered and removed (Figure 13).

Just south of monitoring well SRMW-10, the end of a 6-inch diameter steel pipe was encountered at a depth of approximately 4 feet bgs near grid lines C2. The excavation followed the pipe to the south across grid lines D, E, F and G. Approximately 12 feet south of grid line G, the steel pipe entered a 36-inch diameter concrete pipe traveling east to west and buried approximately 3 feet bgs. The steel pipe was removed during the excavation. The connection to the concrete pipe was patched with concrete. The concrete pipe was left in place. This concrete pipe is assumed to be part of the City of Santa Rosa storm drain system.

Groundwater began to seep into the main pit excavation at 19 feet bgs. A petroleum product seeped into the excavation and onto the groundwater, primarily from the southern and western faces of the excavation. This seepage of product from these areas is in keeping with the observed product in the reconnaissance groundwater sample collected from soil borings SRB-112 and SRB-118.

A ramp was excavated into the main pit excavation from the south to allow excavation to greater depths. An additional 2 to 3 feet of material was removed from the bottom of the excavation and below the groundwater level.

The limits and depths of the pipeline trench and main pit excavation, the analytical results from the removal action soil sampling, previous investigations and the confirmatory soil sampling are shown on Figures 8, 9, 10, 12 and 13. Approximately 3,500 cubic yards of soil were removed from the pipeline trench and main pit excavation. The presence of the 6th Street Warehouse to the west presented site constraints to further excavations in this direction.

Groundwater and NAPL seeping into the main pit excavation was pumped into the two 21,000-gallon temporary holding tanks on numerous occasions. The NAPL was observed to be floating on top of the groundwater and the water underneath the NAPL to be clear. The Regional Board observed this fact by throwing a small rock into the NAPL to observe the clear water beneath. Between each pumping event, Turn-key skimmed the NAPL from the top of the water with absorbent booms attached by ropes to the excavator bucket. A water sample was collected from the main pit excavation by lowering a five-gallon bucket into the water and then decanting the water into a 1-liter amber bottle. This method avoided the sediment disturbance that occurred at the UST excavation.

Backfilling of the main pit excavation began on 4 November 2003 with the concurrence of the Regional Board. Additional soil excavation at the western edge of the main pit excavation was conducted after the main pit was backfilled and compacted. This additional excavation was conducted on 12 and 13 November 2003, at the request of the SRFD, to remove elevated concentrations of TPHd and TPHmo in vadose zone soils as detected in removal action samples NW-E1-44-13.5, NW-E1-45-9, NW-E1-46-5, NW-F1-49-14.5, NW-F1-50-8 and NW-F1-51-5 (Table 6 and Figure 9). Because of the proximity of the 6th Street Warehouse and the depth of the main pit excavation (approximately 22 feet bgs), this excavation could not proceed until the backfill operations were complete and the western sidewall of the main pit excavation stabilized sufficiently to carry the weight of the building, the excavator and a loaded

dump truck. The 12 and 13 November 2003 excavation was conducted to maintain a 1.5 horizontal to 1 vertical slope from the 6th Street Warehouse to the western edge of the main pit excavation to support the warehouse and foundation, and equipment. This allowed for excavation to a maximum depth of 13.3 feet bgs at the western edge of the main pit excavation 20 feet east of the 6th Street Warehouse.

4.3.3 GM Excavation

At the southern end of the former petroleum pipeline trench, high concentrations of TPHd and TPHmo had been detected during the pipe removal. During this removal action, this area was overexcavated to the limits and depths shown on Figure 14. Approximately 325 cubic yards of material was removed from this excavation.

Groundwater began to seep into the GM excavation at 15 feet bgs. A small amount of NAPL seeped into the excavation and onto the groundwater. The groundwater and NAPL that seeped into the excavation were pumped to the temporary holding tanks. Between each pumping event, Turn-key skimmed the NAPL from the top of the water with absorbent booms attached by ropes to the excavator bucket. A water sample was collected from the GM pit excavation by lowering a five-gallon bucket into the water and then decanting the water into a one-liter amber bottle. This method avoided the sediment disturbance that occurred at the UST excavation.

Backfilling of the GM pit excavation began on 31 October 2003 with the concurrence of the Regional Board and the SRFD.

4.3.4 SRB-113 Pit Excavation

Additional excavation was conducted in the vicinity of soil boring SRB-113 after the main pit excavation and the pipeline trenches to the east of soil boring SRB-113 were backfilled and compacted. This excavation was conducted separately from the main pit excavation upon realization that the main pit excavation did not include soil in the vicinity of soil boring SRB-113 which had been found to contain elevated concentrations of the TPHd and TPHmo based on the 6th Street Warehouse Source Area Investigation. The SRB-113 pit excavation was delayed until the main pit was backfilled and compacted for stability and safety reasons as discussed in Section 4.3.2. During this removal action, this area was overexcavated to the limits and depths shown on Figure 8. Approximately 500 cubic yards of material was removed from this excavation.

Groundwater began to seep into the SRB-113 excavation at 19 feet bgs. A small amount of NAPL seeped into the excavation and onto the groundwater. The groundwater and NAPL that seeped into the excavation were pumped to the temporary holding tanks. Between each pumping event, Turn-key skimmed the NAPL from the top of the water with absorbent booms attached by ropes to the excavator bucket. A water sample was collected from the SRB-113 pit excavation by lowering a five-gallon bucket into the water and then decanting the water into a one-liter amber bottle. This method avoided the sediment disturbance that occurred at the UST excavation.

Backfilling of the SRB-113 excavation began on 14 November 2003 with the concurrence of the Regional Board. A hard rain was falling at the Site at this time and the sidewalls of the SRB-113

pit were becoming soft and unstable at the time the Regional Board granted their approval to backfill the SRB-113 pit.

4.3.5 Site Restoration Activities

Completing the backfill and compaction of the various excavations proceeded from 14 November until 19 November 2003, when weather and site conditions would allow safe working conditions. The groundwater pumped from the various excavations was discharged into the City of Santa Rosa sanitary sewer under the one-time discharge permit.

Equipment demobilization was completed on 19 November 2003.

Section 5: Waste Management

5.1 Groundwater

Approximately 70,000 gallons of groundwater and NAPL were pumped from the various source area excavations during these removal actions. The groundwater and NAPL were temporarily stored in two 21,000-gallon tanks.

Two samples of the groundwater and NAPL were collected for laboratory analysis of TPHd and TPHmo. The second sample was also analyzed for VOCs as a condition of the City of Santa Rosa one-time wastewater discharge permit. The laboratory analytical results are summarized in Table 7.

The TPHd, TPHmo, and methylene chloride (the only VOC detected) concentrations detected in the samples were below the City of Santa Rosa Utilities Department acceptance criteria and the one-time permit was issued. The pumped groundwater and NAPL was discharged to the City of Santa Rosa's sanitary sewer over a period of days.

5.2 Soil Stockpile Disposal

Approximately 5,360 cubic yards of soil was excavated and stockpiled during the source area removal actions. An additional 1,100 cubic yards of soil was already stockpiled onsite in various piles. These small piles were evaluated during the removal actions for possible reuse as backfill material. All the small piles were observed to be visually stained and subsequent laboratory testing of composite samples collected from these piles indicated the presence of TPHd and TPHmo. The small piles were consolidated into larger stockpiles and will be removed for offsite disposal with the excavated soil.

There are 13 stockpiles onsite, each containing approximately 500 cubic yards of soil. Four to one composite samples were collected from each stockpile for laboratory analysis for chemical constituents as required by the disposal facilities for profiling for acceptance. The results of the stockpile composite sampling analyses are summarized in Tables 8 through 11. Stockpile No. 11, which was comprised of consolidated piles of soil found onsite, was not sampled. Composite sampling of Stockpile No. 11 will be completed prior to its removal from the Site.

Waste Management has accepted the stockpiled soil for use as daily cover at the Altamont Landfill in Livermore, California. Removal of the soil stockpiles from the Site is tentatively scheduled for the week of 2 February 2004.

Section 6: Discussion and Recommendations

Source area removal actions were conducted at the Southern Warehouse, the Fenced Enclosure and the Northwestern Area in October and November 2003. Soils containing petroleum hydrocarbons and selected metals were excavated, stockpiled and will be removed from the Site for offsite disposal. Remediation of the source area soils is complete with a few minor exceptions.

An anticipated small volume of soil containing TPHd remains at the base of the power pole inside the Fenced Enclosure. This soil should be properly managed once the power pole is de-energized and removed during Site redevelopment activities.

Pockets of soil containing TPHd and TPHmo remain at depths generally greater than 10 feet bgs in the Northwestern Area. These pockets remain because they were inaccessible due to site constraints and safety considerations. These pockets are in the vicinity of, and west of, soil borings SRB-112 and SRB-113. It is also assumed, based on the results of previous investigations and the findings of the 6th Street Warehouse Source Area Investigation, that TPHd and TPHmo impacted soil extends under the 6th Street Warehouse at groundwater level. This material is inaccessible.

Based on the source removal work conducted in October and November 2003 and the analytical results, Kennedy/Jenks recommends that the remediation of Site soils is complete. No further action to address impacts to soils is necessary or warranted.

Neither the presence of impacted soil prior to removal nor the soil remediation efforts requiring excavation below groundwater appear to have impacted groundwater. The fourth quarter 2004 groundwater monitoring event was completed on 9 December 2003, following the completion of the source area removal actions. TPHd and TPHmo were not detected in any of the groundwater samples collected from the Site wells. The fourth quarter results are consistent with previous results. The *Fourth Quarter 2003 Groundwater Monitoring Report* will be submitted under separate cover.

To better evaluate if the source area removal actions and excavating below groundwater have impacted groundwater, two new groundwater monitoring wells should be installed at the locations shown on Figure 15. These new wells should be included in the ongoing groundwater monitoring of the existing five wells associated with the Site. A well installation work plan will be submitted to the Regional Board under separate cover.

Tables

Table 1: Summary of 6th Street Warehouse Source Area Investigation – Soil Sample Analytical Results

Sample Identification	Date Sampled	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]
SRB-104-5	10/15/03	5	<5.0[e]	**12**
SRB-104-10	10/15/03	10	<10	<20
SRB-104-20	10/15/03	20	<10	<20
SRB-105-5	10/15/03	5	<10	<20
SRB-105-15	10/15/03	15	<25	**64**
SRB-105-18.5	10/15/03	18.5	**48**	**180**
SRB-106-5	10/15/03	5	<5.0	<10
SRB-106-15	10/15/03	15	<5.0	<10
SRB-106-20	10/15/03	20	<5.0	<10
SRB-107-5	10/14/03	5	<5.0	<10
SRB-107-15	10/14/03	15	<5.0	<10
SRB-107-20	10/14/03	20	<5.0	<10
SRB-108-5	10/14/03	5	<5.0	<10
SRB-108-10	10/14/03	10	<5.0	<10
SRB-108-20	10/14/03	20	<5.0	<10
SRB-109-5	10/15/03	5	<5.0	<10
SRB-109-15	10/15/03	15	<5.0	<10
SRB-109-19	10/15/03	19	<5.0	<10
SRB-110-5	10/15/03	5	<5.0	<10
SRB-110-10	10/15/03	10	<5.0	<10
SRB-110-20	10/15/03	20	**180**	**180**
SRB-111-5	10/15/03	5	<10	**72**
SRB-111-10	10/15/03	10	**1,400**	**2,300**
SRB-111-18.5	10/15/03	18.5	**470**	**600**
SRB-112-5	10/14/03	5	<5.0	<10
SRB-112-10	10/14/03	10	<5.0	<10
SRB-112-15	10/14/03	15	**590**	**850**
SRB-112-20	10/14/03	20	**3,700**	**3,300**
SRB-113-5	10/14/03	5	**1,400**	**1,400**
SRB-113-10	10/14/03	10	**3,000**	**3,500**
SRB-113-15	10/14/03	15	**46**	**360**
SRB-113-20	10/14/03	20	**1,000**	**1,200**
SRB-114-5	10/14/03	5	<5.0	<10
SRB-114-10	10/14/03	10	<5.0	<10

Table 1: Summary of 6th Street Warehouse Source Area Investigation – Soil Sample Analytical Results

Sample Identification	Date Sampled	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]
SRB-114-20	10/14/03	20	<5.0	<10
SRB-115-5	10/14/03	5	<5.0	<10
SRB-115-10	10/14/03	10	<5.0	<10
SRB-115-20	10/14/03	20	<5.0	<10
SRB-116-5	10/14/03	5	<5.0	**31**
SRB-116-10	10/14/03	10	<5.0	<10
SRB-116-20	10/14/03	20	<5.0	<10
SRB-117-5	10/15/03	5	<5.0	<10
SRB-117-10	10/15/03	10	<5.0	<10
SRB-117-20	10/15/03	20	<5.0	<10
SRB-118-5	10/15/03	5	**21,000**	**15,000**
SRB-118-14.5	10/15/03	14.5	<250	**650**
SRB-118-20	10/15/03	20	**1,600**	**1,900**
SRB-119-5	10/15/03	5	<5.0	<10
SRB-119-10	10/15/03	10	<5.0	<10
SRB-119-20	10/15/03	20	<5.0	<10
SRB-120-5	10/15/03	5	<5.0	<10
SRB-120-10	10/15/03	10	<5.0	<10
SRB-120-20	10/15/03	20	<5.0	<10
SRB-121-5	10/14/03	5	<5.0	<10
SRB-121-15	10/14/03	15	<5.0	**15**
SRB-121-20	10/14/03	20	<5.0	<10
SRB-122-5	10/14/03	5	<5.0	<10
SRB-122-10	10/14/03	10	<5.0	<10
SRB-122-20	10/14/03	20	<5.0	<10

(a) mg/kg = milligrams per kilogram.
(b) feet bgs = feet below ground surface.
(c) Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(d) Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(e) < = Analyte not detected at or above stated laboratory reporting limit.

Results equal to, or greater than, the laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 2: Summary of 6th Street Warehouse Source Area Investigation – Reconnaissance Groundwater Sample Analytical Results

Sample Identification	Date Sampled	Analytical Results (µg/l)[a] TPHd[b]	TPHmo[c]
SRB-104-W	10/15/03	**410**	**2,500**
SRB-105-W	10/15/03	**66,000,000**	**38,000,000**
SRB-106-W	10/15/03	**6,300,000**	**12,000,000**
SRB-107	10/14/03	<50[d]	**1,000**
SRB-108	10/14/03	<100	<1,000
SRB-109-W	10/15/03	**330**	**830**
SRB-110-W	10/15/03	**1,100**	**3,600**
SRB-111-W	10/15/03	**650**	**8,100**
SRB-112	10/14/03	**6,400,000**	**6,900,000**
SRB-113	10/14/03	**830**	**1,300**
SRB-114	10/14/03	**81**	**500**
SRB-115	10/14/03	**520**	<500
SRB-116	10/14/03	<50	**770**
SRB-117-W	10/15/03	**570**	<1,000
SRB-118-W	10/15/03	**2,200,000**	**2,400,000**
SRB-118-W (Dup)	10/15/03	**3,900,000**	**4,100,000**
SRB-119-W	10/15/03	<50	<500
SRB-120-W	10/15/03	<50	<500
SRB-121	10/14/03	<50	<500
SRB-122	10/14/03	**6,000,000**	**5,300,000**

(a) µg/l = micrograms per liter.
(b) Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(c) Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(d) Analyte not detected at, or above, stated laboratory reporting limit.

Results equal to, or greater than, the laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 3: Summary of Excavation Soil Sampling Analytical Results: Southern Warehouse Area – Total Petroleum Hydrocarbons and Arsenic

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Arsenic[e]	Date Sampled
SW-M1-1-2.5	2.5	**2,600**	**2,300**	--[f]	10/15/03
SW-M1-2-6.5	6.5	<5.0[g]	**17**	--	10/15/03
SW-M1-3-5.5	5.5	<5.0	<10	--	10/15/03
SW-M1-4-7	7	**1,500**	**1,400**	--	10/15/03
SW-M1-5-3	3	**1,400**	**1,800**	--	10/15/03
SW-M2-6-5.75	5.75	<5.0	<10	--	10/15/03
SW-N1-7-5	5	<5.0	<10	--	10/15/03
SW-L1-10-8C[h]	8	<5.0	<10	--	10/16/03
SW-L1-11-9.5C	9.5	<10	**33**	--	10/16/03
SW-L1-12-5C	5	<5.0	<10	--	10/16/03
SW-M1-13-4C	4	<5.0	<10	--	10/16/03
SW-L1-14-3.75C	3.75	<5.0	<10	--	10/16/03
SW-L1-15-4.5C	4.5	<5.0	<10	--	10/16/03
SW-M1-16-8C	8	<5.0	<10	3.0	11/16/03
SW-M1-17-8.5C	8.5	<5.0	<10	2.7	11/16/03
SW-M1-18-5C	5	**8.6**	**88**	3.7	11/16/03
SW-N1-19-4.5C	4.5	<5.0	<10	2.8	11/16/03
SW-N1-20-7C	7	<5.0	<10	2.3	11/16/03
SW-M1-21-4C	4	<5.0	<10	<2.0	11/16/03

(a) mg/kg = milligrams per kilogram.
(b) feet bgs = feet below ground surface.
(c) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(d) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(e) Arsenic analysis by EPA Method 6010B.
(f) -- = Not analyzed.
(g) < = Analyte not detected at, or above, stated laboratory reporting limit.
(h) C = Sample collected at the direction of regulatory agency personnel.

TPHd and TPHmo results equal to, or greater than, laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 4: Summary of Excavation Soil Sampling Analytical Results: Fenced Enclosure – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHg[c]	TPHd[d]	TPHmo[e]	Date Sampled
FE-L6-23-1.5C[f]	1.5	<1.0[g]	<5.0	**34**	10/17/03
FE-M6-24-1.5C	1.5	<1.0	<5.0	<10	10/17/03
FE-L5-29-0.5C	0.5	<1.0	<5.0	**1,100**	10/17/03
FE-L6-30-3C	3	<1.0	<5.0	**470**	10/17/03
FE-119-3.5C	3.5	--[h]	1.6	<10	11/13/03

(a) mg/kg = milligrams per kilogram.
(b) feet bgs = feet below ground surface.
(c) TPHg = Total petroleum hydrocarbons as gasoline analysis by EPA Method 8015m.
(d) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(e) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(f) C = Sample collected at the direction of regulatory agency personnel.
(g) < = Analyte not detected at, or above, stated laboratory reporting limit.
(h) -- = Not analyzed.

Results equal to, or greater than, laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 5: Summary of Excavation Soil Sampling Analytical Results: Fenced Enclosure BTEX[a] and Lead[b]

Sample Identification	Depth (feet bgs)[d]	Analytical Results (mg/kg)[c]					Date Sampled
		Benzene	Toluene	Ethylbenzene	Xylenes	Lead	
FE-L6-23-1.5C[e]	1.5	<0.005[f]	<0.005	<0.005	<0.013	26	10/17/03
FE-M6-24-1.5C	1.5	<0.005	<0.005	<0.005	<0.013	27	10/17/03
FE-L5-29-0.5C	0.5	<0.005	<0.005	<0.005	<0.013	98	10/17/03
FE-L6-30-3C	3	<0.005	<0.005	<0.005	<0.013	74	10/17/03

(a) BTEX = Benzene, toluene, ethylbenzene and xylenes analysis by EPA Method 8020.
(b) Lead = Analysis by EPA Method 6010B.
(c) mg/kg = milligrams per kilogram.
(d) feet bgs = feet below ground surface.
(e) C = Sample collected at the direction of regulatory agency personnel.
(f) < = Analyte not detected at or above stated laboratory reporting limit.

Table 6: Summary of Excavation Soil Sampling Analytical Results: Northwestern Area – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Date Sampled
NW-B2-8-14C	14	**900**	**740**	10/16/03
NW-B1-9-7C	7	<83[e]	**450**	10/16/03
NW-B3-10-8.5C	8.5	**220**	**400**	10/16/03
NW-D2-25-9	9	<5.0	<10	10/17/03
NW-D2-26-11	11	<5.0	<10	10/17/03
NW-C2-27-4.5	4.5	<5.0	<10	10/17/03
NW-F2-28-11	11	**420**	**1,200**	10/17/03
NW-B2-31-16C	16	**340**	**290**	10/20/03
NW-B1-32-16	16	<83	**230**	10/20/03
NW-B1-33-21C[f]	21	<25	**58**	10/20/03
NW-D2-34-19	19	**490**	**490**	10/20/03
NW-D2-35-9C	9	<5.0	<10	10/20/03
NW-E1-36-10	10	**3,500**	**3,000**	10/21/03
NW-C1-37-6	6	<5.0	**23**	10/21/03
NW-B1-38-6	6	<5.0	**16**	10/21/03
NW-E1-39-18	18	**2,100**	**2,100**	10/21/03
NW-E1-40-13.5	13.5	<5.0	<10	10/21/03
NW-E1-41-7	7	**2,400**	**1,700**	10/22/03
NW-E1-42-8	8	<5.0	<10	10/22/03
NW-F2-43-14	14	<5.0	<10	10/22/03
NW-E1-44-13.5	13.5	**460**	**470**	10/22/03
NW-E1-45-9	9	**23**	**110**	10/22/03
NW-E1-46-4	4	**1,200**	**950**	10/22/03
NW-F1-47-6	6	**310**	**700**	10/22/03
NW-F1-48-9	9	<5.0	<10	10/22/03
NW-F1-49-14.5	14.5	**1,000**	**1,200**	10/22/03
NW-F1-50-8	8	**750**	**980**	10/22/03
NW-F1-51-5	5	<250	**1,700**	10/22/03
NW-D1-52-4	4	<10	**63**	10/22/03

Table 6: Summary of Excavation Soil Sampling Analytical Results: Northwestern Area – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Date Sampled
NW-C1-53-4	4	<5.0	<10	10/22/03
NW-C2-54-3.5	3.5	<10	**31**	10/22/03
NW-F1-55-15.5	15.5	**14**	**62**	10/22/03
NW-F1-56-14	14	**230**	**340**	10/22/03
NW-F1-57-8.5	8.5	<5.0	<10	10/22/03
NW-E2-58-5	5	<5.0	<10	10/23/03
NW-F2-59-5	5	<5.0	<10	10/23/03
NW-E2-60-6	6	<5.0	**21**	10/23/03
NW-D1-61-20	20	<10	**100**	10/23/03
NW-D1-62-21	21	**550**	**460**	10/23/03
NW-E1-63-21	21	**230**	**260**	10/23/03
NW-E1-64-21	21	**3,300**	**2,500**	10/23/03
NW-E2-65-21	21	**1,400**	**1,200**	10/23/03
NW-E1-66-21	21	**330**	**310**	10/24/03
NW-E1-67-21	21	**63**	**120**	10/24/03
NW-E2-68-21	21	<5.0	<10	10/24/03
NW-E1-69-21	21	**1,600**	**1,600**	10/24/03
NW-G1-70-8	8	**1,100**	**1,100**	10/24/03
NW-G1-71-13	13	<25	**510**	10/24/03
NW-G1-72-5	5	<25	**280**	10/24/03
NW-G1-73-4	4	**210**	**1,600**	10/24/03
NW-F2-74-11	11	<5.0	**22**	10/24/03
NW-G2-75-7	7	<5.0	<10	10/24/03
NW-G2-76-6	6	<5.0	<10	10/24/03
NW-H2-77-4	4	<25	**160**	10/24/03
NW-C2-78-8	8	<5.0	<10	10/27/03
NW-A2-79-18C	18	**280**	**290**	10/27/03
NW-A2-80-21C	21	**92**	**150**	10/27/03
NW-B2-81-21C	21	**77**	**75**	10/27/03
NW-A1-82-19C	19	**110**	**110**	10/27/03

Table 6: Summary of Excavation Soil Sampling Analytical Results: Northwestern Area – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Date Sampled
NW-B2-83-16C	16	**120**	**110**	10/27/03
NW-A1-84-18C	18	<5.0	**51**	10/27/03
NW-A1-85-10C	10	<5.0	<10	10/27/03
NW-A1-86-16C	16	<5.0	**92**	10/27/03
NW-F1-87-16C	16	**320**	**420**	10/27/03
NW-G2-88-11	11	<5.0	<10	10/28/03
NW-H2-89-15	15	<5.0	<10	10/28/03
NW-H2-90-18	18	**67**	**110**	10/28/03
NW-H2-91-17	17	<5.0	<10	10/28/03
NW-H2-92-12	12	<5.0	<10	10/28/03
NW-G1-93-16	16	**540**	**480**	10/28/03
NW-F1-94-17	17	**14**	**37**	10/28/03
NW-E2-95-7C	7	<5.0	**34**	10/28/03
NW-E2-96-9C	9	<25	**190**	10/28/03
NW-H2-97-16-C	16	<5.0	**25**	10/28/03
NW-H2-98-13C	13	<5.0	**46**	10/28/03
NW-H2-99-11C	11	<5.0	<10	10/28/03
NW-H2-100-13C	13	<5.0	<10	10/28/03
NW-E2-101-9C	9	<5.0	<10	10/28/03
NW-D1-102-11	11	**16**	**33**	10/29/03
NW-C1-103-17	17	**14**	**33**	10/29/03
NW-C1-104-9	9	<5.0	<10	10/29/03
NW-C1-105-8	8	<5.0	**11**	10/29/03
NW-C1-106-16	16	<5.0	<10	10/30/03
NW-C1-107-18	18	**1,500**	**1,500**	10/30/03
NW-C1-108-18	18	<5.0	<10	10/30/03
NW-01-109-10	10	**2,300**	**2,300**	10/31/03
NW-01-110-17.5	17.5	**130**	**140**	10/31/03
NW-D1-111-21	21	**1,800**	**1,000**	11/13/03
NW-D1-112-16	16	**1,300**	**720**	11/13/03

Table 6: Summary of Excavation Soil Sampling Analytical Results: Northwestern Area – Total Petroleum Hydrocarbons

Sample Identification	Depth (feet bgs)[b]	Analytical Results (mg/kg)[a] TPHd[c]	TPHmo[d]	Date Sampled
NW-D1-113-14	14	<4.0	<4.0	11/13/03
NW-C1-114-17	17	<1.0	<1.0	11/13/03
NW-C1-115-13	13	**280**	**410**	11/13/03
NW-F1-116-10	10	**200**	<400	11/13/03
NW-F1-117-10	10	<4.0	**100**	11/13/03
NW-E1-118-10	10	**760**	**510**	11/13/03

(a) mg/kg = milligrams per kilogram.
(b) feet bgs = feet below ground surface.
(c) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(d) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(e) < = Analyte not detected at or above stated laboratory reporting limit.
(f) Sample collected at the direction of regulatory agency personnel.

Results equal to, or greater than, laboratory reporting limit are presented in **BOLDFACE** to facilitate identification.

Table 7: Summary of Excavation Pit Dewatering Water Sample Analysis – Total Petroleum Hydrocarbons and VOCs

		Analytical Results (µg/l)[a]					
		TPHd[b]		TPHmo[c]		VOCs[d]	
Sample Identification	Date Sampled	Filtered	Unfiltered	Filtered	Unfiltered	Analyte	Results
Holding Tanks							
Frac Tank 10/24	10/24/03	--[e]	4,500	--	3,300	--	
Frac Tank - 2	10/27/03	--	140	--	800	Methylene chloride	120
Excavation Pit							
UST Ex	10/29/03	--	21,000	--	17,000	--	
GM Water	10/31/03	180	320	<500[f]	<500	--	
Main Pit Water	11/04/03	210	180	<500	<500	--	
SRB-113-Pit	11/14/03	71	110	<500	<500	--	

(a) µg/l = micrograms per liter.
(b) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m with silica gel cleanup.
(c) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m with silica gel cleanup.
(d) VOCs = Volatile organic compounds analysis by EPA Method 8260B. Only analytes detected above laboratory reporting limits are listed.
(e) -- = Not analyzed
(f) < = Analyte not detected at, or above, stated laboratory reporting limit.

Table 8: Summary of Stockpile Composite Sample Analytical Results – Total Petroleum Hydrocarbons

Sample Identification	Date Sampled	Analytical Results (mg/kg)[a]		
		TPHg[b]	TPHd[c]	TPHmo[d]
Stockpile No. 1	10/17/03	4.1[e]	1,700	2,100
Stockpile No. 2	10/20/03	--[f]	550	700
Stockpile No. 3	10/21/03	--	<100[g]	550
Stockpile No. 4	10/21/03	--	5,300	3,700
Stockpile No. 5	10/22/03	--	1,300	1,400
Stockpile No. 6	10/24/03	--	2,000	2,100
Stockpile No. 7	10/24/03	--	<100[g]	470
Stockpile No. 8	10/29/03	--	140	160
Stockpile No. 9	10/29/03	--	16	150
Stockpile No. 10	10/29/03	--	390	350
Stockpile No. 12	10/31/03	--	630	610
Stockpile No. 13	11/13/03	--	500	510

(a) mg/kg = milligrams per kilogram
(b) TPHg = Total petroleum hydrocarbons as gasoline analysis by EPA Method 8015m.
(c) TPHd = Total petroleum hydrocarbons as diesel analysis by EPA Method 8015m.
(d) TPHmo = Total petroleum hydrocarbons as motor oil analysis by EPA Method 8015m.
(e) Laboratory reports that the sample chromatogram does not match the standard gasoline chromatogram. All peaks were integrated within the gasoline range. The reported result in an estimate.
(f) -- = Not analyzed.
(g) < = Analyte not detected at or above stated reporting limit.

Table 9: Summary of Stockpile Composite Sample Analytical Results – VOCs[a] and SVOCs[b]

		Analytical Results (mg/kg)[c]			
		VOCs		SVOCs	
Sample Identification	Date Sampled	Analyte	Results	Analyte	Results
Stockpile No. 1	10/17/03	1,2,3-Trimethylbenzene	0.006	2-Methylnaphthalene	3.3
				Phenanthrene	3.0
				Benzidine	19[d]
				Pyrene	3.5
Stockpile No. 2	10/20/03			Benzidine	9.3[d]
Stockpile No. 3	10/21/03	Naphthalene	0.011	Phenanthrene	2.7
				Fluoranthene	3.3
				Pyrene	2.2
Stockpile No. 4	10/21/03	Isopropylbenzene	0.012	Naphthalene	4.9
		n-Propylbenzene	0.019	2-Methylnaphthalene	35
		sec-butylbenzene	0.011	Acenaphthene	1.8
		n-Butylbenzene	0.025	Phenanthrene	8.9
		Naphthalene	0.56	Pyrene	3.9
				Benzo [a] anthracene	1.7
Stockpile No. 5	10/22/03	n-Butylbenzene	0.007	Benzidine	1.3[d]
		Naphthalene	0.020		
Stockpile No. 6	10/24/03	Isopropylbenzene	0.008	Phenanthrene	1.8
		n-Propylbenzene	0.011	Pyrene	1.0
		n-Butylbenzene	0.019		
Stockpile No. 7	10/24/03			Benzidine	4.7[d]

Table 9: Summary of Stockpile Composite Sample Analytical Results – VOCs[(a)] and SVOCs[(b)]

(a) VOCs = Volatile organic compounds analysis by EPA Method 8260B; Only analytes detected are listed.
(b) SVOCs = Semivolatile organic compounds analysis by EPA Method 8270C; Only analytes detected are listed.
(c) mg/kg = milligrams per kilogram.
(d) Estimated value.

Table 10: Summary of Stockpile Composite Sample Analytical Results – Metals[a]

Sample Identification	Date Sampled	Analytical Results mg/kg[b] Analyte	Results
Stockpile No. 1	10/17/03	Antimony	7.5
		Arsenic	3.1
		Barium	150
		Beryllium	<0.3[c]
		Cadmium	0.9
		Chromium	82
		Cobalt	18
		Copper	42
		Lead	13
		Mercury	0.045
		Molybdenum	<1.0
		Nickel	120
		Selenium	<2.0
		Silver	<1.0
		Thallium	<2.0
		Vanadium	54
		Zinc	53
Stockpile No. 2	10/20/03	Antimony	6.9
		Arsenic	2.4
		Barium	150
		Beryllium	<0.4
		Cadmium	0.7
		Chromium	75
		Cobalt	20
		Copper	27
		Lead	13
		Mercury	0.062

Table 10: Summary of Stockpile Composite Sample Analytical Results – Metals[a]

Sample Identification	Date Sampled	Analytical Results mg/kg[b] Analyte	Results
Stockpile No. 2 (cont'd)	10/20/03	Molybdenum	<1.0
		Nickel	95
		Selenium	<2.0
		Silver	<1.0
		Thallium	<2.0
		Vanadium	61
		Zinc	60
Stockpile No. 3	10/21/03	Antimony	7.5
		Arsenic	4.0
		Barium	160
		Beryllium	<0.4
		Cadmium	0.8
		Chromium	72
		Cobalt	20
		Copper	34
		Lead	85
		Mercury	0.15
		Molybdenum	<1.0
		Nickel	86
		Selenium	<2.0
		Silver	<1.0
		Thallium	<2.0
		Vanadium	58
		Zinc	110
Stockpile No. 4	10/21/03	Antimony	6.1
		Arsenic	4.0
		Barium	180
		Beryllium	<0.4

Table 10: Summary of Stockpile Composite Sample Analytical Results – Metals[a]

Sample Identification	Date Sampled	Analytical Results mg/kg[b] Analyte	Results
Stockpile No. 4 (cont'd)	10/21/03	Cadmium	0.7
		Chromium	76
		Cobalt	18
		Copper	61
		Lead	45
		Mercury	0.070
		Molybdenum	<1.0
		Nickel	94
		Selenium	<2.0
		Silver	<1.0
		Thallium	<2.0
		Vanadium	59
		Zinc	90
Stockpile No. 5	10/22/03	Antimony	7.1
		Arsenic	3.3
		Barium	170
		Beryllium	<0.4
		Cadmium	0.7
		Chromium	97
		Cobalt	23
		Copper	35
		Lead	10
		Mercury	0.039
		Molybdenum	<1.0
		Nickel	150
		Selenium	<2.0
		Silver	<1.0
		Thallium	<2.0

Table 10: Summary of Stockpile Composite Sample Analytical Results – Metals[a]

Sample Identification	Date Sampled	Analytical Results mg/kg[b] Analyte	Results
Stockpile No. 5 (cont'd)	10/22/03	Vanadium	67
		Zinc	63
Stockpile No. 6	10/24/03	Antimony	7.4
		Arsenic	4.9
		Barium	160
		Beryllium	<0.3
		Cadmium	0.8
		Chromium	80
		Cobalt	19
		Copper	35
		Lead	41
		Mercury	0.14
		Molybdenum	<1.0
		Nickel	110
		Selenium	<2.0
		Silver	<1.0
		Thallium	<2.0
		Vanadium	62
		Zinc	74
Stockpile No. 7	10/24/03	Antimony	6.0
		Arsenic	2.3
		Barium	160
		Beryllium	<0.3
		Cadmium	0.7
		Chromium	70
		Cobalt	17
		Copper	37
		Lead	23

Table 10: Summary of Stockpile Composite Sample Analytical Results – Metals[a]

Sample Identification	Date Sampled	Analytical Results mg/kg[b] Analyte	Results
Stockpile No. 7 (cont'd)	10/24/03	Mercury	0.064
		Molybdenum	<1.0
		Nickel	94
		Selenium	<2.0
		Silver	<1.0
		Thallium	<2.0
		Vanadium	49
		Zinc	64
Stockpile No. 8		Antimony	
		Arsenic	
		Barium	
		Beryllium	
		Cadmium	
		Chromium	
		Cobalt	
		Copper	
		Lead	
		Mercury	
		Molybdenum	
		Nickel	
		Selenium	
		Silver	
		Thallium	
		Vanadium	
		Zinc	

(a) Metal analysis by EPA Method 6010; Mercury by EPA Method 7470A.
(b) mg/kg = milligrams per kilogram.
(c) < = Analyte not detected at, or above, stated laboratory reporting limit.

Table 11: Summary of Stockpile Composite Sample Analytical Results – WET Analysis, Selected Metals[a]

Sample Identification	Date Sampled	Analytical Results mg/l[b] Analyte	Results
Stockpile No. 1	10/17/03	Antimony	<0.2[c]
		Chromium	0.3
		Lead	1.0
		Mercury	<0.00025
		Nickel	2.0
		Vanadium	0.4
Stockpile No. 2	10/20/03	Antimony	<0.2
		Chromium	<0.2
		Lead	<0.2
		Mercury	<0.00025
		Nickel	2.6
		Vanadium	0.4
Stockpile No. 3	10/21/03	Antimony	<0.2
		Chromium	0.2
		Lead	1.3
		Mercury	<0.00025
		Nickel	1.1
		Vanadium	<0.4
Stockpile No. 4	12/21/03	Antimony	<0.2
		Chromium	0.5
		Lead	0.5
		Mercury	<0.00025
		Nickel	2.2
		Vanadium	1.0
Stockpile No. 5	10/22/03	Antimony	<0.2
		Chromium	0.3
		Lead	<0.2
		Mercury	<0.00025

Table 11: Summary of Stockpile Composite Sample Analytical Results – WET Analysis, Selected Metals[a]

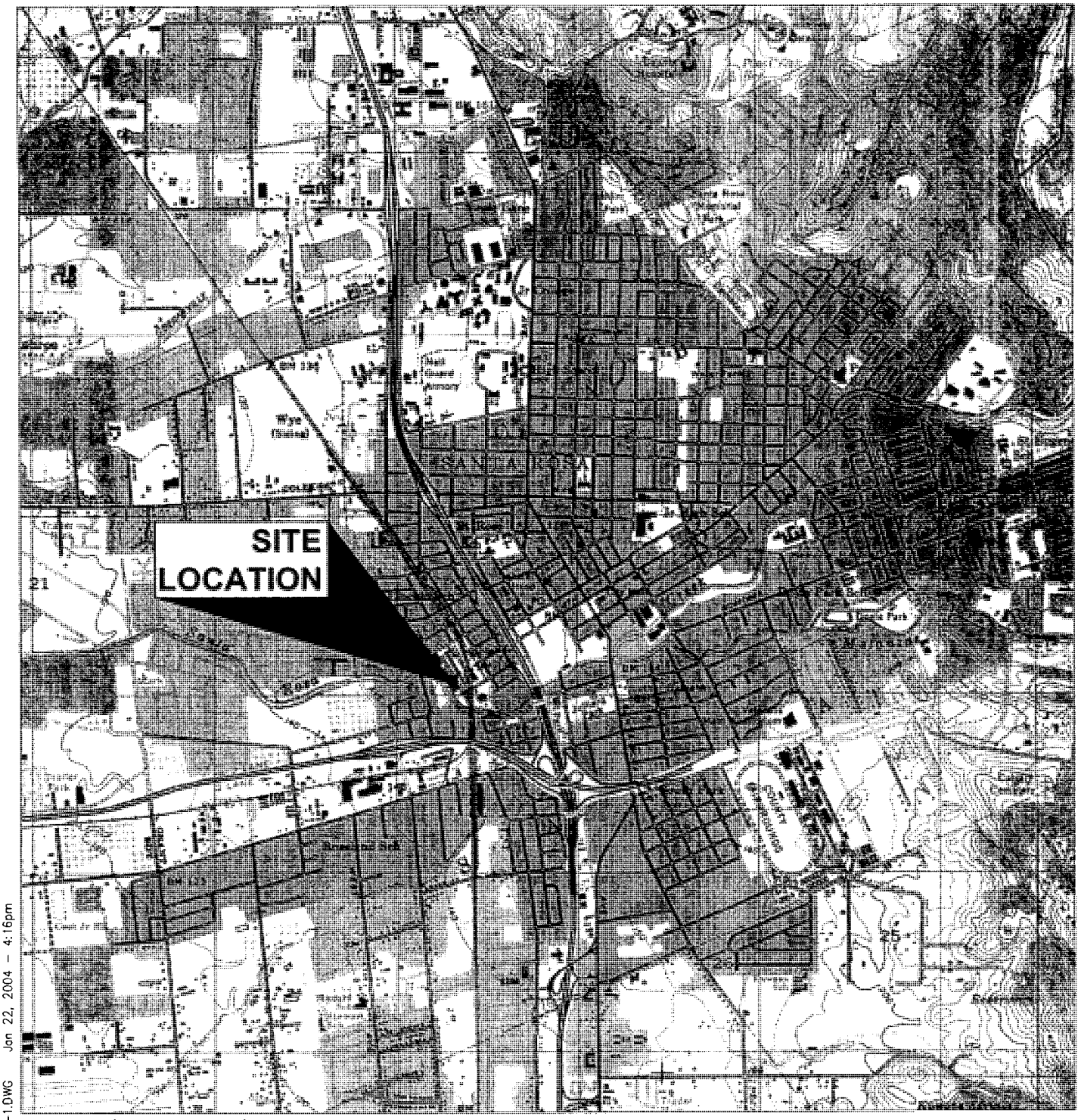
Sample Identification	Date Sampled	Analytical Results mg/l[b] Analyte	Results
Stockpile No. 5 (cont'd)	10/22/03	Nickel	1.9
		Vanadium	0.6
Stockpile No. 6	10/24/03	Antimony	<0.2
		Chromium	<0.2
		Lead	0.3
		Mercury	<0.00025
		Nickel	1.2
		Vanadium	0.5
Stockpile No. 7	10/24/03	Antimony	<0.2
		Chromium	<0.2
		Lead	0.4
		Mercury	<0.00025
		Nickel	1.5
		Vanadium	<0.4
Stockpile No. 8	10/29/03	Antimony	<0.2
		Chromium	<0.2
		Lead	<0.2
		Mercury	<0.00025
		Nickel	1.9
		Vanadium	0.4
Stockpile No. 9	10/29/03	Antimony	<0.2
		Chromium	<0.2
		Lead	0.7
		Mercury	<0.00025
		Nickel	1.3
		Vanadium	<0.4
Stockpile No. 10	10/29/03	Antimony	<0.2
		Chromium	<0.2
		Lead	<0.2

Table 11: Summary of Stockpile Composite Sample Analytical Results – WET Analysis, Selected Metals[a]

Sample Identification	Date Sampled	Analytical Results mg/l[b] Analyte	Results
Stockpile No. 10 (cont'd)	10/29/03	Mercury	<0.00025
		Nickel	1.7
		Vanadium	<0.4
Stockpile No. 12	10/31/03	Antimony	<0.2
		Chromium	<0.2
		Lead	<0.2
		Mercury	0.0034
		Nickel	1.6
		Vanadium	<0.4
Stockpile No. 13	10/21/03	Lead	1.4

(a) Waste extraction test by EPA Method 6010; mercury analysis by EPA Method 7471A.
(b) mg/l = milligrams per liter.
(c) < = Analyte not detected at or above stated laboratory reporting limit.

Figures



SOURCE: (MAPTECH 1997)

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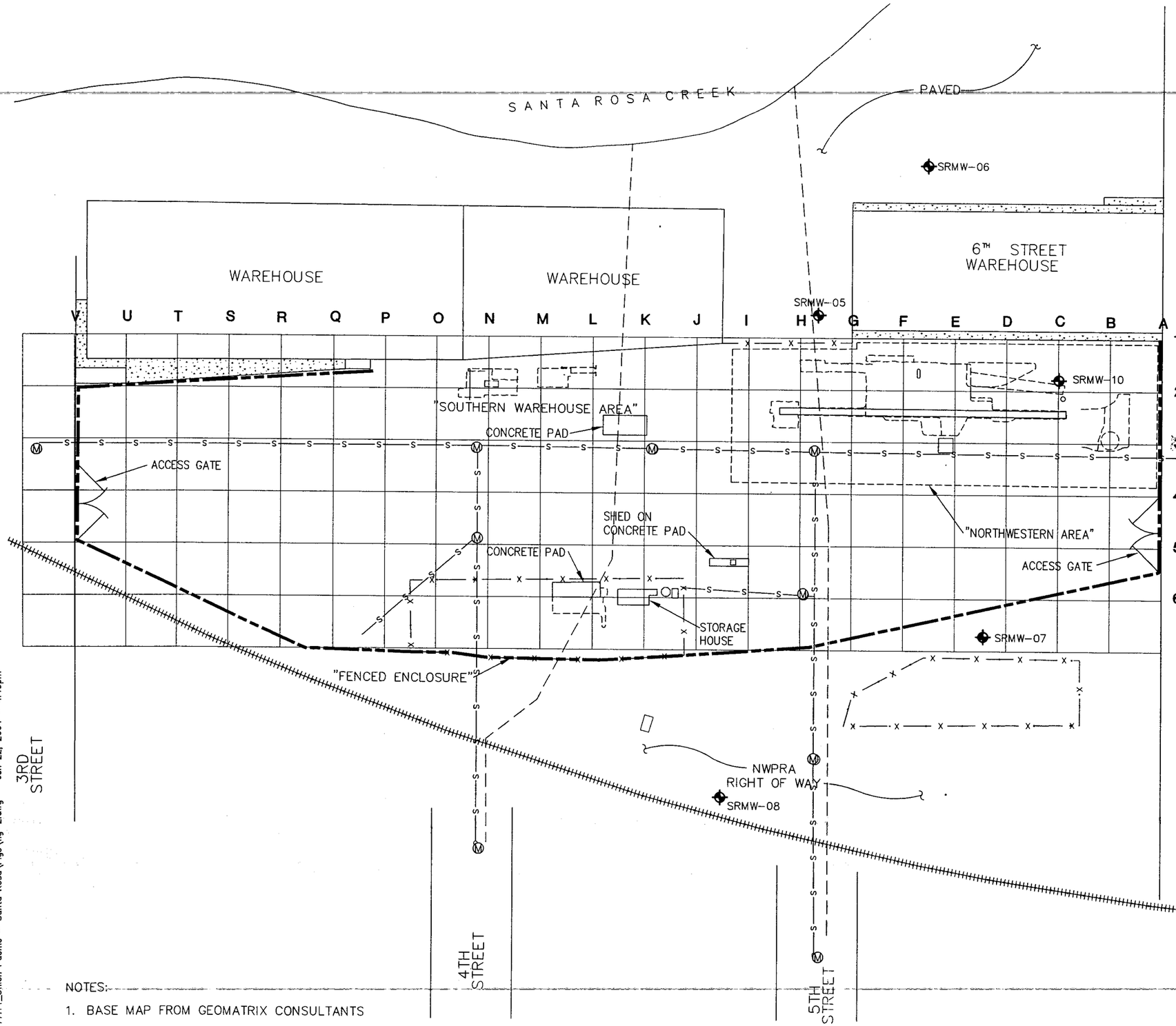
APPROXIMATE SCALE
1" = 800'

Kennedy/Jenks Consultants

UNION PACIFIC RAILROAD COMPANY
SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT

SITE LOCATION MAP

JANUARY 2004
Figure 1
K/J 032777.14



LEGEND

(FOR FIGURES 4 TO 14)

A, B, C. . . 1, 2, 3	CONTROL GRID DESIGNATIONS
SRMW–10	MONITORING WELL LOCATION AND DESIGNATION
	SITE CHAIN LINK FENCE BOUNDARY
	RAILROAD TRACK
	CHAIN LINK FENCE
	CITY OF SANTA ROSA STORM WATER LINE
	CITY OF SANTA ROSA SEWER LINES
M	MANHOLE
	APPROXIMATE LIMITS OF EXCAVATION
•, ⊙	SRB 82 SOIL BORING LOCATION BY OTHERS
X25	SOURCE AREA EXCAVATION SAMPLING LOCATION
X78C	SOURCE AREA EXCAVATION CONFIRMATION SAMPLING LOCATION
X26	ADDITIONAL EXCAVATION CONDUCTED AFTER COLLECTION OF SAMPLE
SRB114	SOURCE AREA INVESTIGATION SOIL BORING LOCATION
	APPROXIMATE DEPTH OF EXCAVATION
VI	VISUAL IMPACTS DETECTED AT STATED DEPTH INTERVAL
--	DATA NOT AVAILABLE

PROJECT NORTH

TRUE NORTH

0 40 80

1"=80'

NOTES:

1. BASE MAP FROM GEOMATRIX CONSULTANTS

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Kennedy/Jenks Consultants

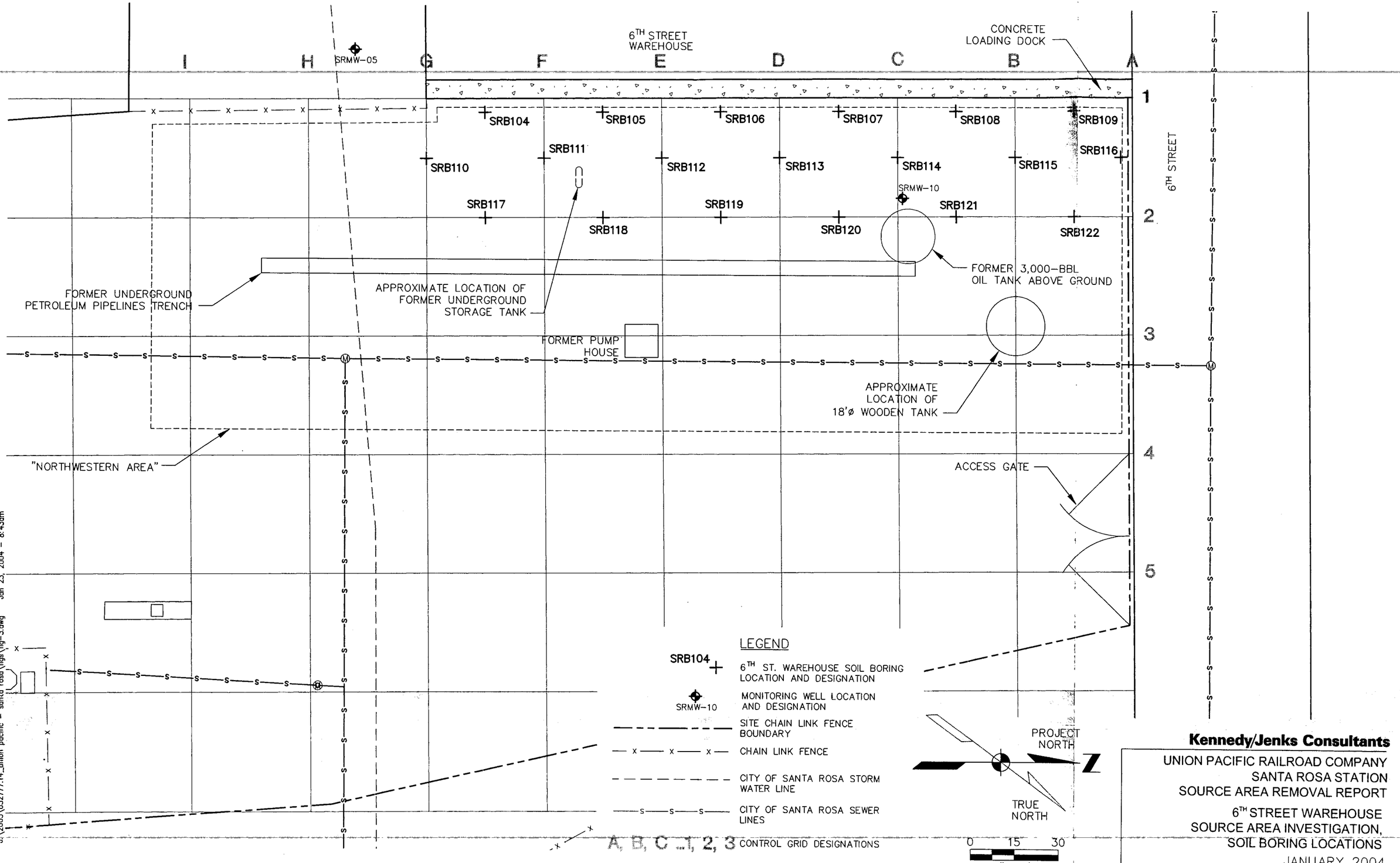
UNION PACIFIC RAILROAD COMPANY
SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT

SITE CONTROL GRID
BASE MAP

JANUARY 2004

Figure 2

K/J 032777.14



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NOTES:

1. BASE MAP FROM GEOMATRIX CONSULTANTS

Kennedy/Jenks Consultants

UNION PACIFIC RAILROAD COMPANY
SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT

6TH STREET WAREHOUSE
SOURCE AREA INVESTIGATION,
SOIL BORING LOCATIONS

JANUARY 2004

Figure 3

K/J 032777.14

M 1

L 1

SOUTHERN WAREHOUSE

LOADING DOCK

±24"ø CONCRETE BURIED PIPE ENCOUNTERED DURING EXCAVATION

4 | 1500 | 1400 | −7'

12C | <5 | <10 | −5'

11C | <10 | 33 | −9.5'

6' TO 7'

6'−7'

130	510	−1'
1600	<100	−7'
960	<50	−9'
<1	<5	−13.5'

SRB21

2600 | 2300 | −2.5'

1

15C | <5 | <10 | −4.5'

10C | <5 | <10 | −8'

<5 | 17 | −6.5' 2

<5 | <10 | −4' 13C

8' TO 9'

14C | <5 | <10 | −3.5'

3

<5 | <10 | −5.5'

M 2

L 2

LEGEND

TPHd | TPHmo | Depth ← DEPTH OF SAMPLE BELOW GROUND SURFACE

TPHmo CONCENTRATION IN mg/kg

TPHd CONCENTRATION IN mg/kg

PROJECT NORTH

TRUE NORTH

0 3 6

1"=6'

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UNION PACIFIC RAILROAD COMPANY
SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT
SOUTHERN WAREHOUSE

GRID AREAS L1-M2

JANUARY 2004

Figure 4

K/J 032777.14

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O 1 | N 1 | M 1

SOUTHERN WAREHOUSE

LOADING DOCK

1' TO 2'

9' TO 10'

8.6	88	3.7	-5'

18C

990	1700	<5	-1'
130	240	14	-4.5'
210	370	27	-7.5'
--	--	<5	-10'
<1	<13	--	-14'

SRB40

16C

<5	<10	3.0	-8'

<1	40	11	-1'
<1	<13	20	-4.5'
--	--	22	-7.5'
--	--	<5	-10.5'

3' TO 4'

SRB41

17C

8' TO 9'

<5	<10	2.7	-8.5'

<5	<10	2.3	-7'

20C

19C

<5	<10	2.8	-4.5'

5

1400	1800	--	-3'

21C

<5	<10	<2	-4'

<5	17	-6.5'	2
<5	<10	-4'	13C

8' TO 9'

1' TO 2'

6

<5	<10	--	-5.75'

4"ø STEEL PIPE ENCOUNTERED DURING EXCAVATION

O 2 | N 2 | M 2

PROJECT NORTH

TRUE NORTH

0 3 6

1"=6'

LEGEND

ARSENIC CONCENTRATION IN mg/kg

TPHd	TPHmo	As	Depth

DEPTH OF SAMPLE BELOW GROUND SURFACE

TPHmo CONCENTRATION IN mg/kg

TPHd CONCENTRATION IN mg/kg

-- NOT ANALYZED

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SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT
SOUTHERN WAREHOUSE

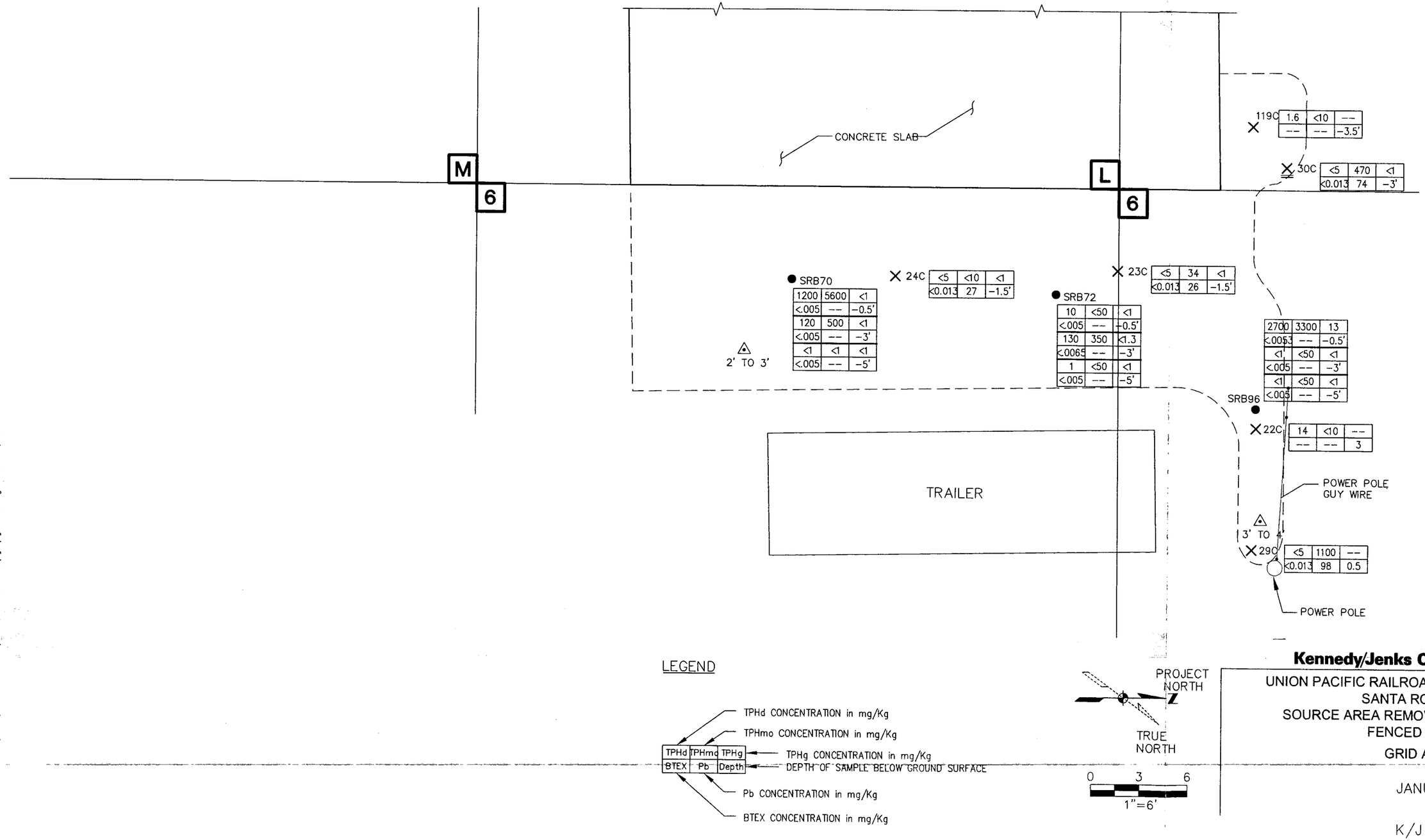
GRID AREAS M1-O2

JANUARY 2004

Figure 5

K/J 032777.14

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SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT
FENCED ENCLOSURE
GRID AREAS M6-L6

JANUARY 2004
Figure 6
K/J 032777.14

6TH STREET WAREHOUSE

C 1 | B 1 | A 1

C 2 | B 2 | A 2

SRB108

<5	<10	-5'
<5	<10	-10'
<5	<10	-20'
<100	<1000	W

SRB109

<5	<10	-5'
<5	40	-15'
<5	<10	-19'
330	880	W

SRB114

<5	<10	-5'
<5	<10	-10'
<5	<10	-20'
81	500	W

SRB115

<5	<10	-5'
<5	<10	-10'
<5	<10	-20'
520	<500	W

SRB116

<5	31	-5'
<5	<10	-10'
<5	<10	-20'
<50	770	W

SRB77
VI 20' TO 21'

SRMW-10

FORMER 3,000-BBL OIL TANK ABOVE GROUND

SRB34

2.1	<13	-1'
2.2	<13	-4.5'

SRB121

<5	<10	-5'
<5	15	-15'
<5	<10	-20'
<50	<500	W

10	<50	-14'
120	130	-17'
1300	1300	-20'
<1	<50	-23'

SRB99

X85C

<5	<10	-10'

X84C

<5	51	-18'

19' TO 20'

SRB122

<5	<10	-5'
<5	<10	-10'
<5	<10	-20'
6000000	5300000	W

PROJECT NORTH

TRUE NORTH

LEGEND

TPHd | TPHmo | Depth ← DEPTH OF SAMPLE BELOW GROUND SURFACE

TPHmo CONCENTRATION IN mg/kg

TPHd CONCENTRATION IN mg/kg

0 3 6
1"=6'

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SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT
NORTHWESTERN AREA

GRID AREAS A1-C2

JANUARY 2004

Figure 7

K/J 032777.14

6TH STREET WAREHOUSE

E 1 | D 1 | C 1

SRB106

<5	<10	-5'
<5	<10	-15'
<5	<10	-20'
6300000	12000000	W

SRB80

<1	<50	-14'
<1	<50	-21.5'

SRB107

<5	<10	-5'
<5	<10	-15'
<5	<10	-20'
<50	1000	W

MAIN PIT EXCAVATION

SRB 113 EXCAVATION

<5	<10	-5'
<5	<10	-10'
590	850	-15'
3700	3300	-20'
6400000	6900000	W

SRB112

36 | 3500 | 3000 | -10'

39 | 2100 | 2100 | -18'

1400	1400	-5'
3000	3500	-10'
46	360	-15'
1000	1200	-20'
830	1300	W

16 | 33 | -11' 102

SRB113

280 | 410 | -13' 115

104 | <5 | <10 | -9'

103 | 14 | 33 | -17'

1500 | 1500 | -18' 107

108 | <5 | <10 | -18'

114 | <1 | <1 | -17'

21' TO 22'

22' TO 23'

109 | 2300 | 2300 | 10'

4' TO 5'

111 | 1800 | 1000 | -21'

52 | <5 | 63 | -4'

<1	<50	-9'
4.9	<50	-21'

SRB83
VI -12' TO -20.5'

<4 | <4 | -14' 113

SRB81

<1	<50	-8.5'
160	230	-15.5'
<1	<50	-22'

SRB79
VI -3' TO -19'

64 | 2500 | -21'

1300 | 720 | -16' 112

61 | <10 | 100 | -20'

62 | 550 | 460 | -21'

<5	<10	-5'
<5	<10	-10'
<5	<10	-20'
<50	<500	W

SRB119

SRB78
VI -4' TO -19'

35C | <5 | <10 | -9'

7' TO 8'

22' TO 23'

106 | <5 | <10 | -16'

37 | <5 | 23 | -6'

105 | <5 | 11 | -8'

6"ø STEEL BURIED PIPELINE, REMOVED DURING EXCAVATION

<5	<10	-5'
<5	<10	-10'
<5	<10	-20'
<50	<500	W

SRB120

SRB114

<5	<10	-5'
<5	<10	-10'
<5	<10	-20'
81	500	W

SRMW-10

E 2 | D 2 | C 2

LEGEND

TPHd | TPHmo | Depth ← DEPTH OF SAMPLE BELOW GROUND SURFACE

TPHmo CONCENTRATION IN mg/kg

TPHd CONCENTRATION IN mg/kg

PROJECT NORTH

TRUE NORTH

0 3 6

1"=6'

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UNION PACIFIC RAILROAD COMPANY
SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT
NORTHWESTERN AREA

GRID AREAS C1-E2

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Figure 8

K/J 032777.14

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6TH STREET WAREHOUSE

G 1 | F 1 | E 1

SRB52
VI −16' TO −22'
830 | 970 | −19.5'

SRB104
<5 | 12 | −5'
<10 | <20 | −10'
<10 | <20 | −20'
410 | 2500 | W

SRB105
<10 | <20 | −5'
<25 | 64 | −15'
48 | 180 | −18.5'
6600000 | 38000000 | W

SRB67
VI −13' TO −19'

SRB63
VI −16' TO −19'

SRB86
VI −11' TO −20'

SRB87
VI −10' TO −19'
<5 | <10 | −5'
<5 | <10 | −10'
180 | 180 | −20'
1100 | 3600 | W

1.5H:1'V SLOPE

<4 | 100 | −10' — 117
200 | <400 | −10' — 116
118: 760 | 510 | −10'

49: 1000 | 1200 | −14.5'
50: 750 | 980 | −8'
51: <250 | 1700 | −5'

44: 460 | 470 | −13.5'
45: 23 | 110 | −9'
46: 1200 | 950 | −4'
69: 1600 | 1600 | −21'

SRB110
55: 14 | 62 | −15.5'
56: 230 | 340 | −14'
57: <5 | <10 | −8.5'
5 | 510 | −13' — 71
6' 93
70
87C: 320 | 420 | −16'
1100 | 1100 | −8'
94: 14 | 37 | −17'

SRB111
<10 | 72 | −5'
1400 | 2300 | −10'
470 | 600 | −18.5'
650 | 8100 | W

42: <5 | <10 | −8'
41: 2400 | 1700 | −7'
40: <5 | <10 | −13.5'

SRB112
<5 | <10 | −5'
<5 | <10 | −10'
590 | 850 | −15'
3700 | 3300 | −20'
6400000 | 6900000 | W
39: 2100 | 2100 | −

6"ø STEEL BURIED PIPELINE, REMOVED DURING EXCAVATION

APPROXIMATE LOCATION OF FORMER UNDERGROUND STORAGE TANK – NOT FOUND DURING EXCAVATION

22' TO 23'

8500 | 7600 | −19.5'
SRB51
47: 310 | 700 | −6'
48: <5 | <10 | −9'

SRB64
VI −16' TO −19'

SRB68
VI −4' TO −19'
66: 330 | 310 | −21'

63: 230 | 260 | −21'

SRB79
VI −3' TO −19

64: 3300 | 2500 | −21'

1300 | 720 | −1

61 62: 550 | 460

SRB90
21 | <50 | −14'
150 | 210 | −17'

MAIN PIT EXCAVATION

G 2 | F 2 | E 2

22' TO 23'

SRB117
<5 | <10 | −5'
<5 | <10 | −10'
<5 | <10 | −20'
570 | <1000 | W

43: <5 | <10 | −14'

350 | 810 | −5'
20 | 61 | −11'
SRB53

22' TO 23'

SRB118
21000 | 15000 | −5'
<250 | 650 | −14.5'
1600 | 1900 | −20'
2200000 | 2400000 | W

PROJECT NORTH

TRUE NORTH

0 3 6
1"=6'

LEGEND

TPHd | TPHmo | Depth ← DEPTH OF SAMPLE BELOW GROUND SURFACE

TPHmo CONCENTRATION IN mg/kg

TPHd CONCENTRATION IN mg/kg

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SOURCE AREA REMOVAL REPORT
NORTHWESTERN AREA

GRID AREAS E1-G2

JANUARY 2004
Figure 9
K/J 032777.14

I 1

H 1

G 1

SRB22

<1	120	-10.5'
67	210	-12.5'
<1	<5	-14'

SRB35

<1	<13	-1'
<1	<13	-4.5'

2' TO 3'

6' TO 7'

<25	280	-5'	72

SRB88
V1 -7' TO -19'

36"ø CONCRETE PIPE ENCOUNTERED DURING EXCAVATION

73	210	1600	-4'

20' TO 22'

<25	510	-13'	71
540	480	-16'	93
1100	1100	-8'	94

6"ø STEEL BURIED PIPELINE, REMOVED DURING EXCAVATION CONNECTED TO 36"ø CONCRETE PIPE

SRB87
V1 -10' TO -19'

<5	<10	-5'
<5	<10	-10'
180	180	-20'
1100	3600	W

SRB110

70

87C

SRB93
V1 -13' TO -16'

SRB91
V1 -12' TO -18.5'

SRB90

21	<50	-1
150	210	-1

I 2

H 2

G 2

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LEGEND

TPHd | TPHmo | Depth ← DEPTH OF SAMPLE BELOW GROUND SURFACE

TPHmo CONCENTRATION IN mg/kg

TPHd CONCENTRATION IN mg/kg

PROJECT NORTH

TRUE NORTH

0 3 6
1"=6'

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SOURCE AREA REMOVAL REPORT
NORTHWESTERN AREA

GRID AREAS G1-I2

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Figure 10
K/J 032777.14

C 2 | B 2 | A 2

SRB34 ⊙
2.1	<13	-1'
2.2	<13	-4.5'

FORMER 3,000-BBL OIL TANK ABOVE GROUND

SRB121
<5	<10	-5'
<5	15	-15'
<5	<10	-20'
<50	<500	W

10	<50	-14'
120	130	-17'
1300	1300	-20'
<1	<50	-23'

SRB99 ●

SRB122
<5	<10	-5'
<5	<10	-10'
<5	<10	-20'
6000000	5300000	W

X85C | <5 | <10 | -10'
X84C | <5 | 51 | -18'

△ 19' TO 20'

X82C | 110 | 110 | -19'

X86C | <5 | 92 | -16'

PL-01 ●
1400	900	-.05'
650	4500	-1.5'
470	2800	-3'

<5	<10	-4.5'

X27

△ 5' TO 6'

FORMER PETROLEUM PIPELINE TRENCH EXCAVATION

GROUND SURFACE

SRB75 ⊙
1200	990	-19'
310	340	-20'

UST EXCAVATION

△ 9' TO 10'

X81C | 77 | 75 | -21'
X83C | 120 | 120 | -16'

APPROXIMATE LOCATION OF 18'ø WOODEN TANK

130	1200	-5'
1800	5100	-7.5'
96	520	-11'
51	59	-20'

9C | <83 | 450 | -7'

X79C | 280 | 290 | -18'

X80C | 92 | 150 | -21'

<1	<50	-5'
<1	<50	-8'
<1	<50	-11'
<1	<50	-17'

SRB103 ●

SRB100 ●

340 | 290 | -16'

X31C

X8C

△ 21' TO 22'

X33C | <25 | 58 | -21'

900 | 740 | -14'

C 3 | B 3 | A 3

10C | 220 | 400 | -8.5'

SRB101 ●
1.1	<50	-5'
<1	<50	-8'
<1	<50	-11'
<1	<50	-17'

S S S S S S S S S S S S S S S S S

PROJECT NORTH

TRUE NORTH

0 3 6
1"=6'

LEGEND

TPHd | TPHmo | Depth ← DEPTH OF SAMPLE BELOW GROUND SURFACE

TPHmo CONCENTRATION IN mg/kg

TPHd CONCENTRATION IN mg/kg

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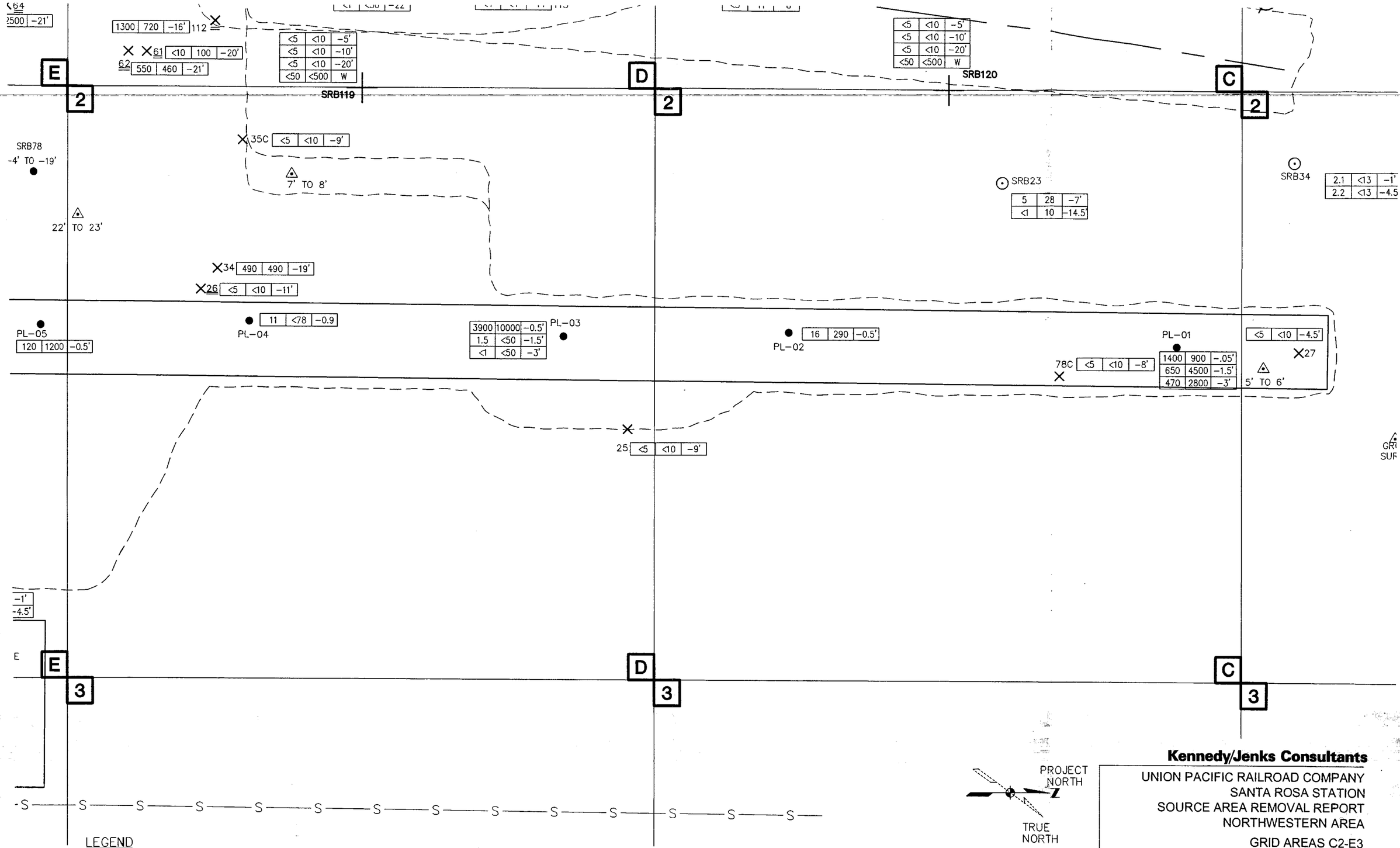
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NORTHWESTERN AREA

GRID AREAS A2-C3

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Figure 11

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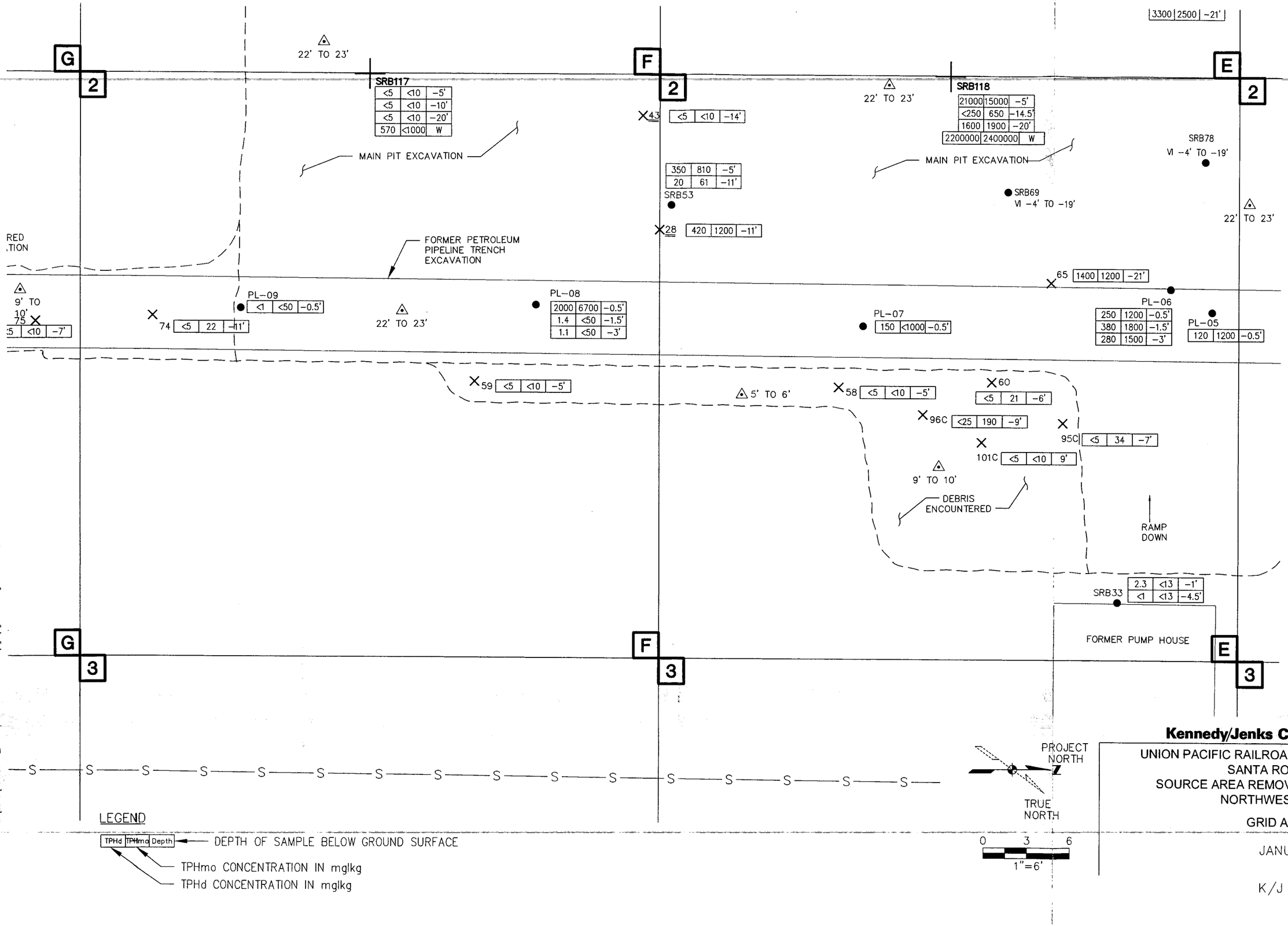


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NORTHWESTERN AREA
GRID AREAS C2-E3

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Figure 12
K/J 032777.14



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NORTHWESTERN AREA

GRID AREAS E2-G3

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Figure 13
K/J 032777.14

I 2 | H 2 | G 2

97C | <5 | 25 | -16'

<5 | <10 | -12' — 92

<5 | <10 | -17' — 91

<5 | 46 | -13' — 98C

77 | <25 | 160 | -4'

PL-12 | 4400 | 1200 | -0.5' | 7100 | 2900 | -3'

90 | 67 | 110 | -18'

18' TO 20'

11' TO 13'

<5 | <10 | -11' — 88 PL-11 — 76 | <5 | <10 | -6'

PL-11 | <1 | <50 | -0.5'

36"ø CONCRETE PIPE ENCOUNTERED DURING EXCAVATION

PL-10 | 51 | 440 | -0.5'

9' TO 10' — 75 | <5 | <10 | -7'

GM PIT EXCAVATION

100C | <5 | <10 | -13'

<5 | <10 | -11' — 99C

89 | <5 | <10 | -15'

I 3 | H 3 | G 3

S S S S S S S S S S S S S S M S S

S

PROJECT NORTH

TRUE NORTH

0 3 6

1"=6'

LEGEND

TPHd | TPHmo | Depth ← DEPTH OF SAMPLE BELOW GROUND SURFACE

TPHmo CONCENTRATION IN mg/kg

TPHd CONCENTRATION IN mg/kg

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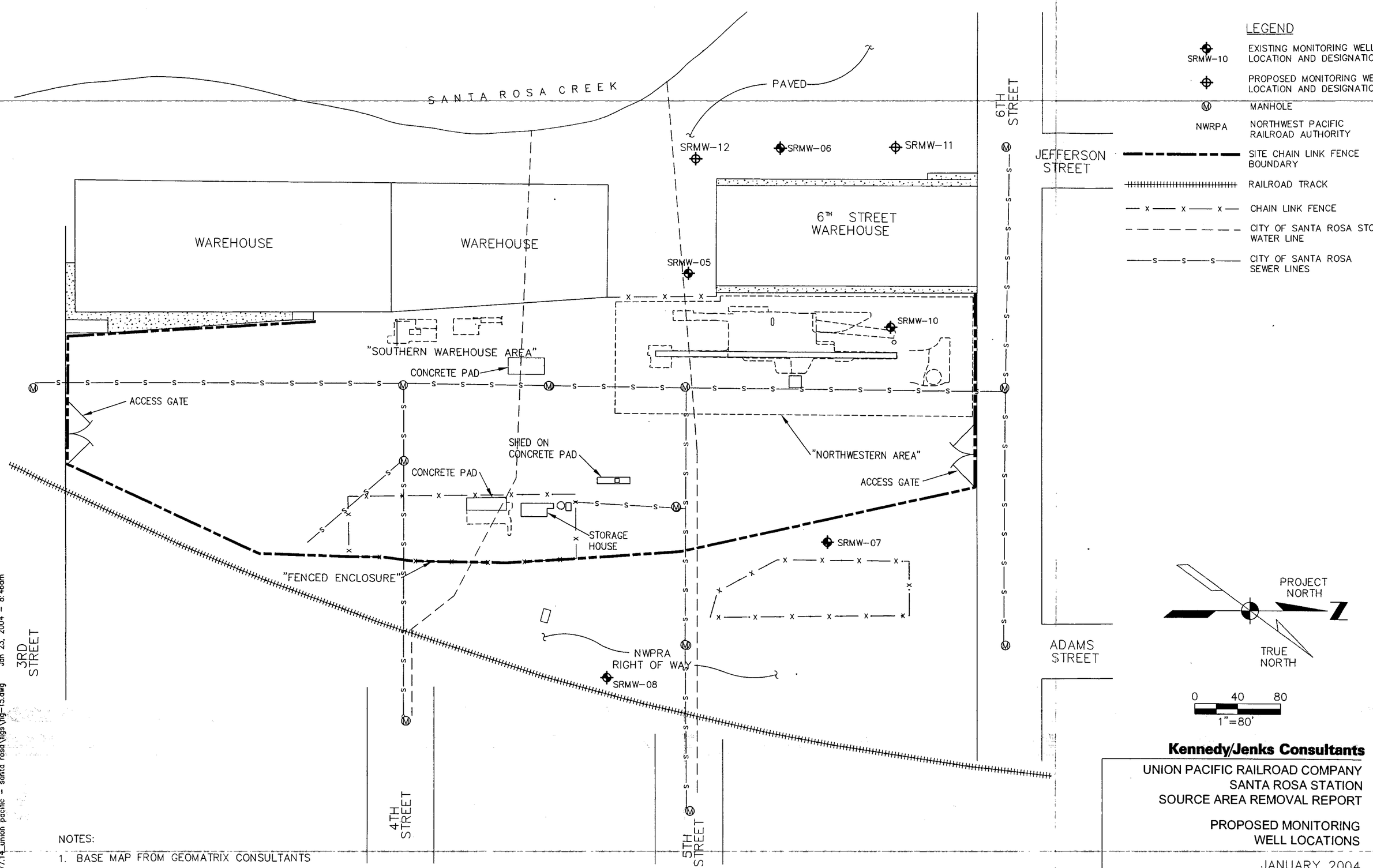
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NORTHWESTERN AREA

GRID AREAS G2-I3

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Figure 14

K/J 032777.14



NOTES:

1. BASE MAP FROM GEOMATRIX CONSULTANTS

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SANTA ROSA STATION
SOURCE AREA REMOVAL REPORT

PROPOSED MONITORING WELL LOCATIONS

JANUARY 2004

Figure 15

K/J 032777.14

Appendix A

Copies of the Laboratory Analytical Reports
and Chain-of-Custody Records

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/15/03
Date Received: 10/15/03
Date Analyzed: 10/15,22,23/03

Client Sample I.D.	SRB-120-5		SRB-120-10		SRB-120-20		SRB-120-W		SRB-119-5		SRB-119-10	
LAB. NO.	S1003272		S1003273		S1003275		W1003276		S1003277		S1003278	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	5.0	ND	50	ND	5.0	ND	5.0	ND
TPH as Oil	10	ND	10	ND	10	ND	500	ND	10	ND	10	ND

Client Sample I.D.	SRB-119-20		SRB-119-W		SRB-118-5		SRB-118-14.5		SRB-118-20		SRB-118-W	
LAB. NO.	S1003280		W1003281		S1003283		S1003285		S1003286		W1003287	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	50	ND	250	21000	250	ND	130	1600	4000	2200000
TPH as Oil	10	ND	500	ND	500	15000	500	650	250	1900	40000	2400000

Client Sample I.D.	10/15-DUP		SRB-117-5		SRB-117-10		SRB-117-20		SRB-117-W		SRB-110-5	
LAB. NO.	W1003288		S1003289		S1003290		S1003292		W1003296A		S1003306	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	4000	3900000	5.0	ND	5.0	ND	5.0	ND	100	570	5.0	ND
TPH as Oil	40000	4100000	10	ND	10	ND	10	ND	1000	ND	10	ND

Client Sample I.D.	SRB-110-10		SRB-110-20		SRB-110-W		SRB-111-5		SRB-111-10		SRB-111-18.5	
LAB. NO.	S1003307		S1003309		W1003310		S1003311		S1003312		S1003314	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	13	180	100	1100	10	ND	250	1400	50	470
TPH as Oil	10	ND	25	180	1000	3600	20	72	500	2300	100	600

Client Sample I.D.	SRB-111-W		SRB-104-5		SRB-104-10		SRB-104-20		SRB-104-W		SRB-105-5	
LAB. NO.	W1003315		S1003316		S1003317		S1003319		W1003320		S1003321	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	100	650	5.0	ND	10	ND	10	ND	100	410	10	ND
TPH as Oil	1000	8100	10	12	20	ND	20	ND	1000	2500	20	ND

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg
Soil samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/15/03
Date Reported

EXCELCHEM ENVIRONMENTAL LABS IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 2119)

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/15/03
Date Received: 10/15/03
Date Analyzed: 10/15,22,23/03

Client Sample I.D.	SRB-105-15		SRB-105-18.5		SRB-105-W		SRB-106-5		SRB-106-15		SRB-106-20	
LAB. NO.	S1003323		S1003324		W1003325		S1003326		S1003328		S1003329	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	25	ND	50	48	20000	66000000	5.0	ND	5.0	ND	5.0	ND
TPH as Oil	50	64	100	180	200000	38000000	10	ND	10	ND	10	ND

Client Sample I.D.	SRB-106-W		SRB-109-5		SRB-109-15		SSRB-109-19		SRB-109-W	
LAB. NO.	W1003330		S1003331		S1003333		S1003334		W1003335	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	4000	6300000	5.0	ND	5.0	ND	5.0	ND	100	330
TPH as Oil	40000	12000000	10	ND	10	ND	10	ND	1000	830

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Soil samples were analyzed at Excelchem's mobile facility.

Soil QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	102	113

QA/QC Analyzed: 11/15/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	113	114
TPH as Oil	133	126

QA/QC Analyzed: 10/23/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	80	78
TPH as Oil	73	91

QA/QC Analyzed: 10/23/03

Laboratory Representative

10/15/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: 916-362-3251
Company/Address: Kennedy/Jenks 3336 Bradshaw #140 Sacramento 95827
Fax #: 916-362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Sta
Project Location: Santa Rosa Sta
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #: 1003080
Location I.D.#:
Email Address: JimCurtis@KennedyJenks.com

ANALYSIS REQUEST

Sample ID	Sampling Date	Sampling Time	Container: VOA	SLEEVE	1L GLASS	PLASTIC	Method Preserved: HCl	HNO3	ICE	NONE	Matrix: WATER	SOIL	AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel					Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
SRB-120-5	10/15/02	0844		X												X	X												X						S1003272
SRB-120-10		0845		X												X	X												X						S1003273
SRB-120-15		0850		X																													HOLD		S1003274
SRB-120-20		0858		X												X	X												X						S1003275
SRB-120-W		0905			X											X	X												X						W1003276
SRB-119-5		0920		X												X	X												X						S1003277
SRB-119-10		0924		X												X	X												X						S1003278
SRB-119-15		0928		X																													HOLD		S1003279
SRB-119-20		0930		X												X	X												X						S1003280
SRB-119-W	✓	0959			X											X	X												X						W1003281

Relinquished by:	Date	Time	Received by:
	10/15/02	1750	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/15/02		

Remarks/Condition of Sample: Samples rec'd throughout day at on site mobile lab

Bill To: Kennedy/Jenks

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis / Kennedy/Jenks
Phone #: 916-362-3251
Company/Address: 3336 Bradshaw #140 Sacramento
Fax #: 916-362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Sta
Project Location: Santa Rosa Sta
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

ANALYSIS REQUEST

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Cleanup						Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date: / LAB USE ONLY:
																										Wet										
																										Total										
SRB-118-5	10/15/03	1014		X					X			X				X	X												X							S10032783
SRB-118-10		1019		X					X			X			(jm)	X	X	H	O	L	D								X			H	O	L	D	S10032784
SRB-118-14.5		1024		X					X			X				X	X												X							S10032785
SRB-118-20		1035		X					X			X				X	X												X							S10032786
SRB-118-W		1050			X				X		X					X	X												X							W10032787
8'10//15-DUP		1055			X				X		X					X	X												X							W10032788
SRB-117-5		1115		X					X			X				X	X												X							S10032789
SRB-117-10		1119		X					X							X	X												X							S10032790
SRB-117-15		1120		X					X			X																				H	O	L	D	S10032791
SRB-117-20	↓	1133		X					X			X				X	X												X							S10032792

Relinquished by:	Date	Time	Received by:
	10/15/2003	1750	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/15/03	—	

Remarks/Condition of Sample: Samples rec'd by mobile lab throughout day

Bill To: Kennedy/Jenks

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis / Kennedy/Jenks
Phone #: 916-362-3251
Company/Address: 3336 Bradshaw #140 Sacramento
Fax #: 916-362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Sta
Project Location: Santa Rosa Sta
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

ANALYSIS REQUEST

Sample ID	Sampling Date	Sampling Time	Container: VOA	SLEEVE	1L GLASS	PLASTIC		Method Preserved: HCl	HNO3	ICE	NONE		Matrix: WATER	SOIL	AIR		BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Cleanup					Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
																													Wet										Bin#
																													Total										Due Date:
SRB-117-W	10/15/2003	1140			X					X			X						X	X												X							
SRB-110-5'		1243		X						X				X					X	X												X							S1003306
SRB-110-10'		1247		X						X				X					X	X												X							S1003307
SRB-110-15		1310		X						X				X																				H	O	L	D	S1003308
SRB-110-20		1310		X						X				X					X	X												X							S1003309
SRB-110-W		1310		1	X					X			X						X	X												X							W1003310
SRB-111-5'		1327		X						X				X					X	X												X							S1003311
SRB-111-10		1330		X						X				X					X	X												X							S1003312
SRB-111-15		1335		X						X				X																				H	O	L	D	S1003313
SRB-111-18.5		1345		X						X				X					X	X												X							S1003314

Relinquished by:	Date	Time	Received by:
	10/15/2003	1750	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/15/03		

Remarks/Condition of Sample:
5 samples rec'd throughout day by mobile lab *

Bill To:
Kennedy / Jenks

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis / Kennedy/Jenks
Phone #: 916-362-3251
Company/Address: 3336 Bradshaw Sacramento
Fax #: 916-362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Sta
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
Email Address:
COC #:
Location I.D.#:

ANALYSIS REQUEST

Sample ID	Sampling Date	Sampling Time	Container: VOA	SLEEVE	1L GLASS	PLASTIC	Method Preserved: HCl	HNO3	ICE	NONE	Matrix: WATER	SOIL	AIR
SRB-111-W	10/15 2003	1357			X				X		X		
SRB-104-5		1421		X					X			X	
SRB-104-10		1423		X					X			X	
SRB-104-15		1426		X					X			X	
SRB-104-20		1431		X					X			X	
SRB-104-W		1434			X				X		X		
SRB-105-5		1459		X					X			X	
SRB-105-10		1501		X					X			X	
SRB-105-15		1504		X					X			X	
SRB-105-18.5		1511		X					X			X	

Analysis	Wet	Total	Requested TAT: 12hr/24hr/48hr/72hr/1wk
BTEX/TPH as Gasoline (602/8020/8015)			
MTBE (8020/8260B)			
TPH as Diesel (8015m)		X	
TPH as Oil (8015m)		X	
Total Oil & Grease (SM-18th Ed 5520B,F)/1664			
Pesticides (608/8081A)			
PCBs (8082)			
VOC Full list (8260B)			
5 Oxygenates (8260B)			
Methanol/Ethanol (8015/8260)			
Lead Scavengers DCA/EDB (8260B)			
Semi VOC Full List (8270C)			
CAM 17 Metals			
Lead			
Cd, Cr, Pb, Zn, Ni (CAM 5)			
Silica Gel Cleanup		X	

Bin#	Due Date:	LAB USE ONLY:
		W1003315
		S1003316
		S1003317
		S1003318
		S1003319
		W1003320
		S1003321
		S1003322
		S1003323
		S1003324

HOLD

Relinquished by:	Date	Time	Received by:
	10/15 2003	~~1750~~	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/15/03	—	

Remarks/Condition of Sample: Samples rec'd by mobile lab throughout day

Bill To: Kennedy Jenks

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis / Kennedy/Jenks
Phone #: 916-362-3251
Company/Address: 3336 Bradshaw Sacramento
Fax #: 916-362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Sta
Project Location: Santa Rosa
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

ANALYSIS REQUEST

Page 5 of 5

Sample ID	Sampling Date	Sampling Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/1664	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals (Wet)	Lead (Wet)	Cd, Cr, Pb, Zn, Ni (CAM 5) (Wet)	CAM 17 Metals (Total)	Lead (Total)	Cd, Cr, Pb, Zn, Ni (CAM 5) (Total)	SILICA GEL						Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY: Bin# / Due Date:
SRB-105-W	10/15/2003	1514			X				X		X					X	X														X						W1003335
SRB-106-5		1541		X					X			X				X	X														X						S1003326
SRB-106-10		1544		X					X			X																					H	O	L	D	S1003327
SRB-106-15		1546		X					X			X				X	X														X						S1003328
SRB-106-20		1553		X					X			X				X	X														X						S1003329
SRB-106-W		1600			X				X		X					X	X														X						W1003330
SRB-109-5		1642		X					X			X				X	X														X						S1003331
SRB-109-10		1645		X					X			X																					H	O	L	D	S1003332
SRB-109-15		1650		X					X			X				X	X														X						S1003333
SRB-109-19		1659		X					X			X				X	X														X						S1003334
SRB-109-W		1658			X				X		X					X	X														X						W1003335

Relinquished by: — Date: 10/15/03 — Time: 1750 — Received by:

Relinquished by: — Date: — Time: — Received by:

Relinquished by: — Date: 10/15/03 — Time: — Received by Laboratory:

Remarks/Condition of Sample: Samples rec'd by lab throughout day

Bill To: Kennedy/Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/14/03
Date Received: 10/14/03
Date Analyzed: 11/15,23/03

Client Sample I.D.	SRB-107-5		SRB-107-15		SRB-107-20		SRB-107	
LAB. NO.	S1003267		S1003269		S1003270		W1003271	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	5.0	ND	50	ND
TPH as Oil	10	ND	10	ND	10	ND	500	1000

Soil QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	102	113

QA/QC Analyzed: 11/15/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	113	114
TPH as Oil	133	126

QA/QC Analyzed: 10/23/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Soil samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/15/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd, #140, Sac. CA, 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address: 1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling Date	Sampling Time	Container: VOA	SLEEVE	1L GLASS	PLASTIC	Method Preserved: HCl	HNO3	ICE	NONE	Matrix: WATER	SOIL	AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel	Mobile TAT	Requested TAT: 12hr/24hr/48hr/72hr (1wk)	Bin# / Due Date / LAB USE ONLY:
SBB-107-5	10/14/03	1542				✓			✓			✓				X	X												X		X		S1003267
SBB-107-10	10/14/03	1546				✓			✓			✓				X	X														Hold		S1003268
SBB-107-15	10/14/03	1553				✓			✓			✓				X	X												X		X		S1003269
SBB-107-20	10/14/03	1606				✓			✓			✓				X	X												X		X		S1003270
SBB-107					✓				✓		✓					X	X												X			X	W1003271

Relinquished by:	Date	Time	Received by:
[signature]	10/14/03	1734	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/14/03		[signature]

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
[signature] [signature] 10-14-03

Bill To: Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/14/03
Date Received: 10/14/03
Date Analyzed: 10/14,22.23/03

Client Sample I.D.	SRB-121-5		SRB-121-15		SRB-121-20		SRB-121	
LAB. NO.	S1003257		S1003259		S1003260		W1003261	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	5.0	ND	50	ND
TPH as Oil	10	ND	10	15	10	ND	500	ND

Client Sample I.D.	SRB-108-5		SRB-108-10		SRB-108		SRB-108-20	
LAB. NO.	S1003262		S1003263		W1003264		S1003266	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	100	ND	5.0	ND
TPH as Oil	10	ND	10	ND	1000	ND	10	ND

Soil QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
TPH as Oil	88	88	82	84

QA/QC Analyzed: 10/14/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	113	114
TPH as Oil	133	126

QA/QC Analyzed: 10/23/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Soil samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/14/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy/Jenks, 3336 Bradshaw Rd #140, Sac. CA. 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address: 1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling Date	Sampling Time	Container: VOA	SLEEVE	1L GLASS	PLASTIC	Method Preserved: HCl	HNO3	ICE	NONE	Matrix: WATER	SOIL	AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Wet	Total	Silica Gel Wash	Mobile TAT	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date:	LAB USE ONLY:
SRB-121-5	10/14/03	1355				✓			✓			✓				X	X														X				S1003257
SRB-121-10	10/14/03	1400				✓			✓			✓				X	X														Hold				S1003258
SRB-121-15	10/14/03	1407				✓			✓			✓				X	X														Hold				S1003259
SRB-121-20	10/14/03	1416				✓			✓			✓				X	X																		S1003260
SRB-121	10/14/03				✓				✓		✓					X	X																	X	W1003261
SRB-108-5	10/14/03	1453				✓			✓			✓				X	X																		S1003262
SRB-108-10	10/14/03	1455				✓			✓			✓				X	X																		S1003263
SRB-108	10/14/03				✓				✓		✓					X	X																	X	W1003264
SRB-108-15	10/14/03	1504				✓			✓			✓				X	X														Hold				S1003265
SRB-108-20	10/14/03	1509				✓			✓			✓				X	X																		S1003266

Relinquished by: Date 10/14/03 Time 1734 Received by:

Relinquished by: Date Time Received by:

Relinquished by: Date 10/14/03 Time Received by Laboratory:

Remarks/Condition of Sample:
Samples recid throughout day by mobile lab.
10-14-03

Bill To: Kennedy/Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928

Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/14/03
Date Received: 10/14/03
Date Analyzed: 10/14,22/03

Client Sample I.D.	SRB-112-5		SRB-112-10		SRB-112-15		SRB-112-20		SRB-112	
LAB. NO.	S1003247		S1003248		S1003249		S1003250		W1003251	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	250	590	250	3700	2000	6400000
TPH as Oil	10	ND	10	ND	500	850	500	3300	20000	6900000

Client Sample I.D.	SRB-122-5		SRB-122-10		SRB-122		SRB-122-20	
LAB. NO.	S1003252		S1003253		W1003255		S1003256	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	4000	6000000	5.0	ND
TPH as Oil	10	ND	10	ND	40000	5300000	10	ND

Soil QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
TPH as Oil	88	88	82	84

QA/QC Analyzed: 10/14/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	113	114
TPH as Oil	133	126

QA/QC Analyzed: 10/23/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Soil samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/14/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy/Jenks, 3336 Bradshaw Rd. #140, Sac. CA. 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature: Jim Curtis

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address: 1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Wet	Total	Silica Gel Waste				Mobile TAT	Requested TAT: 12hr/24hr/48hr/72hr (1wk)	Bin# / Due Date: LAB USE ONLY
SRB-112-5	10/14/03					✓			✓			✓				X	X																	X		S1003247
SRB-112-10	10/14/03					✓			✓			✓				X	X																	X		S1003248
SRB-112-15	10/14/03					✓			✓			✓				X	X																	X		S1003249
SRB-112-20	10/14/03					✓			✓			✓				X	X																	X		S1003250
SRB-112	10/14/03				✓				✓		✓					X	X																		X		W1003251
SRB-122-5	10/14/03	1309				✓			✓			✓				X	X																	X		S1003252
SRB-122-10	10/14/03	1312				✓			✓			✓				X	X																	X		S1003253
SRB-122-15	10/14/03	1322				✓			✓			✓				X	X																	Hold		S1003254
SRB-122					✓						✓					X	X																		X		W1003255
SRB-122-20	10/14/03	1338				✓			✓			✓				X	X																	X		S1003256

Relinquished by:	Date	Time	Received by:
Jim Curtis	10/14/03	1734	
Relinquished by:	Date	Time	Received by Laboratory:
	10/14/03		

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
10-14-03

Bill To: Kennedy/Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/14/03
Date Received: 10/14/03
Date Analyzed: 10/14,21,22/03

Client Sample I.D.	SRB-114-5		SRB-114-10		SRB-114		SRB-114-20		SRB-113-5	
LAB. NO.	S1003232		S1003233		W1003234		S1003236		S1003237	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	50	81	5.0	ND	250	1400
TPH as Oil	10	ND	10	ND	500	ND	10	ND	500	1400

Client Sample I.D.	SRB-113-10		SRB-113-15		SRB-113-20		SRB-113	
LAB. NO.	S1003238		S1003239		S1003240		W1003241	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	250	3000	40	46	130	1000	50	830
TPH as Oil	500	3500	80	360	250	1200	500	1300

Soil QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
TPH as Oil	88	88	82	84

QA/QC Analyzed: 10/14/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	113	114
TPH as Oil	133	126

QA/QC Analyzed: 10/23/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Soil samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/14/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd. #140, Sac, CA. 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR
SRB-114-5	10/14/03	1018				✓			✓			✓	
SRB-114-10	10/14/03	1024				✓			✓			✓	
SRB-114-15	10/14/03	1038			✓						✓		
SRB-114-15	10/14/03	1038				✓			✓			✓	
SRB-114-20	10/14/03	1038				✓			✓			✓	
SRB-113-5	10/14/03	1107				✓			✓			✓	
SRB-113-10	10/14/03	1110				✓			✓			✓	
SRB-113-15	10/14/03	1127				✓			✓			✓	
SRB-113-20	10/14/03	1141				✓			✓			✓	
SRB-113	10/14/03	1141			✓								

BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Wet	Total	Silica Gel Wash	Mobile TAT	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin#	Due Date:	LAB USE ONLY:
		X	X														X					S1003232
		X	X														X					S1003233
		X	X														X		W1003234	X		
		X	X														X		S Hold			S1003235
		X	X														X					S1003236
		X	X														X					S1003237
		X	X														X					S1003238
		X	X														X					S1003239
		X	X														X					S1003240
		X	X														X			X		W1003241

Relinquished by: Jim Curtis — Date: 10/14/03 — Time: 1734 — Received by:

Relinquished by: — Date: — Time: — Received by:

Relinquished by: — Date: 10/14/03 — Time: — Received by Laboratory:

Remarks/Condition of Sample: Samples recd throughout day by mobile lab.
10-14-03

Bill To: Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/14/03
Date Received: 10/14/03
Date Analyzed: 10/14,21/03

Client Sample I.D.	SRB-116-5		SRB-116-10		SRB-116		SRB-116-20	
LAB. NO.	S1003220		S1003221		W1003222		S1003224	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	50	ND	5.0	ND
TPH as Oil	10	31	10	ND	500	770	10	ND

Client Sample I.D.	SRB-115-5		SRB-115-10		SRB-115		SRB-115-20	
LAB. NO.	S1003225		S1003226		W1003227		S1003229	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	50	520	5.0	ND
TPH as Oil	10	ND	10	ND	500	ND	10	ND

Soil QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
TPH as Oil	88	88	82	84

QA/QC Analyzed: 10/14/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	113	114
TPH as Oil	133	126

QA/QC Analyzed: 10/23/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Soil samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/14/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

1003080

Project Manager: Jim Curtis
Kennedy/Jenks Consultants

Phone #: 916 362-3251

Company/Address: 3336 Bradshaw Rd #140
Sacramento CA 95827

Fax #: 916 362-9915

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:

Email Address: JimCurtis@KennedyJenks.com

Project Number/P.O#: 032777.14

Project Name: Santa Rosa ~~Equip~~ Station

Project Location: Santa Rosa Station

Sampler Signature:

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling Date	Sampling Time	Container: VOA	SLEEVE	1L GLASS	PLASTIC	Method Preserved: HCl	HNO3	ICE	NONE	Matrix: WATER	SOIL	AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Wash				Mobile TAT	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date / LAB USE ONLY:
SRB-116-5	10/14	0827				✓			✓			✓				X	X																X		S1003220
SRB-116-10	10/14	0847				✓			✓			✓				X	X																X		S1003221
SRB-116	10/14				✓				✓		✓					X	X																	X	W1003222
SRB-116-15	10/14/03	0901				✓			✓			✓																				S1003223			Hold
SRB-116-20	10/14/03	0909				✓			✓			✓				X	X																X		S1003224
SRB-115-5	10/14/03	0928				✓			✓			✓				X	X																X		S1003225
SRB-115-10	10/14/03	0936				✓			✓			✓				X	X																X		S1003226
SRB-115	10/14				✓				✓		✓					X	X																	X	W1003227
SRB-115-15	10/14/03	0955				✓			✓			✓																				S1003228			Hold
SRB-115-20	10/14/03	0959				✓			✓			✓				X	X																X		S1003229

	Date	Time		
Relinquished by:	10/14/03	1734	Received by:	Remarks/Condition of Sample: Samples reid throughout day by mobile lab. 10-14-03
Relinquished by:			Received by:	
Relinquished by:	10/14/03		Received by Laboratory:	Bill To: Kennedy / Jenks

EXCELCHEM

ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/15/03
Date Received: 10/15/03
Date Analyzed: 10/15/03

Client Sample I.D.	SW-M1-1-2.5		SW-M1-2-6.5		SW-M1-3-5.5		SW-M1-4-7	
LAB. NO.	S1003282		S1003293		S1003294		S1003295	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	50	2600	5.0	ND	5.0	ND	50	1500
TPH as Oil	100	2300	10	17	10	ND	100	1400

Client Sample I.D.	SW-M1-5-3		SW-M2-6-5.75		SW-N1-7-5	
LAB. NO.	S1003296		S1003304		S1003305	
ANALYTE	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	50	1400	5.0	ND	5.0	ND
TPH as Oil	100	1800	10	ND	10	ND

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	102	113

QA/QC Analyzed: 11/15/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

11/15/03
Date Reported

KENNEDY/JENKS CONSULTANTS Excavation Samples KUU5U8U

SAMPLE CHAIN-OF-CUSTODY ANALYSIS REQUEST

☐ 200 New Stine Rd., #115, Bakersfield, CA 93309
☐ 530 South 336th St., Federal Way, WA 98003
☐ 17310 Red Hill Ave., #220, Irvine, CA 92714
☐ 2191 East Bayshore Rd., #200, Palo Alto, CA 94303
☐ 5190 Neil Road, #300, Reno, NV 89502
☒ 3336 Bradshaw Rd., #140, Sacramento, CA 95827
☐ 303 Second St., San Francisco, CA 94107
☐ 1000 Hill Rd., #200, Ventura, CA 93003

POSSIBLE HAZARDS: TPHd, TPHmo, Arsenic

Date 10/15/03 Report To Jim Curtis

Source of Samples Santa Rosa Station Company Kennedy/Jenks

Sampler Name _____ Address _____

Phone _____ _____

Project No. _____ Phone _____

Lab Destination Excelchem

Address _____

_____

Phone _____

Carrier/Way Bill No. _____

(1) Lab ID No.	(1) Client ID No.	COLLECTION Date	COLLECTION Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) ANALYSES REQUESTED: TPHd/TPHmo	Silica Gel Wash							Comment/Conditions (Container type, container number, etc.)
S1003282	SW-M1-1-2.5	10/15/03	0949	S	2.5		ICE	Mob	X	X							
S1003293	SW-M1-2-6.5	10/15/03	1112	S	6.5		ICE	MOB	X	X							
S1003294	SW-M1-3-5.5	10/15/03	1115	S	5.5		ICE	Mob	X	X							
S1003295	SW-M1-4-7	10/16/03	1120	S	7		ICE	Mob	X	X							
S1003296	SW-M1-5-3	10/15/03	1218	S	3		ICE	Mob	X	X							
S1003304	SW-M2-6-5.75	10/15/03	1300	S	5.75		ICE	Mob	X	X							
S1003305	SW-N1-7-5	10/15/03	1305	S	5		ICE	Mob	X	X							

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analyses requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

SAMPLE RELINQUISHED BY:

Print Name	Signature	Company	Date	Time
Jim Curtis		Kennedy/Jenks		

SAMPLE RECEIVED BY:

Print Name	Signature	Company	Date	Time
John Somers		EXCELCHEM	10/15/03	

Samples submitted first/last the day

\MISC\CUSTODY2.FRM

000085.08

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/16/03
Date Received: 10/16/03
Date Analyzed: 10/16/03

Client Sample I.D.	NW-B2-8-14		NW-B1-9-7		NW-B3-10-8.5		SW-L1-11-9.5		SW-L1-12-5	
LAB. NO.	S1003350		S1003351		S1003352		S1003372		S1003373	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	50	900	83	ND	50	220	10	ND	5.0	ND
TPH as Oil	100	740	170	450	100	400	20	33	10	ND

Client Sample I.D.	SW-L1-10-8		SW-M1-13-4		SW-L1-14-3.75		SW-L1-15-4.5	
LAB. NO.	S1003374		S1003375		S1003376		S1003377	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	5.0	ND	5.0	ND
TPH as Oil	10	ND	10	ND	10	ND	10	ND

QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	80	84

QA/QC Analyzed: 10/17/03

QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	85	83

QA/QC Analyzed: 10/17/03

QA/QC %RECOVERY		
	MS	MSD
TPH as Diesel	66	72
TPH as Oil	87	84

QA/QC Analyzed: 10/17/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/17/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy Jenks, 3336 Bradshaw Rd #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR
MW-B2-8-14	10/16/03	1048		X					X			X	
MW-B1-9-7	10/16/03	1055		X					X			X	
MW-B3-10-9.5	10/16/03	1105		X					X			X	
SW-L1-11-9.5	10/16/03	1415		X					X			X	
SW-L1-12-5	10/16/03	1425		X					X			X	
SW-L1-10-8	10/16/03	1410		X					X			X	
SW-M1-13-4	10/16/03	1431		X					X			X	
SW-L1-14-7.5	10/16/03	1441		X					X			X	
SW-L1-15-4.5	10/16/03	1448		X					X			X	

Analysis	Wet	Total
BTEX/TPH as Gasoline (602/8020/8015)		
MTBE (8020/8260B)		
TPH as Diesel (8015m)	X	X
TPH as Oil (8015m)	X	X
Total Oil & Grease (SM-18th Ed 5520B,F)/166		
Pesticides (608/8081A)		
PCBs (8082)		
VOC Full list (8260B)		
5 Oxygenates (8260B)		
Methanol/Ethanol (8015/8260)		
Lead Scavengers DCA/EDB (8260B)		
Semi VOC Full List (8270C)		
CAM 17 Metals		
Lead		
Cd, Cr, Pb, Zn, Ni (CAM 5)		
Silica Gel Cleanup	X	X
Mobile	X	X

Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
X	S1003350
X	S1003351
X	S1003352
X	S1003372
X	S1003373
X	S1003374
X	S1003375
X	S1003376
X	S1003377

Bin#
Due Date:

Relinquished by:	Date	Time	Received by:
Jim Curtis	10/16/03		
	10/16/03		

Remarks/Condition of Sample:
Samples recd throughout day by mobile lab.
10-16-03

Bill To:
Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B

Date Sampled: 10/16/03
Date Received: 10/16/03
Date Analyzed: 10/17/03

Client Sample I.D.	SW-M1-16-8.5		SW-M1-17-8.5		SW-M1-18-5		SW-N-1-19-4.5		SW-N1-20-7		SW-M1-21-4	
LAB. NO.	S1003378		S1003379		S1003380		S1003381		S1003382		S1003383	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
Arsenic	2.0	3.0	2.0	2.7	2.0	3.7	2.0	2.8	2.0	2.3	2.0	ND

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

QA/QC %RECOVERY		
	LCS	LCSD
Arsenic	103	103

QA/QC Analyzed: 10/17/03

Laboratory Representative

10/17/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy Jenks, 3336 Bradshaw Rd #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address: 1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Container:	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR
SW-M1-16-8	10/16/03	1511		X						X			X	
SW-M1-17-8.5	10/16/03	1514		X						X			X	
SW-M1-18-5	10/16/03	1525		X						X			X	
SW-M1-19-9.5	10/16/03	1532		X						X			X	
SW-M1-20-7	10/16/03	1535		X						X			X	
SW-M1-21-4	10/16/03	1545		X						X			X	
FE-M6-22.5	10/16/03	1665		X						X			X	

Sample ID	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Clean	Mobile TAT	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date: / LAB USE ONLY:
SW-M1-16-8			X	X									X		X	X		S1003378
SW-M1-17-8.5			X	X									X		X	X		S1003379
SW-M1-18-5			X	X									X		X	X		S1003380
SW-M1-19-9.5			X	X									X		X	X		S1003381
SW-M1-20-7			X	X									X		X	X		S1003382
SW-M1-21-4			X	X									X		X	X		S100383
FE-M6-22.5			X	X									X		X	X		~~S100384~~ S1003384 TB 10/16/03
																		S1003386

Relinquished by: Jim Curtis — Date: 10/16/03 — Time: —
Received by: —

Relinquished by: —
Date: — Time: —
Received by: —

Relinquished by: —
Date: 10/16/03 — Time: —
Received by Laboratory: Dan Duran

Remarks/Condition of Sample: Samples rec'd throughout day by mobile Lab. TB. 10/16/03

Bill To: Kennedy Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT
Amended Report

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/17/03
Date Amended: 12/29/03

Client Sample I.D.	FE-L6-23-1.5		FE-M6-24-1.5		NW-D2-25-9		NW-D2-26-11	
LAB. NO.	S1003399		S1003400		S1003401		S1003402	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	5.0	ND	5.0	ND
TPH as Oil	10	34	10	ND	10	ND	10	ND

Client Sample I.D.	NW-C2-27-4.5		NW-F2-28-11		FE-L6-30-3		FE-L5-29-0.5	
LAB. NO.	S1003403		S1003405		S1003406		S1003407	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	200	420	5.0	ND	5.0	ND
TPH as Oil	10	ND	400	1200	10	470	10	1100

QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	80	84

QA/QC Analyzed: 10/17/03

QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	85	83

QA/QC Analyzed: 10/17/03

QA/QC %RECOVERY		
	MS	MSD
TPH as Diesel	66	72
TPH as Oil	87	84

QA/QC Analyzed: 10/17/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

REPORT AMENDED TO CORRECT CLIENT SAMPLE ID FOR NW-F22-28-11 TO REFLECT THE ID ON THE COC.

Laboratory Representative

10/17/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy Jenks, 3336 Bradshaw Rd. #140, Sacramento, CA. 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

1003080
1003086

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Filter Gel Wash	Wet	Total	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
FE-L6-23-1.5	10/17/03	1005		X					X			X		X		X	X											X				S1003399
FE-M6-24-1.5	10/17/03	1006		X					X			X		X		X	X											X				S1003400
NW-D2-25-9	10/17/03	1048		X					X			X				X	X															S1003401
NW-D2-26-11	10/17/03	1135		X					X			X				X	X															S1003402
NW-C2-27-4.5	10/17/03	1152		X					X			X				X	X															S1003403
NW-F2-28-11	10/17/03	1401		X					X			X				X	X															S1003404
FE-L6-29-0.5	10/17/03	1444		X					X			X		X		X	X											X				S1003405
FE-L6-30-3	10/17/03	1446		X					X			X		X		X	X											X				S1003406
FE-L5-29-0.5	10/17/03	1444		X					X			X		X		X	X											X				S1003407

Relinquished by: — Date: 10/17/03 — Time: — Received by: —

Relinquished by: — Date: — Time: — Received by: —

Relinquished by: — Date: 10/17/03 — Time: — Received by Laboratory:

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
Volatiles & Metals to be analyzed via fixed facility's on a 24 hr TAT.
10-17-03

Bill To:
Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8020/8015m

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/20/03

Client Sample I.D.	FE-L6-23-1.5		FE-M6-24-1.5		FE-L6-30-3		FE-L5-29-0.5	
LAB. NO.	S1003399		S1003400		S1003406		S1003407	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
Benzene	0.005	ND	0.005	ND	0.005	ND	0.005	ND
Toluene	0.005	ND	0.005	ND	0.005	ND	0.005	ND
Ethylbenzene	0.005	ND	0.005	ND	0.005	ND	0.005	ND
Total Xylenes	0.013	ND	0.013	ND	0.013	ND	0.013	ND
TPH as Gasoline	1.0	ND	1.0	ND	1.0	ND	1.0	ND

QA/QC %RECOVERY		
	LCS	LCSD
Benzene	91	88
Toluene	91	89
Ethylbenzene	92	90
Total Xylenes	93	91

QA/QC Analyzed: 10/20/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/20/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/20/03

Client Sample I.D.	FE-L6-23-1.5		FE-M6-24-1.5		FE-L6-30-3		FE-L5-29-0.5	
LAB. NO.	S1003399		S1003400		S1003406		S1003407	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
Lead	1.0	26	1.0	27	1.0	74	1.0	98

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Lead	103	102	117	100

QA/QC Analyzed: 10/20/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/20/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis	Phone #: (916) 362-3251
Company/Address: Kennedy Jenks, 3336 Bradshaw Rd. #140, Sacramento, CA. 95827	Fax #: (916) 362-9915
Project Number/P.O#: 032777.14	Project Name: Santa Rosa Station
Project Location: Santa Rosa Station	Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
TAT# 1003080 / 1003086

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR
FE-L6-25-1.5	10/17/03	1005		X					X			X	
FE-M6-24-1.5	10/17/03	1010		X					X			X	
NW-D2-25-9	10/17/03	1048		X					X			X	
NW-D2-26-11	10/17/03	1135		X					X			X	
NW-C2-27-4.5	10/17/03	1152		X					X			X	
NW-F2-26-11	10/17/03	1401		X					X			X	
~~FE-L6-29-0.5~~	~~10/17/03~~	~~1444~~		~~X~~					~~X~~			~~X~~	
FE-L6-30-3	10/17/03	1446		X					X			X	
FE-L5-29-0.5	10/17/03	1444		X					X			X	

Sample ID	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Wet: Lead	Total: Lead	Total: Cd, Cr, Pb, Zn, Ni (CAM 5)	Filter Lead Only	Wet	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY
FE-L6-25-1.5	X		X	X										X			X			S1003399
FE-M6-24-1.5	X		X	X										X			X	X		S1003400
NW-D2-25-9			X	X													X	X		S1003401
NW-D2-26-11			X	X													X	X		S1003402
NW-C2-27-4.5			X	X													X	X		S1003403
NW-F2-26-11			X	X													X	X		S1003404
~~FE-L6-29-0.5~~	~~X~~		~~X~~	~~X~~										~~X~~			~~X~~	~~X~~		
FE-L6-30-3	X		X	X										X			X	X		S1003405
FE-L5-29-0.5	X		X	X										X			X	X		S1003406

	Date	Time	
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:			Received by Laboratory:

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
Volatiles & Metals to be analyzed via fixed lab on a 24 hr TAT.
10-17-03

Bill To:
Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/20/03
Date Received: 10/20/03
Date Analyzed: 10/20/03

Client Sample I.D.	NW-B2-31-16		NW-B1-32-16		NW-B1-33-21		NW-D2-34-19		NW-D2-35-9	
LAB. NO.	S1003441		S1003442		S1003456		S1003457		S1003500	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	25	340	83	ND	25	ND	100	490	5.0	ND
TPH as Oil	50	290	170	230	50	58	200	490	10	ND

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	91	95

QA/QC Analyzed: 10/20/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/20/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy Jenks, 3336 Bradshaw Rd. #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals (Wet)	Lead (Wet)	Cd, Cr, Pb, Zn, Ni (CAM 5) (Total)	Silica Gel Wash				Mobile TAT	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date: / LAB USE ONLY:
NW-B2-31-[illegible]	10/20/03	0837		X					X			X				X	X												X				X		S1003441
NW-B1-32-[illegible]	10/20/03	0855		X					X			X				X	X												X				X		S1003442
NW-B1-33-[illegible]	10/20/03	1007		X					X			X				X	X												X				X		S1003456
NW-D2-34-[illegible]	10/20/03	1220		X					X			X				X	X												X				X		S1003457
NW-D2-35-[illegible]	10/20/03	1333		X					X			X				X	X												X				X		S1003500

Relinquished by:	Date	Time	Received by:	Remarks/Condition of Sample:
[signature]	10/20/03			Samples rec'd throughout day by mobile lab. 10-20-03
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date	Time	Received by Laboratory:	Bill To:
	10/20/03		[signature]	Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/21/03
Date Received: 10/21/03
Date Analyzed: 10/21/03

Client Sample I.D.	NW-E1-36-10		NW-C1-37-6		NW-B1-38-6		NW-E1-39-18		NW-E1-40-13.5	
LAB. NO.	S1003523		S1003524		S1003526		S1003527		S1003533	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	500	3500	5.0	ND	5.0	ND	250	2100	5.0	ND
TPH as Oil	1000	3000	10	23	10	16	500	2100	10	ND

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	85	88

QA/QC Analyzed: 10/21/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/21/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy Jenks, 3336 Bradshaw Rd. #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Cleanup				Mobile	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
NW-E1-36-10	10/21/03	1010		X					X			X				X	X												X				X		S1003523
NW-C1-37-6	10/21/03	1005		X					X			X				X	X												X				X		S1003524
NW-B1-38-6	10/21/03	1125		X					X			X				X	X												X				X		S10035216
NW-E1-39-10	10/21/03	1230		X					X			X				X	X												X				X		S10035217
NW-E1-40-13.5	10/21/03	1435		X					X			X				X	X												X				X		S1003533

Relinquished by: — Date: 10/21/03 — Time: — Received by: —

Relinquished by: — Date: — Time: — Received by: —

Relinquished by: — Date: 10/21/03 — Time: — Received by Laboratory:

Remarks/Condition of Sample:
Samples recd throughout day by mobile lab.
10-21-03

Bill To:
Kennedy Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/22/03
Date Received: 10/22/03
Date Analyzed: 10/22/03

Client Sample I.D.	NW-E1-41-7		NW-E1-42-8		NW-F2-43-14		NW-E1-44-13.5		NW-E1-45-9	
LAB. NO.	S1003546		S1003557		S1003559		S1003585		S1003586	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	250	2400	5.0	ND	5.0	ND	100	460	10	23
TPH as Oil	400	1700	10	ND	10	16	200	470	20	110

Client Sample I.D.	NW-E1-46-4		NE-F1-47-6		NW-F1-48-9		NW-F1-49-14.5	
LAB. NO.	S1003587		S1003591		S1003592		S1003593	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	250	1200	250	310	5.0	ND	250	1000
TPH as Oil	500	950	500	700	10	ND	500	1200

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	80	73

QA/QC Analyzed: 10/22/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/22/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy/Jenks, 3336 Bradshaw Rd #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling Date	Sampling Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	Wet	Total	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Wash					Nitrate	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date: / LAB USE ONLY:
NW-E1-41-7	10/22/03	0815		X					X			X				X	X																		X	S1003546
NW-E1-42-8	10/22/03	0930		X					X			X				X	X																		X	S1003557
~~STA# 35~~																																					
NW-F2-43-7	10/22/03	1015		X					X			X				X	X																		X	S1003559
NW-E1-44-8.5	10/22/03	1159		X					X			X				X	X																		X	S1003585
NW-E1-45-9	10/22/03	1202		X					X			X				X	X																		X	S1003586
NW-E1-46-4	10/22/03	1205		X					X			X				X	X																		X	S1003587
NW-F1-47-6	10/22/03	1345		X					X			X				X	X																		X	S1003591
NW-F1-48-9	10/22/03	1350		X					X			X				X	X																		X	S1003592
NW-F1-49-8.5	10/22/03	1458		X					X			X				X	X																		X	S1003593

Relinquished by:	Date	Time	Received by:
	10/22/03		
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/22/03	—	

Remarks/Condition of Sample:
Samples recd throughout day by mobile lab.
10-22-03

Bill To:
Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/22/03
Date Received: 10/22/03
Date Analyzed: 10/22/03

Client Sample I.D.	NW-F1-50-8		NW-F1-51-5		NW-D1-52-4		NW-C1-53-4	
LAB. NO.	S1003594		S1003595		S1003596		S1003597	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	250	750	250	ND	10	ND	5.0	ND
TPH as Oil	500	980	500	1700	20	63	10	ND

Client Sample I.D.	NW-C2-54-3.5		NW-F1-55-15.5		NW-F1-56-14		NW-F1-57-8.5	
LAB. NO.	S1003598		S1003599		S1003600		S1003601	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	10	ND	10	14	100	230	5.0	ND
TPH as Oil	20	31	20	62	200	340	10	ND

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	80	73

QA/QC Analyzed: 10/22/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/22/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd, #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Wet	Total	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date: / LAB USE ONLY:
NW-F1-50-8	10/22/03	1453		X					X			X		X		X	X													X		S1003594
NW-F1-51-5	10/22/03	1455		X					X			X		X		X	X													X		S1003595
NW-D1-52-4'	10/22/03	1516		X					X			X				X	X													X		S1003596
NW-C1-53-4'	10/22/03	1520		X					X			X				X	X													X		S1003597
NW-C2-54-3.5'	10/22/03	1542		X					X			X				X	X													X		S1003598
NW-F1-55-15	10/22/03	1620		X					X			X				X	X													X		S1003599
NW-F1-56-14	10/22/03	1625		X					X			X				X	X													X		S1003600
NW-F1-57-8.5	10/22/03	1626		X					X			X				X	X													X		S1003601

Relinquished by: Date 10/22/03 Time
Received by:

Relinquished by: Date Time
Received by:

Relinquished by: Date 10/22/03 Time
Received by Laboratory:

Remarks/Condition of Sample: Samples recd throughout day by mobile lab.
10-22-03

Bill To: Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/23/03
Date Received: 10/23/03
Date Analyzed: 10/23/03

Client Sample I.D.	NW-E2-58-5		NW-F2-59-5		NW-E2-60-6		NW-D1-61-20	
LAB. NO.	S1003627		S1003628		S1003629		S1003630	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	5.0	ND	10	ND
TPH as Oil	10	ND	10	ND	10	21	20	100

Client Sample I.D.	NW-D1-62-21		NW-E1-63-21		NW-E1-64-21		NW-E2-65-21	
LAB. NO.	S1003631		S1003632		S1003635		S1003676	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	100	550	100	230	250	3300	250	1400
TPH as Oil	200	460	200	260	500	2500	500	1200

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	93	91

QA/QC Analyzed: 10/23/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/23/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251

Company/Address: Kennedy / Jenks
3336 Bradshaw Rd #140
Sacramento, CA 95827
Fax #: (916) 362-9915

Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station

Project Location: Santa Rosa Station
Sampler Signature: [signature]

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel wash					Mobile	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
																										Wet										Bin#
																										Total										Due Date:
58																																				
NW-E2-58-5'	10/23/03	0933		X					X			X				X	X												X	X				X		S1003627
NW-F2-59-5'		0947		X					X			X				X	X												X	X				X		S1003628
NW-E2-60-6'		1114		X					X			X				X	X												X	X				X		S1003629
NW-D2-61-20'		1219		X					X			X				X	X												X	X				X		S1003630
NW-D1-62-21		1245		X					X			X				X	X												X	X				X		S1003631
NW-E1-63-21		1333		X					X			X				X	X												X	X				X		S1003632
NW-E1-64-21		1425		X					X			X				X	X												X	X				X		S1003635
NW-E2-65-21	↓	1558		X					X			X				X	X												X	X				X		S1003676

Relinquished by:	Date	Time	Received by:
[signature]	10/23/2003		
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/23/03		[signature]

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
MM JD
10-23-03

Bill To:
Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/24/03
Date Received: 10/24/03
Date Analyzed: 10/24/03

Client Sample I.D.	Frac Tank 10/24		NW-E1-66-21		NW-E1-67-21		NW-E2-68-21		NW-E1-69-21	
LAB. NO.	W1003711		S1003712		S1003713		S1003737		S1003738	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	1000	4500	100	330	25	63	5.0	ND	250	1600
TPH as Oil	2000	3300	200	310	50	120	10	ND	500	1600

Client Sample I.D.	NW-G1-70-8		NW-G1-71-13		NW-G1-72-5		NW-G1-73-4		NW-F2-74-11	
LAB. NO.	S1003739		S1003740		S1003745		S1003746		S1003747	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	250	1100	25	ND	25	ND	100	210	5.0	ND
TPH as Oil	500	1100	50	510	50	280	200	1600	10	22

Client Sample I.D.	NW-G2-75-7		NW-G2-76-6		NW-H2-77-4	
LAB. NO.	S1003771		S1003772		S1003773	
ANALYTE	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	25	ND
TPH as Oil	10	ND	10	ND	50	160

Soil QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	98	95

QA/QC Analyzed: 10/24/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	83	78

QA/QC Analyzed: 10/24/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/24/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature: Michael McLeod

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica gel washs				Mobile	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date / LAB USE ONLY:
														Wet / Total																						
Frac Tank 10/24	10/24 2003	0700			X				X		X					X	X												X				X		W1003711
NW-E1-66-21'		0817		X					X			X				X	X												X				X		S1003712
NW-E1-67-21		0916		X					X			X				X	X												X				X		S1003713
NW-E2-68-21		1127		X					X			X				X	X												X				X		S1003737
NW-E1-69-21		1128		X					X			X				X	X												X				X		S1003738
NW-G1-70-8		1316		X					X			X				X	X												X				X		S1003739
NW-G1-71-13		1317		X					X			X				X	X												X				X		S1003740
NW-G1-72-5		1418		X					X			X				X	X												X				X		S1003745
NW-G1-73-4'		1431		X					X			X				X	X												X				X		S1003746
NW-F2-74-11	↓	1446		X					X			X				X	X												X				X		S1003747

Relinquished by:	Date	Time	Received by:
	10/24 2003		
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/24/03		

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
10-24-03

Bill To:
Kennedy / Jenks

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd. #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

ANALYSIS REQUEST

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR
JW-G2-75-7	10/24 2003	1523		X					X			X	
JW-G2-76-6	"	1545		X					X			X	
JW-G2-77-4	"	1609		X					X			X	

Sample ID	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Wash				Mobile	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / Due Date / LAB USE ONLY:
													Wet									
													Total									
JW-G2-75-7			X	X											X	X				X		S1003771
JW-G2-76-6			X	X											X	X				X		S1003772
JW-G2-77-4			X	X											X	X				X		S1003773

Relinquished by:	Date	Time	Received by:
Mike Michael	10/24 2003		
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/24/03	—	

Remarks/Condition of Sample:
Samples recd throughout day by mobile lab.
10-24-03

Bill To:
Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/27/03
Date Received: 10/27/03
Date Analyzed: 10/27/03

Client Sample I.D.	NW-C2-78-8		NW-A2-79-18		NW-A2-80-21		NW-B2-81-21		NW-A1-82-19	
LAB. NO.	S1003775		S1003776		S1003777		S1003778		S1003792	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	25	280	25	92	5.0	77	5.0	110
TPH as Oil	10	ND	50	290	50	150	10	75	10	110

Client Sample I.D.	NW-B2-83-16C		NW-A1-84-18C		NW-A1-85-10C		NW-A1-86-16C		NW-F1-87-16C	
LAB. NO.	S1003796		S1003797		S1003798		S1003799		S1003800	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	25	120	5.0	ND	5.0	ND	5.0	ND	25	320
TPH as Oil	50	110	10	51	10	ND	10	92	50	420

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	112	103

QA/QC Analyzed: 10/27/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/27/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd. #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#: 1003080
Email Address:

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Wash	Mobile	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
		C																								Wet						Bin#	
																										Total						Due Date:	
NW-C2-78-8C	10/27/03	0925		X					X			X				X	X													X			S1003775
NW-A2-79-18	10/27/03	0945		X					X			X				X	X													X			S1003776
NW-A2-80-2	10/27/03	0955		X					X			X				X	X													X			S1003777
NW-B2-81-2	10/27/03	1125		X					X			X				X	X													X			S1003778
NW-B2-82-9	10/27/03	1235		X					X			X				X	X													X			S1003792
NW-B2-83-16C	10/27/03	1500		X					X			X				X	X													X			S1003796
NW-B2-84-18C	10/27/03	1510		X					X			X				X	X													X			S1003797
NW-B2-85-10C	10/27/03	1515		X					X			X				X	X													X			S1003798
NW-B2-86-16C	10/27/03	1518		X					X			X				X	X													X			S1003799
NW-F2-87-16C	10/27/03	1525		X					X			X				X	X													X			S1003800

	Date	Time	
Relinquished by:	10/27/03		Received by:
Relinquished by:			Received by:
Relinquished by:	10/27/03		Received by Laboratory:

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
10/27/03 10-27-03

Bill To: Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/28/03
Date Received: 10/28/03
Date Analyzed: 10/28/03

Client Sample I.D.	NW-G2-88-11		NW-H2-89-15		NW-H2-90-18		NW-H2-91-17		NW-H2-92-12	
LAB. NO.	S1003801		S1003802		S1003803		S1003804		S1003814	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	25	67	5.0	ND	5.0	ND
TPH as Oil	10	ND	10	ND	50	110	10	ND	10	ND

Client Sample I.D.	NW-G1-93-16		NW-F1-94-17		NW-E2-95-7		NW-E2-96-9		NW-H2-97-16-C	
LAB. NO.	S1003826		S1003827		S1003831		S1003832		S1003833	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	100	540	5.0	14	5.0	ND	25	ND	5.0	ND
TPH as Oil	200	480	10	37	10	34	50	190	10	25

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	93	89

QA/QC Analyzed: 10/28/0

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/28/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd. #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR
NW-G2-88-11	10/28/03	0714		X					X			X	
NW-H2-89-15	10/28/03	0935		X					X			X	
NW-H2-90-18	10/28/03	0950		X					X			X	
NW-H2-91-17	10/28/03	1015		X					X			X	
NW-H2-92-12	10/28/03	1040		X					X			X	
NW-G1-93-16	10/28/03	1120		X					X			X	
NW-F1-94-17	10/28/03	1145		X					X			X	
NW-E2-95-7	10/28/03	1325		X					X			X	
NW-E2-96-9	10/28/03	1330		X					X			X	
NW-H2-97-12	10/28/03	1455		X					X			X	

Analysis	
BTEX/TPH as Gasoline (602/8020/8015)	
MTBE (8020/8260B)	
TPH as Diesel (8015m)	X
TPH as Oil (8015m)	X
Total Oil & Grease (SM-18th Ed 5520B,F)/166	
Pesticides (608/8081A)	
PCBs (8082)	
VOC Full list (8260B)	
5 Oxygenates (8260B)	
Methanol/Ethanol (8015/8260)	
Lead Scavengers DCA/EDB (8260B)	
Semi VOC Full List (8270C)	
CAM 17 Metals	
Lead	
Cd, Cr, Pb, Zn, Ni (CAM 5)	
Silica Gel Cleanup	X
Mobile	X

Wet
Total
Requested TAT: 12hr/24hr/48hr/72hr/1wk

Bin#
Due Date:

LAB USE ONLY:
S1003801
S1003802
S1003803
S1003804
S1003814
S1003826
S1003827
S1003831
S1003832
S1003833

Relinquished by:	Date	Time	Received by:
	10/28/03		
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/28/03		

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
10/28/03
10-28-03

Bill To:
Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/28/03
Date Received: 10/28/03
Date Analyzed: 10/28/03

Client Sample I.D.	NW-H2-98-13C		NW-H2-99-11C		NW-H2-100-13C		NW-E2-101-9C	
LAB. NO.	S1003835		S1003836		S1003837		S1003838	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	5.0	ND	5.0	ND	5.0	ND
TPH as Oil	10	46	10	ND	10	ND	10	ND

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	93	89

QA/QC Analyzed: 10/28/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/28/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks 3336 Bradshaw Rd. #140 Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling Date	Sampling Time	Container: VOA	SLEEVE	1L GLASS	PLASTIC	Method Preserved: HCl	HNO3	ICE	NONE	Matrix: WATER	SOIL	AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Clean Up	Mobile	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
NW-H2-98-13	10/28/03	1505		X					X			X				X	X													X		S1003835
NW-H2-99-11	10/28/03	1513		X					X			X				X	X													X		S1003836
NW-H2-100-13	10/28/03	1518		X					X			X				X	X													X		S1003837
NW-E2-101-9	10/28/03	1523		X					X			X				X	X													X		S1003838

Wet
Total
Bin#
Due Date:

Relinquished by:	Date	Time	Received by:
	10/28/03		
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/28/03		

Remarks/Condition of Sample:
Samples rec'd throughout day by mobile lab.
10/28/03
10-28-03

Bill To:
Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT
Amended Report

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/31/03
Date Received: 10/31/03
TPHd Analyzed: 11/03/03
TPHo Analyzed: 11/03,04/03
Date Amended: 12/29/03

Client Sample I.D.	NW-D1-109-10		NW-01-110-17.5		GM Water-FILTERED		GM Water-UNFILTERED	
LAB. NO.	S1103010		S1103011		W1103012		W1103012	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	40	2300	8.0	130	50	180	50	320
TPH as Oil	400	2300	80	140	500	ND	500	ND

Soil QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	87	77
TPH as Oil	89	86

QA/QC Analyzed: 11/04/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	111	88
TPH as Oil	75	74

QA/QC Analyzed: 11/05/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

REPORT AMENDED TO CORRECT CLIENT SAMPLE ID FOR NW-D1-109-10 TO REFLECT THE ID ON THE COC.

Laboratory Representative

11/06/03
Date Reported

Sample Chain-of-Custody/Analysis Request

Kennedy/Jenks Consultants

Inv # 1003080 / 1003086

Possible Hazards Analytes

Client UPRR | Report to Jim Curtis

Site Santa Rosa Sta | Company K/J

Project No. 032777.14 | Address 3336 Bradshaw

Sampler Name M. McLeod

Telephone 415-243-2508 | Fax 916-362-9915

Lab Destination Excelchem

Address

Telephone 916-773-3364

Carrier/Way Bill No. n/a

Lab ID No.	(1) Client ID No.	Collection Date	Collection Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) Analyses Requested: TPHd	TPHmo	Silica Gel Wash	Filter #a	Comment/Conditions (container type, container number, etc.)
	~~NW-01~~ NW-01-109-10	10/31 2003	1340	S	10	No	4°C	Rush 24HR	X	X	X		2"x3" Brass sleeve S1103010
	NW-01-110-17.5	↓	1425	S	17.5	↓	↓	↓	X	X	X		" " S1103011
	GM Water	↓	1445	W	n/a	↓	↓	↓	X	X	X	X(a)	2-1l amber W1103012
													(a) 1l unfiltered-analyze
													1l filter-analyze

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analysis requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

11/3/03 0840

Sample Relinquished By: Print Name	Signature	Company	Date	Time	Sample Received By: Print Name	Signature	Company	Date	Time
Mike McLeod		K/J	10/31/2003	1700 (b)	John Somers		EXCELCHEM	11/3/03	840

(b) left at mobile lab for later pickup

Kennedy/Jenks Consultants, Inc. © 2001

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/30/03
Date Received: 10/30/03
Date Analyzed: 10/30/03

Client Sample I.D.	NW-C1-106-16		NW-C1-107-18		NW-C1-108-18	
LAB. NO.	S1003864		S1003886		S1003887	
ANALYTE	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	ND	100	1500	5.0	ND
TPH as Oil	10	ND	200	1500	10	ND

QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	91	90

QA/QC Analyzed: 10/29/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/30/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

1003080

Project Manager: Jim Curtis
Kennedy/Jenks Consultants
Phone #: 916-362-3251
Company/Address: 3336 Bradshaw Rd #140
Sacramento CA 95827
Fax #: 916-362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address: JimCurtis@kennedyjenks.com

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling Date	Sampling Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals (Wet)	Lead (Wet)	Cd, Cr, Pb, Zn, Ni (CAM 5) (Total)	Silica Gel Wash				Rec'd by Mobile Lab	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY: Bin# / Due Date:
NW-C1-106-18	10/30/2003	0745		X					X			X				X	X												X					X		51003864
NW-C1-107-18	10/30	1522		X					X			X				X	X												X					X		51003886
NW-C1-108-18	10/30	1551		X					X			X				X	X												X					X		51003887

Relinquished by: [signature] Date: 10/30/03 Time:
Received by:

Relinquished by:
Date: Time:
Received by:

Relinquished by:
Date: 10/30/03 Time:
Received by Laboratory: Joseph Balbo

Remarks/Condition of Sample:
Samples rec'd through door by mobile lab
10/30/03

Bill To: Kennedy Jenks

EXCELCHEM
ENVIRONMENTAL LABS

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ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/29/03
Date Received: 10/29/03
Date Analyzed: 10/29/03

Client Sample I.D.	NW-D1-102-11		NW-C1-103-17		NW-C1-104-9		USTEX		NW-C1-105-8	
LAB. NO.	S1003847		S1003848		S1003849		W1003851		S1003862	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	5.0	16	5.0	14	5.0	ND	200	21000	5.0	ND
TPH as Oil	10	33	10	33	10	ND	2000	17000	10	11

Soil QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	91	90

QA/QC Analyzed: 10/29/03

Water QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	89	87

QA/QC Analyzed: 10/30/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/29/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Coatis
Phone #: 916 362-3251
Company/Address: Kennedy/Jenks
Fax #: 916 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location:
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
1003080

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling Date	Sampling Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Container:	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Method Preserved:	Matrix: WATER	Matrix: SOIL	Matrix: AIR	Matrix:	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Wash				Mobile	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
NW-D1-EZ-N	10/29/03	1110		✓						✓				✓					X	X												X			X		S1003847
NW-C1-103-E	10/29/03	1140		✓						✓				✓					X	X												X			X		S1003848
NW-C1-104-9	10/29/03	1145		✓						✓				✓					X	X												X			X		S1003849
TBTEX	10/29/03	1435			✓					✓			✓						X	X												X			X		W1003851
NW-C1-105-8	10/29 2003	1606		✓						✓				✓					X	X												X			X		S1003862

TB 10/27

Relinquished by:	Date	Time	Received by:	Remarks/Condition of Sample:
[signature]	10/29/03			Samples rec'd throughout day by mobile lab. 10/29/03
Relinquished by:	Date	Time	Received by:	
Relinquished by:	Date 10/29/03	Time	Received by Laboratory: [signature]	Bill To: Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: UPRR / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 11/13/03
Date Received: 11/14/03
Date Analyzed: 11/14,17/03

Client Sample I.D.	NW-D1-111-21		NW-D1-112-16		NW-D1-113-14		NW-C1-114-17		NW-C1-115-13	
LAB. NO.	S1103352		S1103353		S1103354		S1103355		S1103356	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	40	1800	40	1300	4.0	ND	1.0	ND	40	280
TPH as Oil	400	1000	400	720	40	ND	10	ND	400	410

Client Sample I.D.	NW-F1-116-10		NW-F1-117-10		NW-E1-118-10		FE-119-3.5	
LAB. NO.	S1103357		S1103358		S1103359		S1103360	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	40	200	4.0	ND	40	760	1.0	1.6
TPH as Oil	400	ND	40	100	400	510	10	ND

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	108	111
TPH as Oil	73	82

QA/QC Analyzed: 11/14/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

11/17/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: 916-362-3251
Company/Address: Kennedy/Jenks
Fax #: 916-362-9915
Project Number/P.O#: 032777.14
Project Name: UPRR
Project Location: Santa Rosa
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

ANALYSIS REQUEST

INV # 1003086

Bin# 6
Due Date: 11/17

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	24HR RUSH	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals: Wet	CAM 17 Metals: Total	Lead: Wet	Lead: Total	Cd, Cr, Pb, Zn, Ni (CAM 5): Wet	Cd, Cr, Pb, Zn, Ni (CAM 5): Total	Silica Gel Wash	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
NW-D1-111-21	11/13 2003	0854		X					X			X						X	X														X		S1103352
NW-D1-112-16		1450																																	S1103353
NW-D1-113-14		1459																																	S1103354
NW-C1-114-17		1515																																	S1103355
NW-C1-115-13		1520																																	S1103356
NW-F1-116-10		1530																																	S1103357
NW-F1-117-10		1534																																	S1103358
NW-E1-118-10		1539																																	S1103359
FE-119-3.5		1554																																	S1103360

	Date	Time		
Relinquished by:	11/13 2003	1422	Received by:	Remarks/Condition of Sample:
Relinquished by:			Received by:	
Relinquished by:	11-13-03	4:30	Received by Laboratory:	Bill To:

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8015m

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/20/03

Client Sample I.D.	STKPL #1 COMP	
LAB. NO.	S1003404	
ANALYTE	R/L	Results
TPH as Gasoline	1.0	4.1*

QA/QC %RECOVERY		
	LCS	LCSD
Benzene	91	88
Toluene	91	89
Ethylbenzene	92	90
Total Xylenes	93	91

QA/QC Analyzed: 10/20/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

* The sample chromatogram does not match the standard gasoline chromatogram.
All peaks were integrated within the gasoline range. The result is an estimated value.

Laboratory Representative

10/20/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/21/03

Client Sample I.D.	STKPL #1 COMP	
LAB. NO.	S1003404	
ANALYTE	R/L	Results
Dichlorodiflouromethane	0.005	ND
Chloromethane	0.005	ND
Vinyl chloride	0.005	ND
Bromomethane	0.005	ND
Chloroethane	0.005	ND
Trichlorofluoromethane	0.005	ND
Acetone	0.05	ND
1,1-Dichloroethene	0.005	ND
Iodomethane	0.005	ND
Methylene chloride	0.010	ND
Carbon disulfide	0.005	ND
trans-1,2-Dichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND
2-Butanone	0.05	ND
2,2-Dichloropropane	0.005	ND
cis-1,2-Dichloroethene	0.005	ND
Bromochloromethane	0.005	ND
Chloroform	0.005	ND
1,1,1-Trichloroethane	0.005	ND
Carbon tetrachloride	0.005	ND
1,1-Dichloropropene	0.005	ND
Benzene	0.005	ND
1,2-Dichloroethane	0.005	ND
Trichloroethene	0.005	ND
1,2-Dichloropropane	0.005	ND
Dibromomethane	0.005	ND
Bromodichloromethane	0.005	ND
cis-1,3-Dichloropropene	0.005	ND
4-Methyl-2-pentanone	0.05	ND
Toluene	0.005	ND
trans-1,3-Dichloropropene	0.005	ND
1,1,2-Trichloroethane	0.005	ND
Tetrachloroethene	0.005	ND
1,3-Dichloropropane	0.005	ND
2-Hexanone	0.05	ND
Dibromochloromethane	0.005	ND
1,2-Dibromoethane	0.005	ND

EXCELCHEM
ENVIRONMENTAL LABS

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ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/21/03

Client Sample I.D.	STKPL #1 COMP	
LAB. NO.	S1003404	
ANALYTE	R/L	Results
Chlorobenzene	0.005	ND
1,1,1,2-Tetrachloroethane	0.005	ND
Ethylbenzene	0.005	ND
m,p-Xylene	0.005	ND
o-Xylene	0.005	ND
Styrene	0.005	ND
Bromoform	0.005	ND
Isopropylbenzene	0.005	ND
Bromobenzene	0.005	ND
1,1,2,2-Tetrachloroethane	0.005	ND
1,2,3-Trichloropropane	0.005	ND
n-Propylbenzene	0.005	ND
2-Chlorotoluene	0.005	ND
4-Chlorotoluene	0.005	ND
1,3,5-Trimethylbenzene	0.005	ND
tert-Butylbenzene	0.005	ND
1,2,4-Trimethylbenzene	0.005	0.006
sec-butylbenzene	0.005	ND
1,3-Dichlorobenzene	0.005	ND
4-Isopropyltoluene	0.005	ND
1,4-Dichlorobenzene	0.005	ND
1,2-Dichlorobenzene	0.005	ND
n-Butylbenzene	0.005	ND
1,2-Dibromo-3-chloropropane	0.005	ND
1,2,4-Trichlorobenzene	0.005	ND
Hexachlorobutadiene	0.005	ND
Naphthalene	0.005	ND
1,2,3-Trichlorobenzene	0.005	ND
SURROGATE %RECOVERY		
Dibromofluoromethane	117	
Toluene-d8	107	
4-Bromofluorobenzene	115	

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Joseph Ball
Laboratory Representative

10/21/03
Date Reported

EXCELCHEM ENVIRONMENTAL LABS IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 2119)

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

QA/QC %RECOVERY		
	LCS	LCSD
1,1-Dichloroethene	119	118
Benzene	114	114
Trichloroethene	107	105
Toluene	94	97
Chlorobenzene	101	106

QA/QC Analyzed: 10/21/03

Laboratory Representative

10/21/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/21/03

Client Sample I.D.	STKPL #1 COMP	
LAB. NO.	S1003404	
ANALYTE	R/L	Results
N-Nitrosodimethylamine	2.7	ND
Aniline	2.7	ND
bis (2-Chloroethyl) ether	2.7	ND
Phenol	2.7	ND
2-Chlorophenol	2.7	ND
1,3-Dichlorobenzene	2.7	ND
1,4-Dichlorobenzene	2.7	ND
1,2-Dichlorobenzene	2.7	ND
Benzyl alcohol	2.7	ND
bis (2-Chloroisopropyl) ether	2.7	ND
2-Methylphenol	2.7	ND
Hexachloroethane	2.7	ND
N-Nitroso-di-n-propylamine	2.7	ND
4-Methylphenol	2.7	ND
Nitrobenzene	2.7	ND
Isophorone	2.7	ND
2-Nitrophenol	2.7	ND
2,4-Dimethylphenol	2.7	ND
bis (2-Chloroethoxy) methane	2.7	ND
Benzoic acid	2.7	ND
2,4-Dichlorophenol	2.7	ND
1,2,4-Trichlorobenzene	2.7	ND
Napthalene	2.7	ND
4-Chloroaniline	2.7	ND
Hexachlorobutadiene	2.7	ND
4-Chloro-3-methylphenol	2.7	ND
2-Methylnaphthalene	2.7	3.3
Hexachlorocyclopentadiene	2.7	ND
2,4,6-Trichlorophenol	2.7	ND
2,4,5-Trichlorophenol	2.7	ND
2-Chloronaphthalene	2.7	ND
2-Nitroaniline	2.7	ND
Acenaphthylene	2.7	ND
Dimethylphthalate	2.7	ND
2,6-Dinitrotoluene	2.7	ND
Acenaphthene	2.7	ND

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH
Method: EPA 8270C

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/21/03

Client Sample I.D.	STKPL #1 COMP	
LAB. NO.	S1003404	
ANALYTE	R/L	Results
3-Nitroaniline	2.7	ND
2,4-Dinitrophenol	2.7	ND
Dibenzofuran	2.7	ND
2,4-Dinitrotoluene	2.7	ND
4-Nitrophenol	2.7	ND
Fluorene	2.7	ND
4-Chlorophenyl-phenylether	2.7	ND
Diethylphthalate	2.7	ND
4-Nitroaniline	2.7	ND
Azobenzene	2.7	ND
4,6-Dinitro-2-methylphenol	2.7	ND
Nitrosodiphenylamine	2.7	ND
4-Bromopheny-phenylether	2.7	ND
Hexachlorobenzene	2.7	ND
Pentachlorophenol	2.7	ND
Phenanthrene	2.7	3.0
Anthracene	2.7	ND
Carbazole	2.7	ND
Di-n-butylphthalate	2.7	ND
Fluoranthene	2.7	ND
Benzidine*	19	ND
Pyrene	2.7	3.5
Butylbenzylphthalate	2.7	ND
3,3'-Dichlorobenzidine	2.7	ND
Benzo [a] anthracene	2.7	ND
Chrysene	2.7	ND
bis (2-Ethylhexyl) phthalate	2.7	ND
Di-n-octylphthalate	2.7	ND
Benzo [b] fluoranthene	2.7	ND
Benzo [k] fluoranthene	2.7	ND
Benzo [a] pyrene	2.7	ND
Indeno [1,2,3-cd] pyrene	2.7	ND
Dibenz [a,h] anthracene	2.7	ND
Benzo [g,h,i] perylene	2.7	ND

* Estimated Value

EXCELCHEM
ENVIRONMENTAL LABS

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ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH
Method: EPA 8270C

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/21/03

Client Sample I.D.	STKPL #1 COMP
LAB. NO.	S1003404
SURROGATE %RECOVERY	
Fluorophenol	*
Phenol-d5	*
Nitrobenzene-d5	*
2-Fluorobiphenyl	*
2,4,6-Tribromophenol	*
Terphenyl-d14	*

QA/QC %RECOVERY		
	LCS	LCSD
Phenol	53	52
2-Chlorophenol	55	54
1,4-Dichlorobenzene	57	55
N-Nitroso-di-n-propylamine	63	63
1,2,4-Trichlorobenzene	62	59
4-Chloro-3-methylphenol	62	62
Acenaphthene	67	69
2,4-Dinitrotoluene	69	72
4-Nitrophenol	68	73
Pentachlorophenol	72	73
Pyrene	107	111

QA/QC Analyzed: 10/21/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/Kg

* Surrogate not recovered due to sample dilution.

Laboratory Representative

10/21/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/20/03

Client Sample I.D.	STKPL #1 COMP	
LAB. NO.	S1003404	
ANALYTE	R/L	Results
Antimony	1.0	7.5
Arsenic	2.0	3.1
Barium	2.0	150
Beryllium	0.3	ND
Cadmium	0.5	0.9
Chromium	1.0	82
Cobalt	5.0	18
Copper	2.0	42
Lead	1.0	13
Mercury	0.010	0.045
Molybdenum	1.0	ND
Nickel	1.0	120
Selenium	2.0	ND
Silver	1.0	ND
Thallium	2.0	ND
Vanadium	2.0	54
Zinc	2.0	53

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Joseph Ball
Laboratory Representative

10/20/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Antimony	90	95	84	87
Arsenic	102	103	99	97
Barium	101	103	100	99
Beryllium	103	103	100	99
Cadmium	104	104	95	97
Chromium	104	103	94	99
Cobalt	103	103	100	98
Copper	103	104	111	112
Lead	100	100	111	93
Mercury	88	87	81	76
Molybdenum	103	103	97	97
Nickel	106	104	101	100
Selenium	103	102	95	96
Silver	97	98	98	95
Thallium	100	98	96	95
Vanadium	102	100	105	107
Zinc	105	102	102	101

QA/QC Analyzed: 10/20/03

Joseph Dalb
Laboratory Representative

10/20/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/17/03
Date Received: 10/17/03
Date Analyzed: 10/17/03

Client Sample I.D.	STKPL #1 COMP	
LAB. NO.	S1003404	
ANALYTE	R/L	Results
TPH as Diesel	250	1700
TPH as Oil	500	2100

QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	81	79

QA/QC Analyzed: 10/17/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Sample was analyzed for TPHd and TPHo at the mobile site in Santa Rosa.

Laboratory Representative

10/17/03
Date Reported

KENNEDY/JENKS CONSULTANTS Stockpile composite samples

☐ 200 New Stine Rd., #115, Bakersfield, CA 93309
☐ 530 South 336th St., Federal Way, WA 98003
☐ 17310 Red Hill Ave., #220, Irvine, CA 92714
☐ 2191 East Bayshore Rd., #200, Palo Alto, CA 94303
☐ 5190 Neil Road, #300, Reno, NV 89502
☒ 3336 Bradshaw Rd., #140, Sacramento, CA 95827
☐ 303 Second St., San Francisco, CA 94107
☐ 1000 Hill Rd., #200, Ventura, CA 93003

SAMPLE CHAIN-OF-CUSTODY ANALYSIS REQUEST

POSSIBLE HAZARDS: TPHg/TPHd/TPHmo ~~Lead~~

Date 10/17/03 Report To Jim Curtis

Source of Samples Soil stockpile Company Kennedy/Jenks

Sampler Name J Curtis Address Santa Rosa station

Phone _____

Project No. 083777.14 Phone _____

bu 33 due 10/20

Lab Destination Excelchem

Address TAT 1003080 / 1003086

Phone _____

Carrier/Way Bill No. _____

(1) Lab ID No.	(1) Client ID No.	COLLECTION Date	COLLECTION Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) ANALYSES REQUESTED: TPHg	TPHd	TPHmo	BTEX + MTBE	Lead					Comment/Conditions (Container type, container number, etc.)
51003404	SP#1 #1 Comp	10/17/03	1204			✓	ICE		X	X	X	X	X					Mix well in lab, 4 to 1 field comp

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analyses requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

SAMPLE RELINQUISHED BY:

Print Name	Signature	Company	Date	Time

SAMPLE RECEIVED BY:

Print Name	Signature	Company	Date	Time
John Somers		EXCELCHEM	10/17/03	1235

\MISC\CUSTODY2.FRM

000065.06

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/20/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #2 COMP	
LAB. NO.	S1003459	
ANALYTE	R/L	Results
Dichlorodiflouromethane	0.005	ND
Chloromethane	0.005	ND
Vinyl chloride	0.005	ND
Bromomethane	0.005	ND
Chloroethane	0.005	ND
Trichlorofluoromethane	0.005	ND
Acetone	0.05	ND
1,1-Dichloroethene	0.005	ND
Iodomethane	0.005	ND
Methylene chloride	0.020	ND
Carbon disulfide	0.005	ND
trans-1,2-Dichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND
2-Butanone	0.05	ND
2,2-Dichloropropane	0.005	ND
cis-1,2-Dichloroethene	0.005	ND
Bromochloromethane	0.005	ND
Chloroform	0.005	ND
1,1,1-Trichloroethane	0.005	ND
Carbon tetrachloride	0.005	ND
1,1-Dichloropropene	0.005	ND
Benzene	0.005	ND
1,2-Dichloroethane	0.005	ND
Trichloroethene	0.005	ND
1,2-Dichloropropane	0.005	ND
Dibromomethane	0.005	ND
Bromodichloromethane	0.005	ND
cis-1,3-Dichloropropene	0.005	ND
4-Methyl-2-pentanone	0.05	ND
Toluene	0.005	ND
trans-1,3-Dichloropropene	0.005	ND
1,1,2-Trichloroethane	0.005	ND
Tetrachloroethene	0.005	ND
1,3-Dichloropropane	0.005	ND
2-Hexanone	0.05	ND
Dibromochloromethane	0.005	ND
1,2-Dibromoethane	0.005	ND

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/20/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #2 COMP	
LAB. NO.	S1003459	
ANALYTE	R/L	Results
Chlorobenzene	0.005	ND
1,1,1,2-Tetrachloroethane	0.005	ND
Ethylbenzene	0.005	ND
m,p-Xylene	0.005	ND
o-Xylene	0.005	ND
Styrene	0.005	ND
Bromoform	0.005	ND
Isopropylbenzene	0.005	ND
Bromobenzene	0.005	ND
1,1,2,2-Tetrachloroethane	0.005	ND
1,2,3-Trichloropropane	0.005	ND
n-Propylbenzene	0.005	ND
2-Chlorotoluene	0.005	ND
4-Chlorotoluene	0.005	ND
1,3,5-Trimethylbenzene	0.005	ND
tert-Butylbenzene	0.005	ND
1,2,4-Trimethylbenzene	0.005	ND
sec-butylbenzene	0.005	ND
1,3-Dichlorobenzene	0.005	ND
4-Isopropyltoluene	0.005	ND
1,4-Dichlorobenzene	0.005	ND
1,2-Dichlorobenzene	0.005	ND
n-Butylbenzene	0.005	ND
1,2-Dibromo-3-chloropropane	0.005	ND
1,2,4-Trichlorobenzene	0.005	ND
Hexachlorobutadiene	0.005	ND
Naphthalene	0.005	ND
1,2,3-Trichlorobenzene	0.005	ND
SURROGATE %RECOVERY		
Dibromofluoromethane	105	
Toluene-d8	104	
4-Bromofluorobenzene	117	

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

QA/QC %RECOVERY		
	LCS	LCSD
1,1-Dichloroethene	102	96
Benzene	94	92
Trichloroethene	96	90
Toluene	101	100
Chlorobenzene	99	94

QA/QC Analyzed: 10/23/03

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH

Date Sampled: 10/20/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #2 COMP	
LAB. NO.	S1003459	
ANALYTE	R/L**	Results
N-Nitrosodimethylamine	1.3	ND
Aniline	1.3	ND
bis (2-Chloroethyl) ether	1.3	ND
Phenol	1.3	ND
2-Chlorophenol	1.3	ND
1,3-Dichlorobenzene	1.3	ND
1,4-Dichlorobenzene	1.3	ND
1,2-Dichlorobenzene	1.3	ND
Benzyl alcohol	1.3	ND
bis (2-Chloroisopropyl) ether	1.3	ND
2-Methylphenol	1.3	ND
Hexachloroethane	1.3	ND
N-Nitroso-di-n-propylamine	1.3	ND
4-Methylphenol	1.3	ND
Nitrobenzene	1.3	ND
Isophorone	1.3	ND
2-Nitrophenol	1.3	ND
2,4-Dimethylphenol	1.3	ND
bis (2-Chloroethoxy) methane	1.3	ND
Benzoic acid	1.3	ND
2,4-Dichlorophenol	1.3	ND
1,2,4-Trichlorobenzene	1.3	ND
Napthalene	1.3	ND
4-Chloroaniline	1.3	ND
Hexachlorobutadiene	1.3	ND
4-Chloro-3-methylphenol	1.3	ND
2-Methylnaphthalene	1.3	ND
Hexachlorocyclopentadiene	1.3	ND
2,4,6-Trichlorophenol	1.3	ND
2,4,5-Trichlorophenol	1.3	ND
2-Chloronaphthalene	1.3	ND
2-Nitroaniline	1.3	ND
Acenaphthylene	1.3	ND
Dimethylphthalate	1.3	ND
2,6-Dinitrotoluene	1.3	ND
Acenaphthene	1.3	ND

** Elevated reporting levels are due to high concentration of non-target analytes requiring sample dilution.

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH
Method: EPA 8270C

Date Sampled: 10/20/03
Date Received: 10/21/03
Date Analyzed:

Client Sample I.D.	STKPL #2 COMP	
LAB. NO.	S1003459	
ANALYTE	R/L**	Results
3-Nitroaniline	1.3	ND
2,4-Dinitrophenol	1.3	ND
Dibenzofuran	1.3	ND
2,4-Dinitrotoluene	1.3	ND
4-Nitrophenol	1.3	ND
Fluorene	1.3	ND
4-Chlorophenyl-phenylether	1.3	ND
Diethylphthalate	1.3	ND
4-Nitroaniline	1.3	ND
Azobenzene	1.3	ND
4,6-Dinitro-2-methylphenol	1.3	ND
Nitrosodiphenylamine	1.3	ND
4-Bromopheny-phenylether	1.3	ND
Hexachlorobenzene	1.3	ND
Pentachlorophenol	1.3	ND
Phenanthrene	1.3	ND
Anthracene	1.3	ND
Carbazole	1.3	ND
Di-n-butylphthalate	1.3	ND
Fluoranthene	1.3	ND
Benzidine*	9.3	ND
Pyrene	1.3	ND
Butylbenzylphthalate	1.3	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo [a] anthracene	1.3	ND
Chrysene	1.3	ND
bis (2-Ethylhexyl) phthalate	1.3	ND
Di-n-octylphthalate	1.3	ND
Benzo [b] fluoranthene	1.3	ND
Benzo [k] fluoranthene	1.3	ND
Benzo [a] pyrene	1.3	ND
Indeno [1,2,3-cd] pyrene	1.3	ND
Dibenz [a,h] anthracene	1.3	ND
Benzo [g,h,i] perylene	1.3	ND

* Estimated Value

** Elevated reporting levels are due to high concentration of non-target analytes requiring sample dilution.

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH
Method: EPA 8270C

Date Sampled: 10/20/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #2 COMP
LAB. NO.	S1003459
SURROGATE %RECOVERY	
Fluorophenol	71
Phenol-d5	53
Nitrobenzene-d5	43
2-Fluorobiphenyl	79
2,4,6-Tribromophenol	69
Terphenyl-d14	99

QA/QC %RECOVERY		
	LCS	LCSD
Phenol	57	56
2-Chlorophenol	65	64
1,4-Dichlorobenzene	67	66
N-Nitroso-di-n-propylamine	64	66
1,2,4-Trichlorobenzene	73	72
4-Chloro-3-methylphenol	67	70
Acenaphthene	71	76
2,4-Dinitrotoluene	65	70
4-Nitrophenol	13	15
Pentachlorophenol	48	53
Pyrene	103	107

QA/QC Analyzed: 10/22/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/Kg

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

Date Sampled: 10/20/03
Date Received: 10/21/03
Date Analyzed: 10/22/03

Client Sample I.D.	STKPL #2 COMP	
LAB. NO.	S1003459	
ANALYTE	R/L	Results
Antimony	1.0	6.9
Arsenic	2.0	2.4
Barium	2.0	150
Beryllium	0.4	ND
Cadmium	0.5	0.7
Chromium	1.0	75
Cobalt	5.0	20
Copper	2.0	27
Lead	1.0	13
Mercury	0.010	0.062
Molybdenum	1.0	ND
Nickel	1.0	95
Selenium	2.0	ND
Silver	1.0	ND
Thallium	2.0	ND
Vanadium	2.0	61
Zinc	2.0	60

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Antimony	89	95	78	85
Arsenic	105	103	95	97
Barium	108	106	148	97
Beryllium	103	103	99	102
Cadmium	108	107	97	97
Chromium	104	102	102	81
Cobalt	105	105	96	93
Copper	105	103	107	98
Lead	102	100	94	88
Mercury	101	98	111	94
Molybdenum	106	105	94	97
Nickel	108	106	109	86
Selenium	107	106	96	98
Silver	102	101	98	101
Thallium	106	105	96	99
Vanadium	106	103	97	81
Zinc	104	103	101	84

QA/QC Analyzed: 10/22/03

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/20/03
Date Received: 10/21/03
Date Analyzed: 10/22/03

Client Sample I.D.	STKPL #2 COMP	
LAB. NO.	S1003459	
ANALYTE	R/L	Results
TPH as Diesel	250	550
TPH as Oil	500	700

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	91	95

QA/QC Analyzed: 10/20/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/20/03
Date Reported

KENNEDY/JENKS CONSULTANTS Stockpile

SAMPLE CHAIN-OF-CUSTODY ANALYSIS REQUEST

☐ 200 New Stine Rd., #115, Bakersfield, CA 93309
☐ 530 South 336th St., Federal Way, WA 98003
☐ 17310 Red Hill Ave., #220, Irvine, CA 92714
☐ 2191 East Bayshore Rd., #200, Palo Alto, CA 94303
☐ 5190 Neil Road, #300, Reno, NV 89502
☒ 3336 Bradshaw Rd., #140, Sacramento, CA 95827
☐ 303 Second St., San Francisco, CA 94107
☐ 1000 Hill Rd., #200, Ventura, CA 93003

POSSIBLE HAZARDS: TPH mo, TPHd [redacted]

Date 10/20/03 Report To Jim Curtis

Source of Samples Santa Rosa Station Company

Sampler Name Jim Curtis Address

Phone Address

Project No. 032777.14 Phone

Lab Destination INV # 1003080 / 1003086

Phone

Carrier/Way Bill No.

(1) Lab ID No.	(1) Client ID No.	COLLECTION Date	COLLECTION Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) ANALYSES REQUESTED: TPHmo	TPHd	BTEX	VOCs	Title 22 Metals					Comment/Conditions (Container type, container number, etc.)
51003459	SVTPL #2 Comp	10/20/03	1300			✓	ICE	48hr	X	X	X	X						Mix well

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analyses requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

SAMPLE RELINQUISHED BY:

Print Name	Signature	Company	Date	Time
Jim Curtis		Kennedy/Jenks	10/20/03	1400

SAMPLE RECEIVED BY:

Print Name	Signature	Company	Date	Time
John Somers		EXCELCHEM	10/24/03	1400

\MISC\CUSTODY2.FRM

000065.08

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Curt Griffiths
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: Title 22 WET / EPA 6010 & 7470A

Date Sampled: 10/17,20,21,22,24,29,31/03
Date Received: 11/07/03
Date Analyzed: 11/14/03

Client Sample I.D.	Stockpile #1		Stockpile #2		Stockpile #3		Stockpile #4		Stockpile #5		Stockpile #6	
LAB. NO.	S1003404		S1003459		S1003522		S1003525		S1003558		S1003736	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
Antimony	0.2	ND	0.2	ND	0.2	ND	0.2	ND	0.2	ND	0.2	ND
Chromium	0.2	0.3	0.2	ND	0.2	0.2	0.2	0.5	0.2	0.3	0.2	ND
Lead	0.2	1.0	0.2	ND	0.2	1.3	0.2	0.5	0.2	ND	0.2	0.3
Mercury	0.00025	ND	0.00025	ND	0.00025	ND	0.00025	ND	0.00025	ND	0.00025	ND
Nickel	0.2	2.0	0.2	2.6	0.2	1.1	0.2	2.2	0.2	1.9	0.2	1.2
Vanadium	0.4	0.4	0.4	0.4	0.4	ND	0.4	1.0	0.4	0.6	0.4	0.5

Client Sample I.D.	Stockpile #7		Stockpile #8		Stockpile #9		Stockpile #10		Stockpile #12	
LAB. NO.	S1003774		S1003846		S1003850		S1003863		S1103009	
ANALYTE	R/L	Results	R/L	Results	R/L	Results	R/L	Results	R/L	Results
Antimony	0.2	ND	0.2	ND	0.2	ND	0.2	ND	0.2	ND
Chromium	0.2	ND	0.2	ND	0.2	ND	0.2	ND	0.2	ND
Lead	0.2	0.4	0.2	ND	0.2	0.7	0.2	ND	0.2	ND
Mercury	0.00025	ND	0.00025	ND	0.00025	ND	0.00025	ND	0.00025	0.0034
Nickel	0.2	1.5	0.2	1.9	0.2	1.3	0.2	1.7	0.2	1.6
Vanadium	0.4	ND	0.4	0.4	0.4	ND	0.4	ND	0.4	ND

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Antimony	110	110	107	108
Chromium	104	107	105	108
Lead	107	105	105	107
Nickel	107	107	106	106
Vanadium	107	108	104	109

QA/QC Analyzed: 11/14/03

QA/QC %RECOVERY		
	LCS	LCSD
Mercury	100	100

QA/QC Analyzed: 11/14/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in mg/L

Laboratory Representative

11/17/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Cut Griffith
Phone #:
Company/Address: Kennedy - Jenks
Fax #:
Project Number/P.O#: 32777.14
Project Name: Santa Rosa Station
Project Location:
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#: FAV# 1003086 / ~~1003080~~
Email Address:

ANALYSIS REQUEST

Page 1 of 2

Bin# 32
Due Date: 11/14

Sample ID	Sampling Date	Sampling Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals (Wet)	Lead (Wet)	Cd, Cr, Pb, Zn, Ni (CAM 5) (Wet)	STLC - Sb, Cr, Pb, Hg, Ni, V (Total)						Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY
Stockpile #1	10/17	1204		X					X			X																	X					t	~~404~~ 5100373~~6~~
Stockpile #2	10/20	1380										X																	X					X	5100345~~9~~
Stockpile #3	10/21	0900										X																	X					X	5100352~~2~~
Stockpile #4	10/21	1115										X																	X					X	5100352~~5~~
Stockpile #5	10/22	1010										X																	X					X	5100355~~8~~
Stockpile #6	10/24	1008										X																	X					X	5100373~~6~~
Stockpile #7	10/24	1615										X																	X					X	5100377~~4~~
Stockpile #8	10/29	1100										X																	X					X	5100384~~6~~
Stockpile #9	10/29	1330										X																	X					X	5100385~~0~~
~~stockpile #10~~	10/29	1615										X																	X					X	5100387~~2~~

Relinquished by: | Date | Time | Received by:
Relinquished by: | Date | Time | Received by:
Relinquished by: | Date | Time | Received by Laboratory:

Remarks/Condition of Sample:
X Client verbally called in & requested analysis
please sign and date approval for additional analyses.

Bill To:

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Curt Grisafi, PKS
Phone #:
Company/Address: Kennedy-Jenks
Fax #:
Project Number/P.O#: 32727-14
Project Name: Santa Rosa Station
Project Location:
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#: 1003086
Email Address:

ANALYSIS REQUEST

Sample ID	Sampling Date	Sampling Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	STLC Cd, Cr, Pb, Hg, Ni						Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
																										Wet										Bin# 32
																										Total										Due Date:
Stockpile #12	10/31	1515		X					X			X																	X						X	5110309

Relinquished by: | Date | Time | Received by:
Relinquished by: | Date | Time | Received by:
Relinquished by: | Date | Time | Received by Laboratory:

Remarks/Condition of Sample:
X
please sign & date

Bill To:

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis , Curt Griffiths
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777
Method: Title 22 WET & EPA 6010

Date Sampled: 10/21/03
Date Received: 10/30/03
Date Analyzed: 11/03/03

Client Sample I.D.	Stockpile #3	
LAB. NO.	S1003522	
ANALYTE	R/L	Results
Lead	0.2	1.4

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Lead	103	104	102	105

QA/QC Analyzed: 11/03/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
WET results given in mg/L

Laboratory Representative

11/03/03
Date Reported

Oct 30 03 04:48p Kennedy/Jenks 9167734784 P.2
10/30/2003 16:36 PAGE 02
530-891-9283

Excelchem Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis / Curt Grissom
Phone #: 362-3251 / 530-891-9293
Company/Address: Kennedy-Jenks
Fax #: 362-9915 / 530-891-9283
Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:

Project Number/P.O#: 032777
Project Name: Santa Rosa Station
Project Location:
Sampler Signature:

ANALYSIS REQUEST INV# 1003086 Page ___ of ___

Bin# 32
Due Date: 11-6

Sample ID	Sampling Date	Sampling Time	Container: VOA	SLEEVE	1L GLASS	PLASTIC	Method Preserved: HCl	HNO3	ICE	NONE	Matrix: WATER	SOIL	AIR	BTEX/TPH as Gasoline (8021/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
Stockpile #3	10/21/03	0900		X					X			X															X			5003522

Wet: X
Total:

Relinquished by:	Date	Time	Received by:	Remarks/Condition of Sample:
				please sign & date approval
Relinquished by:	Date	Time	Received by:	5 Day TAT
Relinquished by:	Date	Time	Received by Laboratory:	Bill To:

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/21/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #3 COMP		STKPL #4 COMP	
LAB. NO.	S1003522		S1003525	
ANALYTE	R/L	Results	R/L	Results
Dichlorodiflouromethane	0.005	ND	0.005	ND
Chloromethane	0.005	ND	0.005	ND
Vinyl chloride	0.005	ND	0.005	ND
Bromomethane	0.005	ND	0.005	ND
Chloroethane	0.005	ND	0.005	ND
Trichlorofluoromethane	0.005	ND	0.005	ND
Acetone	0.05	ND	0.10	ND
1,1-Dichloroethene	0.005	ND	0.005	ND
Iodomethane	0.005	ND	0.005	ND
Methylene chloride	0.020	ND	0.020	ND
Carbon disulfide	0.005	ND	0.005	ND
trans-1,2-Dichloroethene	0.005	ND	0.005	ND
1,1-Dichloroethane	0.005	ND	0.005	ND
2-Butanone	0.05	ND	0.05	ND
2,2-Dichloropropane	0.005	ND	0.005	ND
cis-1,2-Dichloroethene	0.005	ND	0.005	ND
Bromochloromethane	0.005	ND	0.005	ND
Chloroform	0.005	ND	0.005	ND
1,1,1-Trichloroethane	0.005	ND	0.005	ND
Carbon tetrachloride	0.005	ND	0.005	ND
1,1-Dichloropropene	0.005	ND	0.005	ND
Benzene	0.005	ND	0.005	ND
1,2-Dichloroethane	0.005	ND	0.005	ND
Trichloroethene	0.005	ND	0.005	ND
1,2-Dichloropropane	0.005	ND	0.005	ND
Dibromomethane	0.005	ND	0.005	ND
Bromodichloromethane	0.005	ND	0.005	ND
cis-1,3-Dichloropropene	0.005	ND	0.005	ND
4-Methyl-2-pentanone	0.05	ND	0.05	ND
Toluene	0.005	ND	0.005	ND
trans-1,3-Dichloropropene	0.005	ND	0.005	ND
1,1,2-Trichloroethane	0.005	ND	0.005	ND
Tetrachloroethene	0.005	ND	0.005	ND
1,3-Dichloropropane	0.005	ND	0.005	ND
2-Hexanone	0.05	ND	0.05	ND
Dibromochloromethane	0.005	ND	0.005	ND
1,2-Dibromoethane	0.005	ND	0.005	ND

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
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Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/21/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #3 COMP		STKPL #4 COMP	
LAB. NO.	S1003522		S1003525	
ANALYTE	R/L	Results	R/L	Results
Chlorobenzene	0.005	ND	0.005	ND
1,1,1,2-Tetrachloroethane	0.005	ND	0.005	ND
Ethylbenzene	0.005	ND	0.005	ND
m,p-Xylene	0.005	ND	0.005	ND
o-Xylene	0.005	ND	0.005	ND
Styrene	0.005	ND	0.005	ND
Bromoform	0.005	ND	0.005	ND
Isopropylbenzene	0.005	ND	0.005	0.012
Bromobenzene	0.005	ND	0.005	ND
1,1,2,2-Tetrachloroethane	0.005	ND	0.005	ND
1,2,3-Trichloropropane	0.005	ND	0.005	ND
n-Propylbenzene	0.005	ND	0.005	0.019
2-Chlorotoluene	0.005	ND	0.005	ND
4-Chlorotoluene	0.005	ND	0.005	ND
1,3,5-Trimethylbenzene	0.005	ND	0.005	ND
tert-Butylbenzene	0.005	ND	0.005	ND
1,2,4-Trimethylbenzene	0.005	ND	0.005	ND
sec-butylbenzene	0.005	ND	0.005	0.011
1,3-Dichlorobenzene	0.005	ND	0.005	ND
4-Isopropyltoluene	0.005	ND	0.005	ND
1,4-Dichlorobenzene	0.005	ND	0.005	ND
1,2-Dichlorobenzene	0.005	ND	0.005	ND
n-Butylbenzene	0.005	ND	0.005	0.025
1,2-Dibromo-3-chloropropane	0.005	ND	0.005	ND
1,2,4-Trichlorobenzene	0.005	ND	0.005	ND
Hexachlorobutadiene	0.005	ND	0.005	ND
Naphthalene	0.005	0.011	0.025	0.56
1,2,3-Trichlorobenzene	0.005	ND	0.005	ND
SURROGATE %RECOVERY				
Dibromofluoromethane	103		120	
Toluene-d8	104		104	
4-Bromofluorobenzene	113		127	

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

QA/QC %RECOVERY		
	LCS	LCSD
1,1-Dichloroethene	102	96
Benzene	94	92
Trichloroethene	96	90
Toluene	101	100
Chlorobenzene	99	94

QA/QC Analyzed: 10/23/03

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH

Date Sampled: 10/21/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #3 COMP		STKPL #4 COMP	
LAB. NO.	S1003522		S1003525	
ANALYTE	R/L	Results	R/L	Results
N-Nitrosodimethylamine	1.3	ND	1.3	ND
Aniline	1.3	ND	1.3	ND
bis (2-Chloroethyl) ether	1.3	ND	1.3	ND
Phenol	1.3	ND	1.3	ND
2-Chlorophenol	1.3	ND	1.3	ND
1,3-Dichlorobenzene	1.3	ND	1.3	ND
1,4-Dichlorobenzene	1.3	ND	1.3	ND
1,2-Dichlorobenzene	1.3	ND	1.3	ND
Benzyl alcohol	1.3	ND	1.3	ND
bis (2-Chloroisopropyl) ether	1.3	ND	1.3	ND
2-Methylphenol	1.3	ND	1.3	ND
Hexachloroethane	1.3	ND	1.3	ND
N-Nitroso-di-n-propylamine	1.3	ND	1.3	ND
4-Methylphenol	1.3	ND	1.3	ND
Nitrobenzene	1.3	ND	1.3	ND
Isophorone	1.3	ND	1.3	ND
2-Nitrophenol	1.3	ND	1.3	ND
2,4-Dimethylphenol	1.3	ND	1.3	ND
bis (2-Chloroethoxy) methane	1.3	ND	1.3	ND
Benzoic acid	1.3	ND	1.3	ND
2,4-Dichlorophenol	1.3	ND	1.3	ND
1,2,4-Trichlorobenzene	1.3	ND	1.3	ND
Napthalene	1.3	ND	1.3	4.9
4-Chloroaniline	1.3	ND	1.3	ND
Hexachlorobutadiene	1.3	ND	1.3	ND
4-Chloro-3-methylphenol	1.3	ND	1.3	ND
2-Methylnaphthalene	1.3	ND	1.3	35
Hexachlorocyclopentadiene	1.3	ND	1.3	ND
2,4,6-Trichlorophenol	1.3	ND	1.3	ND
2,4,5-Trichlorophenol	1.3	ND	1.3	ND
2-Chloronaphthalene	1.3	ND	1.3	ND
2-Nitroaniline	1.3	ND	1.3	ND
Acenaphthylene	1.3	ND	1.3	ND
Dimethylphthalate	1.3	ND	1.3	ND
2,6-Dinitrotoluene	1.3	ND	1.3	ND
Acenaphthene	1.3	ND	1.3	1.8

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH
Method: EPA 8270C

Date Sampled: 10/21/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #3 COMP		STKPL #4 COMP	
LAB. NO.	S1003522		S1003525	
ANALYTE	R/L	Results	R/L	Results
3-Nitroaniline	1.3	ND	1.3	ND
2,4-Dinitrophenol	1.3	ND	1.3	ND
Dibenzofuran	1.3	ND	1.3	ND
2,4-Dinitrotoluene	1.3	ND	1.3	ND
4-Nitrophenol	1.3	ND	1.3	ND
Fluorene	1.3	ND	1.3	ND
4-Chlorophenyl-phenylether	1.3	ND	1.3	ND
Diethylphthalate	1.3	ND	1.3	ND
4-Nitroaniline	1.3	ND	1.3	ND
Azobenzene	1.3	ND	1.3	ND
4,6-Dinitro-2-methylphenol	1.3	ND	1.3	ND
Nitrosodiphenylamine	1.3	ND	1.3	ND
4-Bromopheny-phenylether	1.3	ND	1.3	ND
Hexachlorobenzene	1.3	ND	1.3	ND
Pentachlorophenol	1.3	ND	1.3	ND
Phenanthrene	1.3	2.7	1.3	8.9
Anthracene	1.3	ND	1.3	ND
Carbazole	1.3	ND	1.3	ND
Di-n-butylphthalate	1.3	ND	1.3	ND
Fluoranthene	1.3	3.3	1.3	ND
Benzidine*	9.3	ND	9.3	ND
Pyrene	1.3	2.2	1.3	3.9
Butylbenzylphthalate	1.3	ND	1.3	ND
3,3'-Dichlorobenzidine	1.3	ND	1.3	ND
Benzo [a] anthracene	1.3	ND	1.3	1.7
Chrysene	1.3	ND	1.3	ND
bis (2-Ethylhexyl) phthalate	1.3	ND	1.3	ND
Di-n-octylphthalate	1.3	ND	1.3	ND
Benzo [b] fluoranthene	1.3	ND	1.3	ND
Benzo [k] fluoranthene	1.3	ND	1.3	ND
Benzo [a] pyrene	1.3	ND	1.3	ND
Indeno [1,2,3-cd] pyrene	1.3	ND	1.3	ND
Dibenz [a,h] anthracene	1.3	ND	1.3	ND
Benzo [g,h,i] perylene	1.3	ND	1.3	ND

* Estimated Value

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
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ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH
Method: EPA 8270C

Date Sampled: 10/21/03
Date Received: 10/21/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #3 COMP	STKPL #4 COMP
LAB. NO.	S1003522	S1003525
SURROGATE %RECOVERY		
Fluorophenol	77	14
Phenol-d5	51	15
Nitrobenzene-d5	39	38
2-Fluorobiphenyl	67	94
2,4,6-Tribromophenol	71	97
Terphenyl-d14	81	107

QA/QC %RECOVERY		
	LCS	LCSD
Phenol	57	56
2-Chlorophenol	65	64
1,4-Dichlorobenzene	67	66
N-Nitroso-di-n-propylamine	64	66
1,2,4-Trichlorobenzene	73	72
4-Chloro-3-methylphenol	67	70
Acenaphthene	71	76
2,4-Dinitrotoluene	65	70
4-Nitrophenol	13	15
Pentachlorophenol	48	53
Pyrene	103	107

QA/QC Analyzed: 10/22/03

QA/QC %RECOVERY		
	LCS	LCSD
Phenol	*	*
2-Chlorophenol	*	*
1,4-Dichlorobenzene	*	*
N-Nitroso-di-n-propylamine	*	*
1,2,4-Trichlorobenzene	*	*
4-Chloro-3-methylphenol	*	*
Acenaphthene	*	*
2,4-Dinitrotoluene	*	*
4-Nitrophenol	*	*
Pentachlorophenol	*	*
Pyrene	*	*

QA/QC Analyzed:

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/Kg

* To follow

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

Date Sampled: 10/21/03
Date Received: 10/21/03
Date Analyzed: 10/22,23/03

Client Sample I.D.	STKPL #3 COMP		STKPL #4 COMP	
LAB. NO.	S1003522		S1003525	
ANALYTE	R/L	Results	R/L	Results
Antimony	1.0	7.5	1.0	6.1
Arsenic	2.0	4.0	2.0	4.0
Barium	2.0	160	2.0	180
Beryllium	0.4	ND	0.4	ND
Cadmium	0.5	0.8	0.5	0.7
Chromium	1.0	72	1.0	76
Cobalt	5.0	20	5.0	18
Copper	2.0	34	2.0	61
Lead	1.0	85	1.0	45
Mercury	0.010	0.15	0.010	0.070
Molybdenum	1.0	ND	1.0	ND
Nickel	1.0	86	1.0	94
Selenium	2.0	ND	2.0	ND
Silver	1.0	ND	1.0	ND
Thallium	2.0	ND	2.0	ND
Vanadium	2.0	58	2.0	59
Zinc	2.0	110	2.0	90

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Antimony	89	95	78	85
Arsenic	105	103	95	97
Barium	108	106	148	97
Beryllium	103	103	99	102
Cadmium	108	107	97	97
Chromium	104	102	102	81
Cobalt	105	105	96	93
Copper	105	103	107	98
Lead	102	100	94	88
Mercury	101	98	111	94
Molybdenum	106	105	94	97
Nickel	108	106	109	86
Selenium	107	106	96	98
Silver	102	101	98	101
Thallium	106	105	96	99
Vanadium	106	103	97	81
Zinc	104	103	101	84

QA/QC Analyzed: 10/22/03

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Antimony	85	93	77	81
Arsenic	103	104	102	100
Barium	111	109	112	120
Beryllium	102	104	105	103
Cadmium	103	106	99	99
Chromium	102	103	100	92
Cobalt	102	105	95	95
Copper	101	100	116	110
Lead	103	103	113	108
Mercury	92	91	99	75
Molybdenum	106	107	99	100
Nickel	104	105	108	101
Selenium	105	103	96	95
Silver	107	102	105	105
Thallium	104	105	100	97
Vanadium	104	103	103	100
Zinc	105	108	126	116

QA/QC Analyzed: 10/23/03

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
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Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/21/03
Date Received: 10/21/03
Date Analyzed: 10/21/03

Client Sample I.D.	STKPL #3 COMP		STKPL #4 COMP	
LAB. NO.	S1003522		S1003525	
ANALYTE	R/L	Results	R/L	Results
TPH as Diesel	100	ND	100	5300
TPH as Oil	200	550	200	3700

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	85	88

QA/QC Analyzed: 10/21/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/21/03
Date Reported

Stockpile composites

KENNEDY/JENKS CONSULTANTS

- ☐ 200 New Stine Rd., #115, Bakersfield, CA 93309
- ☐ 530 South 336th St., Federal Way, WA 98003
- ☐ 17310 Red Hill Ave., #220, Irvine, CA 92714
- ☐ 2191 East Bayshore Rd., #200, Palo Alto, CA 94303
- ☐ 5190 Neil Road, #300, Reno, NV 89502
- ☒ 3336 Bradshaw Rd., #140, Sacramento, CA 95827
- ☐ 303 Second St., San Francisco, CA 94107
- ☐ 1000 Hill Rd., #200, Ventura, CA 93003

SAMPLE CHAIN-OF-CUSTODY ANALYSIS REQUEST

POSSIBLE HAZARDS: TPH mo, TPH d

Date 10/21/03

Report To Jim Curtis / Curt Griffith

Source of Samples Santa Rosa Curtis Station

Company Kennedy, Jenks

Sampler Name

Address

Phone 916 362-3251

Phone

Project No. 033777.

Phone

Lab Destination Inv #

Address 1003080 / 1003086

Phone

Carrier/Way Bill No.

(1) Lab ID No.	(1) Client ID No.	COLLECTION Date	COLLECTION Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) ANALYSES REQUESTED: SVOCs w/ PAH	SVOCs	TPH g	TPH mo	Title 22 metals				Comment/Conditions (Container type, container number, etc.)
S1003522	STKPL #3	10/21/03	0900	S		✓	ICE	48 hr	X	X	X	X					brass tube; 4:1 field comp
																	mix well
S1003525	STKPL #4	10/21/03	1115	S		✓	ICE	48 hr	X	X	X	X					brass tube, 4:1 field comp
																	mix well

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analyses requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

SAMPLE RELINQUISHED BY:

Print Name	Signature	Company	Date	Time
Jim Curtis		Kennedy/J	10/21/03	

SAMPLE RECEIVED BY:

Print Name	Signature	Company	Date	Time
John Somers		EXCELCHEM	10/24/03	

Samples delivered to mobile lab throughout day

\MISC\CUSTODY2.FRM

000085.08

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/22/03
Date Received: 10/23/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #5	
LAB. NO.	S1003558	
ANALYTE	R/L	Results
Dichlorodiflouromethane	0.005	ND
Chloromethane	0.005	ND
Vinyl chloride	0.005	ND
Bromomethane	0.005	ND
Chloroethane	0.005	ND
Trichlorofluoromethane	0.005	ND
Acetone	0.05	ND
1,1-Dichloroethene	0.005	ND
Iodomethane	0.005	ND
Methylene chloride	0.020	ND
Carbon disulfide	0.005	ND
trans-1,2-Dichloroethene	0.005	ND
1,1-Dichloroethane	0.005	ND
2-Butanone	0.05	ND
2,2-Dichloropropane	0.005	ND
cis-1,2-Dichloroethene	0.005	ND
Bromochloromethane	0.005	ND
Chloroform	0.005	ND
1,1,1-Trichloroethane	0.005	ND
Carbon tetrachloride	0.005	ND
1,1-Dichloropropene	0.005	ND
Benzene	0.005	ND
1,2-Dichloroethane	0.005	ND
Trichloroethene	0.005	ND
1,2-Dichloropropane	0.005	ND
Dibromomethane	0.005	ND
Bromodichloromethane	0.005	ND
cis-1,3-Dichloropropene	0.005	ND
4-Methyl-2-pentanone	0.05	ND
Toluene	0.005	ND
trans-1,3-Dichloropropene	0.005	ND
1,1,2-Trichloroethane	0.005	ND
Tetrachloroethene	0.005	ND
1,3-Dichloropropane	0.005	ND
2-Hexanone	0.05	ND
Dibromochloromethane	0.005	ND
1,2-Dibromoethane	0.005	ND

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/22/03
Date Received: 10/23/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #5	
LAB. NO.	S1003558	
ANALYTE	R/L	Results
Chlorobenzene	0.005	ND
1,1,1,2-Tetrachloroethane	0.005	ND
Ethylbenzene	0.005	ND
m,p-Xylene	0.005	ND
o-Xylene	0.005	ND
Styrene	0.005	ND
Bromoform	0.005	ND
Isopropylbenzene	0.005	ND
Bromobenzene	0.005	ND
1,1,2,2-Tetrachloroethane	0.005	ND
1,2,3-Trichloropropane	0.005	ND
n-Propylbenzene	0.005	ND
2-Chlorotoluene	0.005	ND
4-Chlorotoluene	0.005	ND
1,3,5-Trimethylbenzene	0.005	ND
tert-Butylbenzene	0.005	ND
1,2,4-Trimethylbenzene	0.005	ND
sec-butylbenzene	0.005	ND
1,3-Dichlorobenzene	0.005	ND
4-Isopropyltoluene	0.005	ND
1,4-Dichlorobenzene	0.005	ND
1,2-Dichlorobenzene	0.005	ND
n-Butylbenzene	0.005	0.007
1,2-Dibromo-3-chloropropane	0.005	ND
1,2,4-Trichlorobenzene	0.005	ND
Hexachlorobutadiene	0.005	ND
Naphthalene	0.005	0.020
1,2,3-Trichlorobenzene	0.005	ND
SURROGATE %RECOVERY		
Dibromofluoromethane	109	
Toluene-d8	101	
4-Bromofluorobenzene	122	

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

QA/QC %RECOVERY		
	LCS	LCSD
1,1-Dichloroethene	102	96
Benzene	94	92
Trichloroethene	96	90
Toluene	101	100
Chlorobenzene	99	94

QA/QC Analyzed: 10/23/03

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH

Date Sampled: 10/22/03
Date Received: 10/23/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #5	
LAB. NO.	S1003558	
ANALYTE	R/L**	Results
N-Nitrosodimethylamine	1.3	ND
Aniline	1.3	ND
bis (2-Chloroethyl) ether	1.3	ND
Phenol	1.3	ND
2-Chlorophenol	1.3	ND
1,3-Dichlorobenzene	1.3	ND
1,4-Dichlorobenzene	1.3	ND
1,2-Dichlorobenzene	1.3	ND
Benzyl alcohol	1.3	ND
bis (2-Chloroisopropyl) ether	1.3	ND
2-Methylphenol	1.3	ND
Hexachloroethane	1.3	ND
N-Nitroso-di-n-propylamine	1.3	ND
4-Methylphenol	1.3	ND
Nitrobenzene	1.3	ND
Isophorone	1.3	ND
2-Nitrophenol	1.3	ND
2,4-Dimethylphenol	1.3	ND
bis (2-Chloroethoxy) methane	1.3	ND
Benzoic acid	1.3	ND
2,4-Dichlorophenol	1.3	ND
1,2,4-Trichlorobenzene	1.3	ND
Napthalene	1.3	ND
4-Chloroaniline	1.3	ND
Hexachlorobutadiene	1.3	ND
4-Chloro-3-methylphenol	1.3	ND
2-Methylnaphthalene	1.3	ND
Hexachlorocyclopentadiene	1.3	ND
2,4,6-Trichlorophenol	1.3	ND
2,4,5-Trichlorophenol	1.3	ND
2-Chloronaphthalene	1.3	ND
2-Nitroaniline	1.3	ND
Acenaphthylene	1.3	ND
Dimethylphthalate	1.3	ND
2,6-Dinitrotoluene	1.3	ND
Acenaphthene	1.3	ND

** Elevated reporting levels are due to high concentration of non-target analytes requiring sample dilution.

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
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ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH
Method: EPA 8270C

Date Sampled: 10/22/03
Date Received: 10/23/03
Date Analyzed:

Client Sample I.D.	STKPL #5	
LAB. NO.	S1003558	
ANALYTE	R/L **	Results
3-Nitroaniline	1.3	ND
2,4-Dinitrophenol	1.3	ND
Dibenzofuran	1.3	ND
2,4-Dinitrotoluene	1.3	ND
4-Nitrophenol	1.3	ND
Fluorene	1.3	ND
4-Chlorophenyl-phenylether	1.3	ND
Diethylphthalate	1.3	ND
4-Nitroaniline	1.3	ND
Azobenzene	1.3	ND
4,6-Dinitro-2-methylphenol	1.3	ND
Nitrosodiphenylamine	1.3	ND
4-Bromopheny-phenylether	1.3	ND
Hexachlorobenzene	1.3	ND
Pentachlorophenol	1.3	ND
Phenanthrene	1.3	ND
Anthracene	1.3	ND
Carbazole	1.3	ND
Di-n-butylphthalate	1.3	ND
Fluoranthene	1.3	ND
Benzidine*	9.3	ND
Pyrene	1.3	ND
Butylbenzylphthalate	1.3	ND
3,3'-Dichlorobenzidine	1.3	ND
Benzo [a] anthracene	1.3	ND
Chrysene	1.3	ND
bis (2-Ethylhexyl) phthalate	1.3	ND
Di-n-octylphthalate	1.3	ND
Benzo [b] fluoranthene	1.3	ND
Benzo [k] fluoranthene	1.3	ND
Benzo [a] pyrene	1.3	ND
Indeno [1,2,3-cd] pyrene	1.3	ND
Dibenz [a,h] anthracene	1.3	ND
Benzo [g,h,i] perylene	1.3	ND

* Estimated Value

** Elevated reporting levels are due to high concentration of non-target analytes requiring sample dilution.

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: 8270C-PAH
Method: EPA 8270C

Date Sampled: 10/22/03
Date Received: 10/23/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #5
LAB. NO.	S1003558
SURROGATE %RECOVERY	
Fluorophenol	68
Phenol-d5	48
Nitrobenzene-d5	36
2-Fluorobiphenyl	72
2,4,6-Tribromophenol	70
Terphenyl-d14	82

QA/QC %RECOVERY		
	LCS	LCSD
Phenol	64	56
2-Chlorophenol	68	60
1,4-Dichlorobenzene	69	61
N-Nitroso-di-n-propylamine	71	65
1,2,4-Trichlorobenzene	76	67
4-Chloro-3-methylphenol	79	71
Acenaphthene	81	71
2,4-Dinitrotoluene	75	70
4-Nitrophenol	95	78
Pentachlorophenol	55	47
Pyrene	108	96

QA/QC Analyzed: 10/23/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/Kg

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

Date Sampled: 10/22/03
Date Received: 10/23/03
Date Analyzed: 10/23/03

Client Sample I.D.	STKPL #5	
LAB. NO.	S1003558	
ANALYTE	R/L	Results
Antimony	1.0	7.1
Arsenic	2.0	3.3
Barium	2.0	170
Beryllium	0.4	ND
Cadmium	0.5	0.7
Chromium	1.0	97
Cobalt	5.0	23
Copper	2.0	35
Lead	1.0	10
Mercury	0.010	0.039
Molybdenum	1.0	ND
Nickel	1.0	150
Selenium	2.0	ND
Silver	1.0	ND
Thallium	2.0	ND
Vanadium	2.0	67
Zinc	2.0	63

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM

ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Antimony	85	93	77	81
Arsenic	103	104	102	100
Barium	111	109	112	120
Beryllium	102	104	105	103
Cadmium	103	106	99	99
Chromium	102	103	100	92
Cobalt	102	105	95	95
Copper	101	100	116	110
Lead	103	103	113	108
Mercury	92	91	99	75
Molybdenum	106	107	99	100
Nickel	104	105	108	101
Selenium	105	103	96	95
Silver	107	102	105	105
Thallium	104	105	100	97
Vanadium	104	103	103	100
Zinc	105	108	126	116

QA/QC Analyzed: 10/23/03

Laboratory Representative

10/23/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/22/03
Date Received: 10/23/03
Date Analyzed: 10/22/03

Client Sample I.D.	STKPL #5	
LAB. NO.	S1003558	
TPH as Diesel	250	1300
TPH as Oil	500	1400

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	80	73

QA/QC Analyzed: 10/22/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/22/03
Date Reported

KENNEDY/JENKS CONSULTANTS

☐ 200 New Stine Rd., #115, Bakersfield, CA 93309
☐ 530 South 336th St., Federal Way, WA 98003
☐ 17310 Red Hill Ave., #220, Irvine, CA 92714
☐ 2191 East Bayshore Rd., #200, Palo Alto, CA 94303
☐ 5190 Neil Road, #300, Reno, NV 89502
☒ 3336 Bradshaw Rd., #140, Sacramento, CA 95827
☐ 303 Second St., San Francisco, CA 94107
☐ 1000 Hill Rd., #200, Ventura, CA 93003

SAMPLE CHAIN-OF-CUSTODY ANALYSIS REQUEST

POSSIBLE HAZARDS: TPHMO, TPHD 1003080/1003086

Date 10/22/03 Report To Jim Curtis/Curt Griffiths

Source of Samples Santa Rosa Company

Sampler Name J Curtis Station Address

Phone Address

Project No. 032777.14 Phone

Lab Destination

Address

Phone

Carrier/Way Bill No.

(1) Lab ID No.	(1) Client ID No.	COLLECTION Date	COLLECTION Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) ANALYSES REQUESTED: EPA 8015 M-TPH	EPA 8020 TPH	EPA 8020 TPH						Comment/Conditions (Container type, container number, etc.)
S1003558	STATL #5	10/22/03	1010	S		✓	ICE	48	X	X	X	X					

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analyses requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

SAMPLE RELINQUISHED BY: Print Name	Signature	Company	Date	Time	SAMPLE RECEIVED BY: Print Name	Signature	Company	Date	Time
Jim Curtis		KJ	10/23	1745	GRACIANNE DELACRUZ		EXCELchem	10-23-03	11:45

\MISC\CUSTODY2.FRM

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EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928

Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/24/03
Date Received: 10/24/03
Date Analyzed: 10/27/03

Client Sample I.D.	Stockpile 6		Stockpile 7	
LAB. NO.	S1003736		S1003774	
ANALYTE	R/L	Results	R/L	Results
Chlorobenzene	0.005	ND	0.005	ND
1,1,1,2-Tetrachloroethane	0.005	ND	0.005	ND
Ethylbenzene	0.005	ND	0.005	ND
m,p-Xylene	0.005	ND	0.005	ND
o-Xylene	0.005	ND	0.005	ND
Styrene	0.005	ND	0.005	ND
Bromoform	0.005	ND	0.005	ND
Isopropylbenzene	0.005	0.008	0.005	ND
Bromobenzene	0.005	ND	0.005	ND
1,1,2,2-Tetrachloroethane	0.005	ND	0.005	ND
1,2,3-Trichloropropane	0.005	ND	0.005	ND
n-Propylbenzene	0.005	0.011	0.005	ND
2-Chlorotoluene	0.005	ND	0.005	ND
4-Chlorotoluene	0.005	ND	0.005	ND
1,3,5-Trimethylbenzene	0.005	ND	0.005	ND
tert-Butylbenzene	0.005	ND	0.005	ND
1,2,4-Trimethylbenzene	0.005	ND	0.005	ND
sec-butylbenzene	0.005	ND	0.005	ND
1,3-Dichlorobenzene	0.005	ND	0.005	ND
4-Isopropyltoluene	0.005	ND	0.005	ND
1,4-Dichlorobenzene	0.005	ND	0.005	ND
1,2-Dichlorobenzene	0.005	ND	0.005	ND
n-Butylbenzene	0.005	0.019	0.005	ND
1,2-Dibromo-3-chloropropane	0.005	ND	0.005	ND
1,2,4-Trichlorobenzene	0.005	ND	0.005	ND
Hexachlorobutadiene	0.005	ND	0.005	ND
Naphthalene	0.005	ND	0.025	ND
1,2,3-Trichlorobenzene	0.005	ND	0.005	ND
SURROGATE %RECOVERY				
Dibromofluoromethane	117		112	
Toluene-d8	101		108	
4-Bromofluorobenzene	126		109	

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/28/03
Date Reported

EXCELCHEM ENVIRONMENTAL LABS IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 2119)

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

QA/QC %RECOVERY		
	LCS	LCSD
1,1-Dichloroethene	118	106
Benzene	117	109
Trichloroethene	112	102
Toluene	114	112
Chlorobenzene	108	106

QA/QC Analyzed: 10/27/03

Laboratory Representative

10/28/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8270C

Date Sampled: 10/24/03
Date Received: 10/24/03
Date Analyzed: 10/27/03

Client Sample I.D.	Stockpile 6		Stockpile 7	
LAB. NO.	S1003736		S1003774	
ANALYTE	R/L	Results	R/L	Results
N-Nitrosodimethylamine	0.7	ND	0.7	ND
Aniline	0.7	ND	0.7	ND
bis (2-Chloroethyl) ether	0.7	ND	0.7	ND
Phenol	0.7	ND	0.7	ND
2-Chlorophenol	0.7	ND	0.7	ND
1,3-Dichlorobenzene	0.7	ND	0.7	ND
1,4-Dichlorobenzene	0.7	ND	0.7	ND
1,2-Dichlorobenzene	0.7	ND	0.7	ND
Benzyl alcohol	0.7	ND	0.7	ND
bis (2-Chloroisopropyl) ether	0.7	ND	0.7	ND
2-Methylphenol	0.7	ND	0.7	ND
Hexachloroethane	0.7	ND	0.7	ND
N-Nitroso-di-n-propylamine	0.7	ND	0.7	ND
4-Methylphenol	0.7	ND	0.7	ND
Nitrobenzene	0.7	ND	0.7	ND
Isophorone	0.7	ND	0.7	ND
2-Nitrophenol	0.7	ND	0.7	ND
2,4-Dimethylphenol	0.7	ND	0.7	ND
bis (2-Chloroethoxy) methane	0.7	ND	0.7	ND
Benzoic acid	0.7	ND	0.7	ND
2,4-Dichlorophenol	0.7	ND	0.7	ND
1,2,4-Trichlorobenzene	0.7	ND	0.7	ND
Napthalene	0.7	ND	0.7	ND
4-Chloroaniline	0.7	ND	0.7	ND
Hexachlorobutadiene	0.7	ND	0.7	ND
4-Chloro-3-methylphenol	0.7	ND	0.7	ND
2-Methylnaphthalene	0.7	ND	0.7	ND
Hexachlorocyclopentadiene	0.7	ND	0.7	ND
2,4,6-Trichlorophenol	0.7	ND	0.7	ND
2,4,5-Trichlorophenol	0.7	ND	0.7	ND
2-Chloronaphthalene	0.7	ND	0.7	ND
2-Nitroaniline	0.7	ND	0.7	ND
Acenaphthylene	0.7	ND	0.7	ND
Dimethylphthalate	0.7	ND	0.7	ND
2,6-Dinitrotoluene	0.7	ND	0.7	ND
Acenaphthene	0.7	ND	0.7	ND

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8270C

Date Sampled: 10/24/03
Date Received: 10/24/03
Date Analyzed: 10/27/03

Client Sample I.D.	Stockpile 6		Stockpile 7	
LAB. NO.	S1003736		S1003774	
ANALYTE	R/L	Results	R/L	Results
3-Nitroaniline	0.7	ND	0.7	ND
2,4-Dinitrophenol	0.7	ND	0.7	ND
Dibenzofuran	0.7	ND	0.7	ND
2,4-Dinitrotoluene	0.7	ND	0.7	ND
4-Nitrophenol	0.7	ND	0.7	ND
Fluorene	0.7	ND	0.7	ND
4-Chlorophenyl-phenylether	0.7	ND	0.7	ND
Diethylphthalate	0.7	ND	0.7	ND
4-Nitroaniline	0.7	ND	0.7	ND
Azobenzene	0.7	ND	0.7	ND
4,6-Dinitro-2-methylphenol	0.7	ND	0.7	ND
Nitrosodiphenylamine	0.7	ND	0.7	ND
4-Bromopheny-phenylether	0.7	ND	0.7	ND
Hexachlorobenzene	0.7	ND	0.7	ND
Pentachlorophenol	0.7	ND	0.7	ND
Phenanthrene	0.7	1.8	0.7	ND
Anthracene	0.7	ND	0.7	ND
Carbazole	0.7	ND	0.7	ND
Di-n-butylphthalate	0.7	ND	0.7	ND
Fluoranthene	0.7	ND	0.7	ND
Benzidine*	4.7	ND	4.7	ND
Pyrene	0.7	1.0	0.7	ND
Butylbenzylphthalate	0.7	ND	0.7	ND
3,3'-Dichlorobenzidine	0.7	ND	0.7	ND
Benzo [a] anthracene	0.7	ND	0.7	ND
Chrysene	0.7	ND	0.7	ND
bis (2-Ethylhexyl) phthalate	0.7	ND	0.7	ND
Di-n-octylphthalate	0.7	ND	0.7	ND
Benzo [b] fluoranthene	0.7	ND	0.7	ND
Benzo [k] fluoranthene	0.7	ND	0.7	ND
Benzo [a] pyrene	0.7	ND	0.7	ND
Indeno [1,2,3-cd] pyrene	0.7	ND	0.7	ND
Dibenz [a,h] anthracene	0.7	ND	0.7	ND
Benzo [g,h,i] perylene	0.7	ND	0.7	ND

* Estimated Value

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8270C

Date Sampled: 10/24/03
Date Received: 10/24/03
Date Analyzed: 10/27/03

Client Sample I.D.	Stockpile 6	Stockpile 7
LAB. NO.	S1003736	S1003774
SURROGATE %RECOVERY		
Fluorophenol	54	53
Phenol-d5	23	32
Nitrobenzene-d5	29	64
2-Fluorobiphenyl	73	71
2,4,6-Tribromophenol	76	70
Terphenyl-d14	81	76

QA/QC %RECOVERY		
	LCS	LCSD
Phenol	55	63
2-Chlorophenol	63	68
1,4-Dichlorobenzene	64	70
N-Nitroso-di-n-propylamine	62	66
1,2,4-Trichlorobenzene	71	77
4-Chloro-3-methylphenol	68	72
Acenaphtlene	72	76
2,4-Dinitrotoluene	65	68
4-Nitrophenol	71	85
Pentachlorophenol	66	70
Pyrene	91	97

QA/QC Analyzed: 10/27/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/Kg

Laboratory Representative

10/28/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

Date Sampled: 10/24/03
Date Received: 10/24/03
Date Analyzed: 10/27/03

Client Sample I.D.	Stockpile 6		Stockpile 7	
LAB. NO.	S1003736		S1003774	
ANALYTE	R/L	Results	R/L	Results
Antimony	1.0	7.4	1.0	6.0
Arsenic	2.0	4.9	2.0	2.3
Barium	2.0	160	2.0	160
Beryllium	0.3	ND	0.3	ND
Cadmium	0.5	0.8	0.5	0.7
Chromium	1.0	80	1.0	70
Cobalt	5.0	19	5.0	17
Copper	2.0	35	2.0	37
Lead	1.0	41	1.0	23
Mercury	0.010	0.14	0.010	0.064
Molybdenum	1.0	ND	1.0	ND
Nickel	1.0	110	1.0	94
Selenium	2.0	ND	2.0	ND
Silver	1.0	ND	1.0	ND
Thallium	2.0	ND	2.0	ND
Vanadium	2.0	62	2.0	49
Zinc	2.0	74	2.0	64

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

10/28/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 6010B and EPA 7471A (Hg)

QA/QC %RECOVERY				
	LCS	LCSD	MS	MSD
Antimony	77	88	70	74
Arsenic	94	95	88	93
Barium	91	92	110	89
Beryllium	99	99	92	94
Cadmium	95	97	85	85
Chromium	95	95	88	83
Cobalt	94	97	86	85
Copper	95	93	89	106
Lead	93	93	66	88
Mercury	102	99	93	95
Molybdenum	95	96	85	86
Nickel	97	100	90	84
Selenium	95	96	84	85
Silver	87	85	84	86
Thallium	97	98	85	86
Vanadium	93	94	84	88
Zinc	96	96	85	91

QA/QC Analyzed: 10/27/03

Laboratory Representative

10/28/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/24/03
Date Received: 10/24/03
Date Analyzed: 10/24,27/03

Client Sample I.D.	STOCKPILE #6		STOCKPILE #7	
LAB. NO.	S1003736		S1003774	
ANALYTE	R/L	Results	R/L	Results
TPH as Diesel	250	2000	100	ND
TPH as Oil	500	2100	200	470

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	98	95

QA/QC Analyzed: 10/24/03

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	112	103

QA/QC Analyzed: 10/27/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/24,27/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916)
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd. #140, Sacramento, CA 95827
Fax #: (916)
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
IAV# 1003080 / 1003086

ANALYSIS REQUEST

Page 1 of 1

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Wash	Requested TAT: 12hr/24hr/48hr/72hr/1wk	LAB USE ONLY:
STOCKPILE #6	10/24 2003	1008		X					X			X				X	X				X				X	X			X	72hr	S1003736
STOCKPILE #7	"	1015		X					X			X				X	X				X				X	X			X	72hr	S1003774

Wet
Total

Bin#
Due Date: 10/28

Relinquished by:	Date	Time	Received by:
	10/24 2003		
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	10/24/03	—	

Remarks/Condition of Sample:
8015M is analyzed via mobile.
10-24-03

Bill To: Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/24/03
Date Received: 10/24/03
Date Analyzed: 10/27/03

Client Sample I.D.	Stockpile 6		Stockpile 7	
LAB. NO.	S1003736		S1003774	
ANALYTE	R/L	Results	R/L	Results
Dichlorodiflouromethane	0.005	ND	0.005	ND
Chloromethane	0.005	ND	0.005	ND
Vinyl chloride	0.005	ND	0.005	ND
Bromomethane	0.005	ND	0.005	ND
Chloroethane	0.005	ND	0.005	ND
Trichlorofluoromethane	0.005	ND	0.005	ND
Acetone	0.05	ND	0.05	ND
1,1-Dichloroethene	0.005	ND	0.005	ND
Iodomethane	0.005	ND	0.005	ND
Methylene chloride	0.020	ND	0.020	ND
Carbon disulfide	0.005	ND	0.005	ND
trans-1,2-Dichloroethene	0.005	ND	0.005	ND
1,1-Dichloroethane	0.005	ND	0.005	ND
2-Butanone	0.05	ND	0.05	ND
2,2-Dichloropropane	0.005	ND	0.005	ND
cis-1,2-Dichloroethene	0.005	ND	0.005	ND
Bromochloromethane	0.005	ND	0.005	ND
Chloroform	0.005	ND	0.005	ND
1,1,1-Trichloroethane	0.005	ND	0.005	ND
Carbon tetrachloride	0.005	ND	0.005	ND
1,1-Dichloropropene	0.005	ND	0.005	ND
Benzene	0.005	ND	0.005	ND
1,2-Dichloroethane	0.005	ND	0.005	ND
Trichloroethene	0.005	ND	0.005	ND
1,2-Dichloropropane	0.005	ND	0.005	ND
Dibromomethane	0.005	ND	0.005	ND
Bromodichloromethane	0.005	ND	0.005	ND
cis-1,3-Dichloropropene	0.005	ND	0.005	ND
4-Methyl-2-pentanone	0.05	ND	0.05	ND
Toluene	0.005	ND	0.005	ND
trans-1,3-Dichloropropene	0.005	ND	0.005	ND
1,1,2-Trichloroethane	0.005	ND	0.005	ND
Tetrachloroethene	0.005	ND	0.005	ND
1,3-Dichloropropane	0.005	ND	0.005	ND
2-Hexanone	0.05	ND	0.05	ND
Dibromochloromethane	0.005	ND	0.005	ND
1,2-Dibromoethane	0.005	ND	0.005	ND

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/27/03
Date Received: 10/27/03
Date Analyzed: 10/27/03

Client Sample I.D.	STKPL #8	
LAB. NO.	S1003793	
ANALYTE	R/L	Results
TPH as Diesel	100	400
TPH as Oil	200	370

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Oil	112	103

QA/QC Analyzed: 10/27/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/27/03
Date Reported

KENNEDY/JENKS CONSULTANTS

SAMPLE CHAIN-OF-CUSTODY ANALYSIS REQUEST

☐ 200 New Stine Rd., #115, Bakersfield, CA 93309
☐ 530 South 336th St., Federal Way, WA 98003
☐ 17310 Red Hill Ave., #220, Irvine, CA 92714
☐ 2191 East Bayshore Rd., #200, Palo Alto, CA 94303
☐ 5190 Neil Road, #300, Reno, NV 89502
☒ 8336 Bradshaw Rd., #140, Sacramento, CA 95827
☐ 303 Second St., San Francisco, CA 94107
☐ 1000 Hill Rd., #200, Ventura, CA 93003

1003080

POSSIBLE HAZARDS: TPHd, TPHmo

Date 10/27/03 | Report To Jim Curtis / Curt

Source of Samples Santa Rosa Station | Company KJ Griffiths

Sampler Name J Curtis | Address

Phone | Phone

Project No. | Phone

Lab Destination

Address

Phone

Carrier/Way Bill No.

(1) Lab ID No.	(1) Client ID No.	COLLECTION Date	COLLECTION Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) ANALYSES REQUESTED: SVOCs w PAH	VOCs	TPHd/TPHmo	Title 22 metals					Comment/Conditions (Container type, container number, etc.)
S1003793	SWPL #8	10/27/03	1310	S		✓	ICE		X	X	X	X					Mix well, 4:1 field composite
																	Hold SVOCs, VOCs & Metals

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analyses requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

SAMPLE RELINQUISHED BY:

Print Name	Signature	Company	Date	Time
Jim Curtis		Kennedy/Jenks	10/27/03	1315

SAMPLE RECEIVED BY:

Print Name	Signature	Company	Date	Time
John Somers		EXCELCHEM	10/27/03	1315

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/29/03
Date Received: 10/29/03
Date Analyzed: 10/29/03

Client Sample I.D.	STKPL #8		STKPL #9		STKPL #10	
LAB. NO.	S1003846		S1003850		S1003863	
ANALYTE	R/L	Results	R/L	Results	R/L	Results
TPH as Diesel	10	140	10	16	10	390
TPH as Oil	20	160	20	150	20	350

QA/QC %RECOVERY		
	MS	MSD
TPH as Oil	91	90

QA/QC Analyzed: 10/29/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Samples were analyzed at Excelchem's mobile facility.

Laboratory Representative

10/29/03
Date Reported

KENNEDY/JENKS CONSULTANTS

Stockpile Samples

SAMPLE CHAIN-OF-CUSTODY ANALYSIS REQUEST

☐ 200 New Stine Rd., #115, Bakersfield, CA 93309
☐ 530 South 336th St., Federal Way, WA 98003
☐ 17310 Red Hill Ave., #220, Irvine, CA 92714
☐ 2191 East Bayshore Rd., #200, Palo Alto, CA 94303
☐ 5190 Neil Road, #300, Reno, NV 89502
☒ 3336 Bradshaw Rd., #140, Sacramento, CA 95827
☐ 303 Second St., San Francisco, CA 94107
☐ 1000 Hill Rd., #200, Ventura, CA 93003

1003080

POSSIBLE HAZARDS: TPHd, TPHmo

Date 10/29/03

Source of Samples Santa Rosa

Sampler Name J Curtis Station

Phone _____

Project No. 032777.14

Report To: Jim Curtis / Curt Graf

Company Kennedy/Jenks

Address _____

Phone _____

Lab Destination _____

Address _____

Phone _____

Carrier/Way Bill No. _____

(1) Lab ID No.	(1) Client ID No.	COLLECTION Date	COLLECTION Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) ANALYSES REQUESTED: TPHd	TPHmo	EPA 8015	VOCs	Title 22 Metals					Comment/Conditions (Container type, container number, etc.)
S1003846	STKPL #8	10/29/03	1100	S		✓	ICE	Mod	X									mix well: 4:1 field comp
	STKPL #8	10/29/03	1100	S		✓	ICE	Fixed			X	X	X					Hold
S1003850	STKPL #9	10/29/03	1330	S		✓	ICE	Mod	X									mix well: 4:1 field comp
	STKPL #9	10/29/03	1330	S		✓	ICE	Fixed			X	X	X					Hold
S1003863	STKPL #10	10/29/03	1615	S		✓	ICE	Fixed	X									mix well: 4:1 field comp
	STKPL #10	10/29/03	1615	S		✓	ICE	Fixed			X	X	X					Hold

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analyses requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

SAMPLE RELINQUISHED BY:

Print Name	Signature	Company	Date	Time
Curtis Station	Curtis Station	K/J	10/30/2003	1018

SAMPLE RECEIVED BY:

Print Name	Signature	Company	Date	Time
JOSEPH BALLA	Joseph Balla	Excel Chem	10/29/03	

Samples were rec'd throughout day by mobile lab.

10/29/03

.MISC\CUSTODY2.FRM

000065.06

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 10/31/03
Date Received: 11/03/03
TPHd Analyzed: 11/03/03
TPHo Analyzed: 11/03/03

Client Sample I.D.	Stockpitle #12	
LAB. NO.	S1103009	
ANALYTE	R/L	Results
TPH as Diesel	40	630
TPH as Oil	400	610

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	87	77
TPH as Oil	89	86

QA/QC Analyzed: 11/04/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

11/05/03
Date Reported

Sample Chain-of-Custody/Analysis Request

INV# 1003086

Kennedy/Jenks Consultants

Page 1/1

Possible Hazards Analytes

Client K/J

Site SR Sta

Project No. 032777.14

Sampler Name M. McLeod

Telephone 415-243-2508

Report to Jim Curtis

Company K/J

Address 3336 Bradshaw

Fax 916-362-9918

Lab Destination ExelChem

Address

Telephone 916-773-3364

Carrier/Way Bill No. n/a

(1) Client ID No.	Collection Date	Collection Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) Analyses Requested: TPHd	TPHmo	Silica Gel Cleanup	SVOCs	VOCs	CAM 17 metals				Comment/Conditions (container type, container number, etc.)
STOCKPILE #12	10/31 2003	15:15	S	n/a	No	4°C	48 HR	X	X	X							2"x6" sleeve S1103009
																	Run only TPH, Si. gel. Hold other analyses pending results

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analysis requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

11/3 0840

Sample Relinquished By: Print Name	Signature	Company	Date	Time	Sample Received By: Print Name	Signature	Company	Date	Time
Mike McLeod		K/J	10/31/03	1700	John Somers		EXCELCHEM	11/3/03	840

Kennedy/Jenks Consultants, Inc. © 2001

(a) ~~Left in cooler at Mobile lab for later picking~~

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa / 032777.14
Method: EPA 3550 / EPA 3630 / EPA 8015m

Date Sampled: 11/13/03
Date Received: 11/14/03
Date Analyzed: 11/14/03

Client Sample I.D.	Stockpile #13	
LAB. NO.	S1103361	
ANALYTE	R/L	Results
TPH as Diesel	40	500
TPH as Oil	400	510

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	108	111
TPH as Oil	73	82

QA/QC Analyzed: 11/14/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Soil samples reported in mg/kg

Laboratory Representative

11/17/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: 916-362-3251
Company/Address: Kennedy/Jenks
Fax #: 916-362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa
Project Location: Santa Rosa
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
Email Address:
COC #:
Location I.D.#:

ANALYSIS REQUEST

INV# 1003086

Page 1 of 1

Sample ID	Sampling Date	Sampling Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B) (A)	Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals (Wet)	CAM 17 Metals (Total)	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel wash	Requested TAT: 12hr/24hr/48h/72hr/1wk	LAB USE ONLY
Stockpile #13	11/13 2003	1357		X					X			X				X	X				X				(A)	(A)				X		S1103361

Bin# 6
Due Date: 11/17
LAB USE ONLY:

Relinquished by:	Date	Time	Received by:
	11/13 2003	1628	
Relinquished by:	Date	Time	Received by:
Relinquished by:	Date	Time	Received by Laboratory:
	11-13-03	9:30	

Remarks/Condition of Sample:
(A) Hold these analyses pending TPHd and TPHmo results

Bill To:

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 10/27/03
Date Received: 10/27/03
Date Analyzed: 10/27/03

Client Sample I.D.	Frac Tank - 2	
LAB. NO.	W1003795	
ANALYTE	R/L	Results
TPH as Diesel	100	140
TPH as Oil	200	800

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	83	78

QA/QC Analyzed: 10/27/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L

TPHd and TPHo sample analyzed in the mobile facility and treated with a silica gel wash.

Laboratory Representative

10/27/03
Date Reported

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/27/03
Date Received: 10/27/03
Date Analyzed: 10/27/03

Client Sample I.D.	Frac Tank - 2	
LAB. NO.	W1003794	
ANALYTE	R/L	Results
Dichlorodiflouromethane	0.5	ND
Chloromethane	0.5	ND
Vinyl chloride	0.5	ND
Bromomethane	0.5	ND
Chloroethane	0.5	ND
Trichlorofluoromethane	0.5	ND
Acetone	5.0	ND
1,1-Dichloroethene	0.5	ND
Iodomethane	0.5	ND
Methylene chloride	0.5	120
Carbon disulfide	0.5	ND
trans-1,2-Dichloroethene	0.5	ND
1,1-Dichloroethane	0.5	ND
2-Butanone	5.0	ND
2,2-Dichloropropane	0.5	ND
cis-1,2-Dichloroethene	0.5	ND
Bromochloromethane	0.5	ND
Chloroform	0.5	ND
1,1,1-Trichloroethane	0.5	ND
Carbon tetrachloride	0.5	ND
1,1-Dichloropropene	0.5	ND
Benzene	0.5	ND
1,2-Dichloroethane	0.5	ND
Trichloroethene	0.5	ND
1,2-Dichloropropane	0.5	ND
Dibromomethane	0.5	ND
Bromodichloromethane	0.5	ND
cis-1,3-Dichloropropene	0.5	ND
4-Methyl-2-pentanone	5.0	ND
Toluene	0.5	ND
trans-1,3-Dichloropropene	0.5	ND
1,1,2-Trichloroethane	0.5	ND
Tetrachloroethene	0.5	ND
1,3-Dichloropropane	0.5	ND
2-Hexanone	5.0	ND
Dibromochloromethane	0.5	ND
1,2-Dibromoethane	0.5	ND

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

Date Sampled: 10/27/03
Date Received: 10/27/03
Date Analyzed: 10/27/03

Client Sample I.D.	Frac Tank - 2	
LAB. NO.	W1003794	
ANALYTE	R/L	Results
Chlorobenzene	0.5	ND
1,1,1,2-Tetrachloroethane	0.5	ND
Ethylbenzene	0.5	ND
m,p-Xylene	0.5	ND
o-Xylene	0.5	ND
Styrene	0.5	ND
Bromoform	0.5	ND
Isopropylbenzene	0.5	ND
Bromobenzene	0.5	ND
1,1,2,2-Tetrachloroethane	0.5	ND
1,2,3-Trichloropropane	0.5	ND
n-Propylbenzene	0.5	ND
2-Chlorotoluene	0.5	ND
4-Chlorotoluene	0.5	ND
1,3,5-Trimethylbenzene	0.5	ND
tert-Butylbenzene	0.5	ND
1,2,4-Trimethylbenzene	0.5	ND
sec-Butylbenzene	0.5	ND
1,3-Dichlorobenzene	0.5	ND
4-Isopropyltoluene	0.5	ND
1,4-Dichlorobenzene	0.5	ND
1,2-Dichlorobenzene	0.5	ND
n-Butylbenzene	0.5	ND
1,2-Dibromo-3-chloropropane	0.5	ND
1,2,4-Trichlorobenzene	0.5	ND
Hexachlorobutadiene	0.5	ND
Naphthalene	0.5	ND
1,2,3-Trichlorobenzene	0.5	ND
SURROGATE %RECOVERY		
Dibromofluoromethane	93	
Toluene-d8	99	
4-Bromofluorobenzene	105	

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in ug/L

Laboratory Representative

10/28/03
Date Reported

EXCELCHEM ENVIRONMENTAL LABS IS CERTIFIED BY THE STATE OF CALIFORNIA
DEPARTMENT OF HEALTH SERVICES AS A HAZARDOUS WASTE TESTING LABORATORY
(Certification No. 2119)

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ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 8260B

QA/QC %RECOVERY		
	LCS	LCSD
1,1-Dichloroethene	94	94
Benzene	108	105
Trichloroethene	109	105
Toluene	105	101
Chlorobenzene	102	97

QA/QC Analyzed: 10/28/03

Laboratory Representative

10/28/03
Date Reported

Excelchem
Environmental Labs

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Ph: 916-773-3664 Fx: 916-773-4784

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Jim Curtis
Phone #: (916) 362-3251
Company/Address: Kennedy / Jenks, 3336 Bradshaw Rd #140, Sacramento, CA 95827
Fax #: (916) 362-9915
Project Number/P.O#: 032777.14
Project Name: Santa Rosa Station
Project Location: Santa Rosa Station
Sampler Signature:

Electronic Data Deliverables Request:
Global I.D.#:
COC #:
Location I.D.#:
Email Address:
INI # 1003080/1003086

ANALYSIS REQUEST

Page ___ of ___

Sample ID	Sampling: Date	Sampling: Time	Container: VOA	Container: SLEEVE	Container: 1L GLASS	Container: PLASTIC	Method Preserved: HCl	Method Preserved: HNO3	Method Preserved: ICE	Method Preserved: NONE	Matrix: WATER	Matrix: SOIL	Matrix: AIR	BTEX/TPH as Gasoline (602/8020/8015)	MTBE (8020/8260B)	TPH as Diesel (8015m)	TPH as Oil (8015m)	Total Oil & Grease (SM-18th Ed 5520B,F)/166	Pesticides (608/8081A)	PCBs (8082)	VOC Full list (8260B)	5 Oxygenates (8260B)	Methanol/Ethanol (8015/8260)	Lead Scavengers DCA/EDB (8260B)	Semi VOC Full List (8270C)	CAM 17 Metals	Lead	Cd, Cr, Pb, Zn, Ni (CAM 5)	Silica Gel Wash					Nebilize	Requested TAT: 12hr/24hr/48hr/72hr/1wk	Bin# / LAB USE ONLY:
														Wet												Total										Due Date:
FracTank-2	10/27/03	1335	X		1L				X		X					X	X				X													X	W# 10-27-03 $1003794
FracTank-2	10/27/03	1335			X				X		X					X	X												X					X	W1003795

Relinquished by: Jim Curtis — Date 10/27/03 — Time 1335 — Received by:
Relinquished by: — Date — Time — Received by:
Relinquished by: — Date 10/27/03 — Time 1335 — Received by Laboratory:

Remarks/Condition of Sample: Samples 10-27-03

Bill To: Kennedy / Jenks

EXCELCHEM
ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 11/04/03
Date Received: 11/04/03
TPHd Analyzed: 11/10/03
TPHmo Analyzed: 11/10/03

Client Sample I.D.	Main Pit Water - filtered		Main Pit Water - unfiltered	
LAB. NO.	W1103066			
ANALYTE	R/L	Results	R/L	Results
TPH as Diesel	50	210	50	180
TPH as Oil	500	ND	500	ND

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	119	112
TPH as Oil	72	71

TPHd QA/QC Analyzed: 11/11/03
TPHmo QA/QC Analyzed: 11/11/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L

Laboratory Representative

11/11/03
Date Reported

Sample Chain-of-Custody/Analysis Request

Kennedy/Jenks Consultants

Inv# 1003080 / 1003086

Possible Hazards: Analytes

Client: UPRR | Report to: Jim Curtis

Site: Santa Rosa Sta. | Company: K/J

Project No.: 032777.14 | Address: 3336 Bradshaw, Sacramento

Sampler Name: M. McLeod | Fax: 916-362-9915

Telephone: 415-243-2508

Lab Destination: Excelchem

Address:

Telephone: 916-773-3664

Carrier/Way Bill No.: n/a

(1) Sample ID No.	Client ID No.	Collection Date	Collection Time	(2) Type	(2) Depth	(3) Comp.	(4) Pres.	Turn-around	(5) TPHd	(5) TPHmo	(5) Silica Gel Wash	(5) Filter (a)	(5)	(5)	(5)	(5)	(5)	Comment/Conditions (container type, container number, etc.)
	Main Pit Water	11/4 2003	1440	W	n/a	No	4°C	24HR 48HR STD	X	X	X	X	W1103060					(a) 2, 1-L ambers
																		(a) Run 1L filtered before analysis
													Bin 72					
													Due 11/11					Run 1L unfiltered before analysis

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analysis requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

Sample Relinquished By					Sample Received By				
Print Name	Signature	Company	Date	Time	Print Name	Signature	Company	Date	Time
Mike McLeod	Mike McLeod	K/J	11/4 2003	1516	Rachel Pulliam	Rachel Pulliam	Excelchem	11-4	3:20

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ENVIRONMENTAL LABS

500 Giuseppe Court, Suite 3
Roseville, CA 95678
Phone#: (916) 773-3664 Fax#: (916) 773-4784

ANALYSIS REPORT

Attention: Jim Curtis
Kennedy Jenks
180 E. 4th Street, Suite 500
Chico, CA 95928
Project: Santa Rosa Station / 032777.14
Method: EPA 3510 / EPA 3630 / EPA 8015m

Date Sampled: 11/14/03
Date Received: 11/14/03
TPHd Analyzed: 11/20/03
TPHo Analyzed: 11/20/03

Client Sample I.D.	SRB-113 pit - Filtered		SRB-113 pit - Unfiltered	
LAB. NO.	W1103378			
ANALYTE	R/L	Results	R/L	Results
TPH as Diesel	50	71	50	110
TPH as Oil	500	ND	500	ND

QA/QC %RECOVERY		
	LCS	LCSD
TPH as Diesel	102	89
TPH as Oil	70	75

QA/QC Analyzed: 11/20/03

ND = Not detected. Compound(s) may be present at concentrations below the reporting limit.
R/L = Reporting Limit
Water samples reported in µg/L

Laboratory Representative

11/21/03
Date Reported

KENNEDY/JENKS CONSULTANTS inv# 1103021

SAMPLE CHAIN-OF-CUSTODY / ANALYSIS REQUEST

☐ 200 New Stine Rd., #115, Bakersfield, CA 93309
☐ 530 South 336th St., Federal Way, WA 98003
☐ 17310 Red Hill Ave., #220, Irvine, CA 92714
☐ 2191 East Bayshore Rd., #200, Palo Alto, CA 94303
☐ 5190 Neil Road, #300, Reno, NV 89502
☒ 3336 Bredshaw Rd., #140, Sacramento, CA 95827
☐ 303 Second St., San Francisco, CA 94107
☐ 1000 Hill Rd., #200, Ventura, CA 93003

POSSIBLE HAZARDS: TPHd/TPHmo

Date 11/14/03

Report To Jim Curtis

Source of Samples Santa Rosa Station

Company Kennedy/Jenks

Sampler Name J Curtis

Address

Phone

Project No. 032777.14

Phone

Lab Destination Excelchem

Address

Phone

Carrier/Way Bill No.

due 11/21/03 hr 39

(1) Lab ID No.	(1) Client ID No.	COLLECTION Date	COLLECTION Time	(2) Type	Depth	(3) Comp.	(4) Pres.	Turn-around	(5) ANALYSES REQUESTED								Comment/Conditions (Container type, container number, etc.)
	SSB-13 Pit	11/14/03	0915	W			ICE	5DD	X		X			WW3378			2 liter amber

(1) Write only one sample number in each space.
(2) Specify type of sample(s): Water (W), Solid (S), or indicate type.
(3) Mark each sample which should be composited in Laboratory as follows: Place an "A" in box for each sample that should be composited into one sample; use sequential letter for additional groups.
(4) Preservation of sample.
(5) Write each analyses requested across top. Place an "X" in appropriate column to indicate type of analysis needed for each sample.

SAMPLE RELINQUISHED BY: Print Name	Signature	Company	Date	Time	SAMPLE RECEIVED BY: Print Name	Signature	Company	Date	Time
Jim Curtis		KJ	11/14/03	1345	Rachel Pullicar		Excelchem	11/14	1:50

\MISC\CUSTODY2.FRM

000065.09

Site Assessment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California
North Coast Regional Water Quality Control Board
Case No. 1TSR196

Antea Group Project No. UPR8248
February 29, 2012

Prepared for:
Joan Fleck
North Coast Regional Water Quality Control Board
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

Prepared by:
Antea™Group
312 Piercy Road
San Jose, CA 94086
+1 800 477 7411

Site Assessment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board Case No. 1TSR196

Antea Group Project No. UPR8248
February 29, 2012

Prepared for:
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North Coast Regional Water Quality Control Board
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

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Appendices

Appendix A Agency Correspondence
Appendix B Site Details and Summary of Previous Environmental Investigations
Appendix C EBA Engineering's Soil Excavation Work Plan
Appendix D Geoprobe® CPT and UVOST Product Summaries

Site Assessment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board Case No. 1TSR196

1.0 INTRODUCTION

Antea™Group has prepared this *Site Assessment Work Plan* on behalf of Union Pacific Railroad (UPRR) in response to the North Coast Regional Water Quality Control Board (RWQCB) directive letter dated January 19, 2012 **(Appendix A).** The site is currently in the process of redevelopment. This work plan proposes the following activities to address RWQCB concerns:

- additional soil excavation in the vicinity of EBA Engineering (EBA) boring SB-1,
- qualitative groundwater assessment in the vicinity of the recently removed underground storage tanks (USTs) to investigate separate phase hydrocarbons encountered during UST removal and to determine the optimal placement of up to four groundwater monitoring wells, and
- a review of available case files for the property to the west of the site and the advancement of soil borings along a section of the southwest property boundary to aid in determining the relationship between on-site and off-site contamination.

1.1 Site Description

Currently, the site is vacant with no operations. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the 3 West Third Street and 60 West Sixth Street Warehouses, to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties (**Figure 1**).

1.2 Site History

The site was historically used as a railroad freight depot and maintenances/fueling yard from the late 1800's through the 1960's. This site became vacant and generally unused since the late 1960's. Consultants have conducted environmental investigations and remediation efforts at the site since 1987. Former operations at the site include the use of aboveground storage tanks (ASTs), underground storage tanks (USTs), a main railroad track system that occupied the eastern portion of the property, several associated railroad spurs and siding, a turntable, warehouses, and freight houses. A Sanborn Fire Insurance map dated 1885 indicates the Santa Rosa Woolen Mills was located in the northwestern portion of the site until approximately 1906 (EBA, 2009a). **Appendix B** includes a summary of environmental investigations and remedial activities conducted at the site. **Figure 2** shows the locations of historic borings and wells at the site.

1.3 Geologic and Hydrogeologic Setting

1.3.1 Regional Geology

The site is centrally located within the Santa Rosa Plain, which is part of the Coast Range Geomorphic Province of northern California. The Coast Range Geomorphic Province is characterized as a series of northwest trending elongated ridges and valleys that are a result of folding and faulting. The Santa Rosa Plain consists of alluvial fan deposits of Pleistocene and Holocene age. The alluvial fan deposits form a nearly continuous blanket over the Santa Rosa Plain and consist of poorly sorted coarse sand and gravel, moderately sorted fine sand and silt, and silty clay. The region has been mapped as having basement materials that underlie the alluvial fan deposits. The basement materials consist of marine sedimentary rocks of the Miocene Age Wilson Grove Formation. Portions of the Wilson Grove Formation are overlain by younger continental sedimentary rocks of the Pliocene-Pleistocene Age Glen Ellen Formation (EBA, 2008b).

1.3.2 Site Geology and Hydrogeology

The geology of the project site is characterized by shallow rocky fill in the upper one to two feet below ground surface (bgs) that is underlain by sandy silt and clayey sediments containing varying amounts of angular to sub-rounded gravel. These finer-grained sediments extend to approximately 20 feet bgs, and are underlain by a laterally continuous sandy coarse-grained unit extending to at least 25 feet bgs, the maximum depth explored at the project site to date (EBA, 2008b).

The hydrogeology of the project site is likely controlled by gradational lenses of sediments separated by clayey layers. A thin, laterally extensive sandy unit located at an average depth of approximately 13-15 feet bgs overlays a similarly laterally extensive clayey bed. The more impervious clay units likely act as confining layers and inhibit the downward vertical migration of fluids. Based on this observation, the resulting perched groundwater in the upper permeable sand unit at 15 feet bgs has been independently sampled from the deeper water-bearing zone present at a depth of approximately 20 to 25 feet bgs (EBA, 2008). However, EBA noted that wells SRMW-7 and SRMW-8 were screened across both zones. The predominant groundwater flow direction is approximately west-southwest across the project site towards Santa Rosa Creek (approximately 160 feet beyond the western side of the property). Therefore, the eastern portion of the project site is considered up gradient relative to the western portion (EBA, 2008b).

2.0 SITE INVESTIGATION

2.1 Proposed Scope of Work

As stated in the introduction, Antea Group proposes to address RWQCB concerns by conducting the following activities:

- **Soil Excavation**: Antea Group will excavate soil in the area of soil boring SB-1 to remove hydrocarbon impacted soil observed at 12 feet bgs by EBA during their 2008 investigation..

- **Qualitative Borings (QB-1 through QB-8):** Antea Group will advance up to eight soil borings utilizing direct push rods equipped with cone penetration testing (CPT) tip and Ultra-Violet Optical Screening Tool (UVOST). Borings will be advanced in the vicinity of the UST excavation where in November 2011, two 550-gallon tanks were removed by United Pumping Services (UPS) and encountered separate phase hydrocarbons within the excavation. The data from these borings will be used as a screening tool only, with the goal of determining the extent of separate phase hydrocarbons (SPH) present in groundwater and to determine the ideal location of up to four (4) groundwater monitoring wells.

- **Monitoring Wells (MW-1 through MW-4):** Antea Group will install up to four monitoring wells, pending review and analysis of the qualitative boring data, to determine groundwater impacts in the vicinity of the former UST excavation. Based upon an evaluation of qualitative data from the UVOST advancement, Antea Group will determine optimal well placement upgradient of, within, and downgradient from the area demonstrating separate phase impacts.

- **Soil Borings (SB-62 through SB-66) and Temporary Monitoring Wells:** Antea Group will advance five soil borings along the southwest property boundary to evaluate the relationship between on-site and off-site contamination.

Each of these activities are discussed further in **Section 2.3**.

2.2 Pre-Field Activities

Prior to initiating field activities, Antea Group will prepare a Health and Safety Plan (HASP) in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP will contain a list of regulatory and emergency contacts, as well as a hospital route map to the nearest emergency facility. Field personnel will conduct a daily review for site-specific updates or changes in work conditions. UPS will obtain the necessary permits for the excavation from the City of Santa Rosa Fire Department and Planning agencies. Antea Group will obtain all necessary soil boring and monitoring well installation permits. In addition, Antea Group and UPS will conduct pre-field notifications, as required by the regulatory and permitting agencies.

2.3 Field Activities

Prior to ground disturbance, Antea Group and UPS will contact Underground Service Alert (USA) North to mark the site for subsurface utilities. Antea Group also contact UPRRs fiber optic hotline as required, and will employ the services of a private underground utility locater to verify utility locations marked by USA members and to identify any other potential unmarked underground utilities or obstructions in the vicinity of planned ground disturbances. In addition, a California C-57 licensed drilling company will clear each soil boring/well location via hand auger or air excavation (air knife) to a minimum depth of five feet bgs.

2.3.1 Soil Excavation

UPS will conduct soil excavation in the area of former soil boring SB-1, as proposed by EBA in their *Soil Excavation Work Plan* dated October 2009. **Figure 3** depicts the maximum lateral extent of the excavation (approximately 45 feet by 15 feet) with final vertical limits of approximately 15 feet bgs, or to the depth of groundwater, as directed by the RWQCB in their October 30, 2009 correspondence. **Appendix C** contains EBA's October 2009 Work Plan. Antea Group will carry out field activities as outlined in EBA's work plan in Sections 4.0 through 4.6 with the exception of their choice of analytical laboratory, their proposed sample analytical suite and their proposed groundwater treatment and subsequent discharge into the sanitary sewer.

Regarding the proposed change in sample analytical suite, widespread low-level volatile organic compounds (VOCs) & semi-volatile organic compounds (SVOCs), specifically tetrachloroethylene (PCE), trichloroethylene (TCE) and methyl tertiary-butyl ether (MTBE) appear to be ubiquitous to the area and not related to former onsite activities. Therefore, Antea Group proposes to omit VOCs and SVOCs from the analytical suite, and to analyze discreet soil samples only for the following:

- Diesel range organics (DRO), carbon chain range C10 – C28, and Motor oil range organics (MORO), carbon chain range C24 – C36, by EPA Method 8015B with silica gel cleanup;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM

For proper waste profiling, stockpiled soil samples from the excavation area will include the analytes listed above, plus the following VOCs, SVOCs, and metals:

- Gasoline range organics (GRO), benzene, toluene, ethylbenzene and xylenes (BTEX compounds) by EPA Method 8260B;
- PCE and TCE by EPA Method 8270C;
- California Assessment Manual (CAM) 5 metals: cadmium, chromium, nickel, lead, zinc by EPA Method 6010B.

Antea Group proposes to pump and containerize groundwater from the excavation. Any groundwater recovered from the excavation will be sampled for waste characterization and temporarily stored on-site site pending profiling and off-site transport and disposal at an appropriate waste facility. The water from the excavation will be sampled for the following:

- DRO, and MORO, by EPA Method 8015B with Silica Gel Cleanup;
- GRO and VOCs by EPA Method 8260B;
- SVOCs by EPA Method 8270C;
- PAHs by EPA Method 8270C SIM;
- Total and dissolved CAM 5 Metals: cadmium, chromium, nickel, lead, and zinc, by EPA Method 6010B.

2.3.2 Qualitative Borings

Antea Group will evaluate groundwater impacts in the vicinity of the former UST excavation using direct push rods equipped with CPT and UVOST modules (CPT-UVOST) in up to eight locations around the recently excavated tank pit area. **Appendix D** contains Geoprobe® CPT and UVOST product summaries and specifications. Antea Group will advance CPT-UVOST at four initial locations in the approximate locations indicated on **Figure 3**. Both CPT and UVOST sensors can be advanced in the same hole. The proposed terminus for each test boring is approximately 20 feet bgs; however, Antea Group will base the final depths on field conditions.

The location of the remaining four CPT- UVOST borings will be contingent upon the findings of the initial four borings. Antea Group's goal is to be able to qualitatively assess the lateral extent of the SPH impacts in the vicinity of the recently-excavated former UST location (using UVOST as a qualitative screening tool only).

2.3.3 Monitoring Well Installations

Once Antea Group has a general model of subsurface conditions using the qualitative borings, the locations of up to four monitoring wells will be determined. The optimal well locations will be upgradient of, within, and downgradient from, the area demonstrating the highest impact to groundwater, based upon an evaluation of qualitative data from the CPT-UVOST advancement. To protect the integrity of newly installed wells, the timing of well installation is contingent upon site redevelopment activities.

Monitoring Well Installation

Each well will be installed using eight-inch hollow-stem auger drilling equipment. The borehole will be advanced to five feet below the first encountered groundwater, with the well's screen interval extending approximately five feet above first encountered groundwater and five feet below. Actual depth and length of the screened interval will be determined by observed lithology during drilling and CPT-UVOST operations to prevent screening across the clay/silt unit that separates the shallow water-bearing zone from the deeper water-bearing zone. Soil samples will be collected at 5-foot depth intervals, and continuously below the depth of first-encountered groundwater during auger drilling using a California modified split-spoon sampler equipped with brass soil sleeves,.

The wells will be constructed of 2-inch diameter PVC casing with a manufactured well screen (0.020 inch slot size). A 2/12 sand filter pack will backfill the annulus to one foot above the well screen, followed by 2 feet of hydrated bentonite. The remainder of the annular space will be backfilled with neat-cement grout. A locking well cap will be placed on the well head. Antea Group will determine the appropriate well completion (flush mount or riser pipe) based on the redevelopment plans and type of construction activity in the proposed well locations.

Antea Group anticipates that two to three soil samples from each well location will be submitted for laboratory analysis; one from five feet bgs, one from ten feet bgs and/or the deepest unsaturated soil sample. Actual sample selection/depths will be determined based upon field observations (depth to water, or visual staining). Soil

samples will be collected in clean brass liners, capped with Teflon® sheets and tight-fitting plastic end caps, labeled, and placed in an ice-chilled cooler pending transportation to the laboratory. Soil samples will be analyzed for the following:

- DRO and MORO, by EPA Method 8015B with Silica Gel Cleanup;
- PAHs by EPA Method 8270C SIM;

Monitoring Well Development

Development of the newly installed monitoring wells will take place a minimum of 72 hours following installation. Well development will consist of surging the length of the screened interval for a minimum of 15 minutes and evacuating a minimum of 10 well casing volumes of groundwater. Field personnel will record groundwater parameters (depth to water, temperature, pH, conductivity, turbidity, etc) during the well development process. The final well installation report will include the well development logs. Following development, the wells will be allowed to stabilize for a minimum of 72 hours prior to the collection of any groundwater samples.

Monitoring Well Survey

Subsequent to completion, a California Licensed Land Surveyor will survey the latitude/longitude of each wellhead. The land surveyor will survey the top of casing elevations to North American Vertical Datum 88, accurate to the nearest 0.01 foot. Antea Group will include the survey data in the final assessment report and will upload the data to the state GeoTracker database as required.

2.3.4 Exploratory Soil Borings

Antea Group's selected drilling contractor will complete five soil borings on the southwestern boundary of the site (**Figure 3**). The drilling contractor will advance the borings utilizing direct-push technology (Geoprobe® or similar). Soil samples will be collected from each boring with four-foot long acetate sampling liners placed within the direct-push rods prior to boring advancement. The soil borings will be logged continuously using the Unified Soil Classification System (USCS) under the direction of a State Registered Professional Geologist. The proposed terminus for each exploratory boring is approximately 20 feet bgs; however, Antea Group will base the final depths on field conditions.

Antea Group will select samples for laboratory analysis based upon field observations (depth to water, or visual staining), but anticipates that three soil samples will be submitted for laboratory analysis, one from five feet bgs, the deepest unsaturated soil sample or samples exhibiting visual staining. Select soil samples will be cut from the four-foot long acetate liners, capped with Teflon® sheets and tight-fitting plastic end caps, labeled, and placed in an ice-chilled cooler pending transportation to the laboratory.

Following completion of each of the five soil borings, the driller will insert a pre-packed well screen for the collection of groundwater samples. The pre-packed well screens are five feet in length and consist of 3/4-inch

diameter Schedule 40 polyvinyl chloride (PVC) casing with 0.010-inch slots surrounded by 1.5-inches of 20/40 Grade sand encased in a stainless steel mesh. Insertion of the screens begins with the advancement of 3.25-inch direct-push rods driven to depth. The driller will then lower the pre-pack well screens with ¾-inch diameter Schedule 40 PVC riser pipe into the probe rods. Following collection of groundwater samples, each pre-packed screen will be removed and the boreholes subsequently sealed with bentonite grout.

Soil and groundwater samples will be analyzed for the following:

- DRO and MORO by EPA Method 8015B with Silica Gel Cleanup;
- PAHs by EPA Method 8270C SIM;

3.0 DECONTAMINATION AND DISPOSAL OF INVESTIGATION DERIVED WASTE

Prior to use and between boring locations, down-hole equipment will be carefully decontaminated using high-pressure hot water spray or an Alconox scrub solution followed by a double rinse in clean tap water and distilled water.

Soil cuttings and wastewater generated during drilling and development activities will be placed in Department of Transportation (DOT) approved 55-gallon drums, sealed and labeled in accordance with the corresponding DOT protocols for non-hazardous waste. The drums will be sampled for characterization and temporarily stored on-site pending profiling and disposal. Antea Group's waste management contractor will transport laboratory-profiled waste derived from the investigation, for disposal at an appropriate licensed facility. The final investigation report will include waste manifest documentation.

4.0 SCHEDULE AND REPORTING

Pre field-activities will begin upon regulatory approval of this work plan. Scheduling of field activities will commence following procurement of permits for excavation, borings and monitoring wells as well as access procurement from the property owner for the proposed work. Antea Group estimates excavation and boring advancement will be completed within two week of the start of field activities. In order to protect newly-installed wells, the timing of monitoring well installation is also contingent upon the property redevelopment schedule and final selected well locations. Upon completion of the proposed scope of work, Antea Group will prepare a summary report containing the following:

- An updated Base Map showing the final locations of the qualitative borings, monitoring wells and soil borings/temporary wells. The Base Map will also provide detailed information concerning the extent of the soil excavation and samples collected.
- A detailed description of the excavation, qualitative borings, monitoring wells, development logs, well survey data, soil borings and groundwater sampling;
- Analytical summary tables;
- Waste disposal manifests, and;
- Interpretation of the field and laboratory data and recommendations, as appropriate.

The proposed activities outlined in this work plan and the corresponding reports will be performed and prepared under the direction of a California Registered Geologist. In accordance with applicable regulatory requirements, all reports, maps, and analytical data will be uploaded to the State GeoTracker database.

5.0 REMARKS

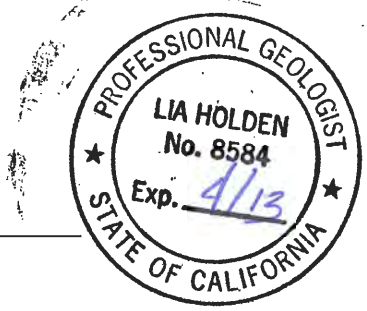
The recommendations contained in this document represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This document is based upon a specific scope of work requested by the client. For any reports cited that were not generated by Delta or Antea Group, the data from those reports is used "as is" and is assumed to be accurate. Antea Group does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document will be performed. This document is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this document. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this document.

Prepared by:

Renee Ransom
Staff Professional
Antea Group

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



Lia N. Holden, P.G.
Project Geologist
California Registered Professional Geologist No. 8584
Antea Group

cc: GeoTracker (upload)
Santa Rosa Fire Department, GBuckheit@srcity.org (electronic only)
Joan Thomas SMART, jthomas@sonomamarintrain.org (electronic only)
John Nemeth SMART, jnemeth@sonomamarintrain.org (electronic only)

6.0 REFERENCES

EBA Engineering (2008a). *Phase I Environmental Site Assessment, SMART Railroad Property, Santa Rosa*, California, dated March 2008.

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United States Geological Survey, *Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States*, US Geological Survey Professional Paper 1270, 1984.

Figures

Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3 Site Assessment Work Plan Map





North

0 1000 2000 FT

SCALE

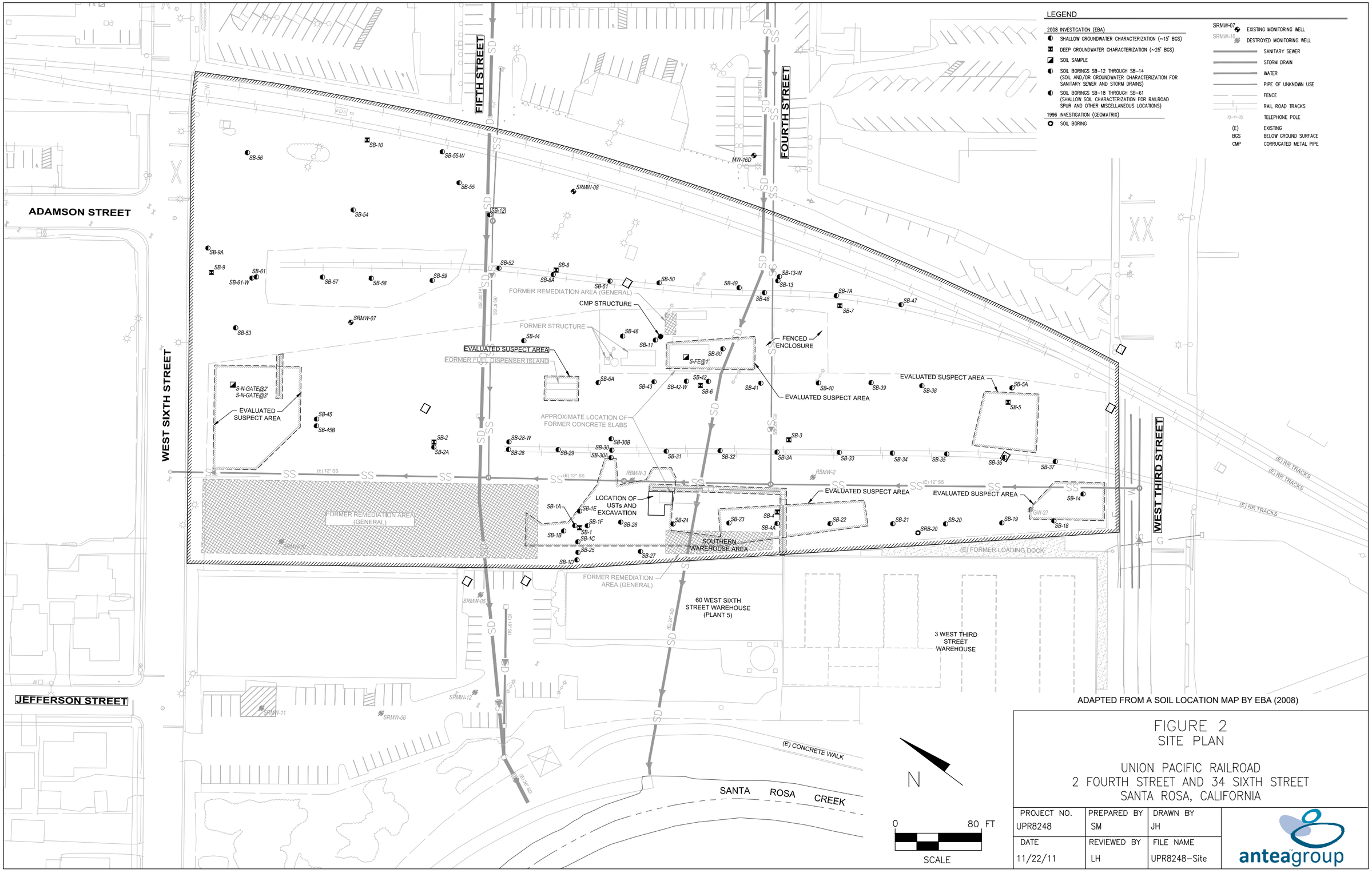
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup

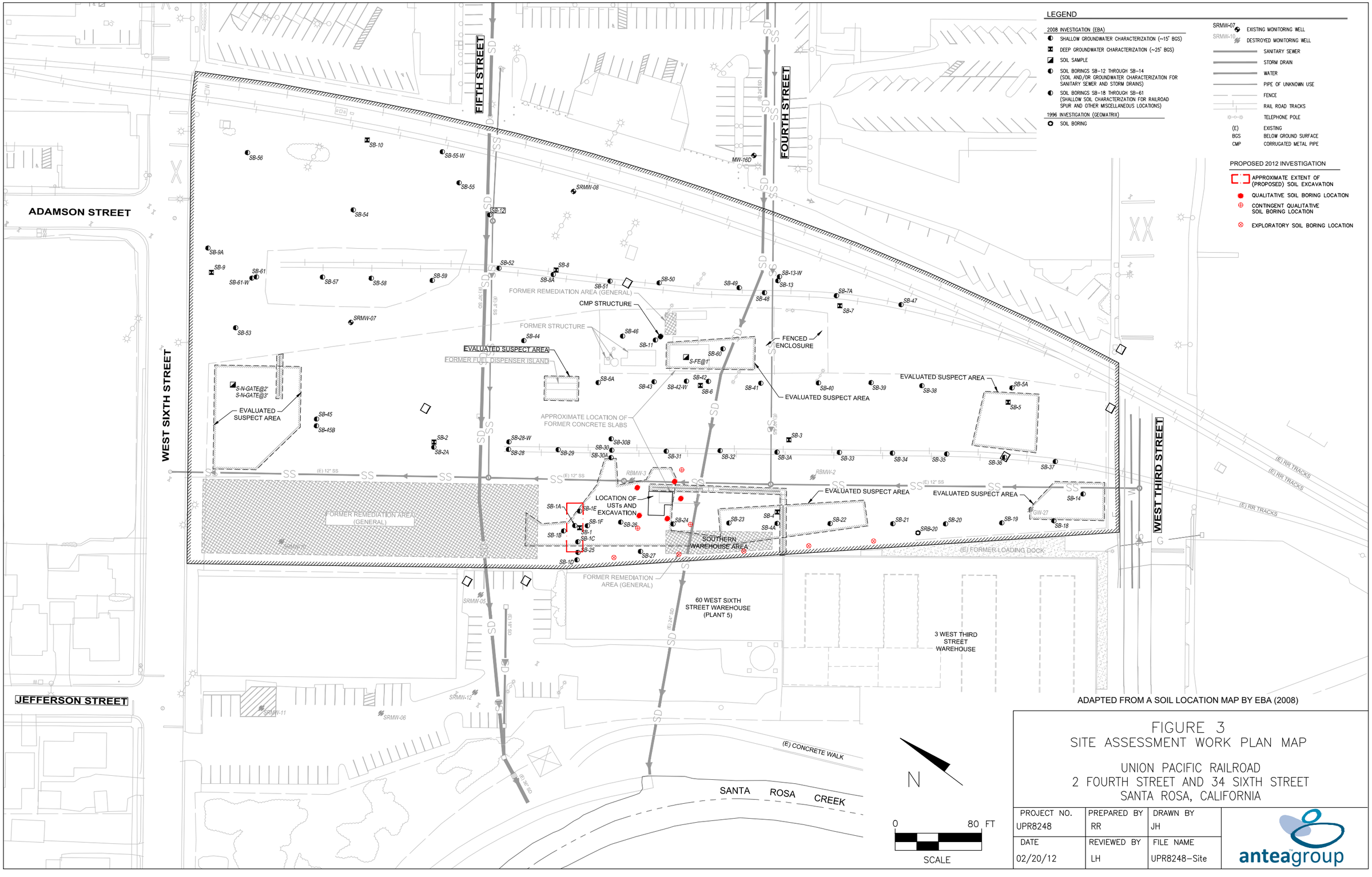


ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
UPR8248	SM	JH	
DATE	REVIEWED BY	FILE NAME	
11/22/11	LH	UPR8248-Site	anteagroup



ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 3
SITE ASSESSMENT WORK PLAN MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
02/20/12	LH	UPR8248-Site

anteagroup

Appendix A

Agency Correspondence

California Regional Water Quality Control Board
North Coast Region
Geoffrey M. Hales, Chairman

Matt Rodriquez
Secretary for
Environmental Protection

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Edmund G. Brown Jr.
Governor

January 19, 2012

Mr. James Diel
Union Pacific Railroad
9451 Atkinson Street
Suite 100
Roseville, CA 95747

Mr. John Nemeth
Sonoma Marin Area Rail Transit
750 Landaro Street,
Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: Case Status

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case Nos. 1TSR196 and 1NSR196

In the Regional Water Board staff letter dated July 22, 2011, remaining items to be completed were identified, which included the removal of the oil underground storage tank; removal of known shallow soil impacts; and removal of impacted soil in the vicinity of SB-1. It was stated that if evidence of a discharge is revealed at the time of tank removal, contaminated soil must be removed and depending upon the degree of discharge, the impact to water quality may need to be investigated. The purpose of this letter is to bring this file up to date summarizing work conducted since July 2011 and reiterating work items that remain to be completed.

Underground Storage Tanks

On November 3, 2011, the underground oil storage tank was removed. At the time of removal, a second tank was discovered and removed along with visually impacted soil. The excavation was continued to groundwater where separate phase oil product was observed.

Based on recent communications with Antea Group staff working on behalf of Union Pacific Railroad, report preparation is in progress and submittal is anticipated in the next few weeks.

Shallow Soil Impacts

As previously stated, shallow soil impacts may be addressed prior to and/or during property development.

Soil Removal at SB-1

Soil removal in the area of SB-1 must be completed as soon as possible and prior to land development activities. The work may be conducted according to the existing work plan prepared by EBA Engineering submitted on behalf of the Railroad Square Associates, LLC (who is not a responsible party) or a new work plan. If someone other than EBA Engineering implements the existing work plan, the licensed professional in responsible charge of the project must be identified.

Based on the current development plans, a delay in completing remedial actions in the area of SB-1 may impact the installation of proposed infrastructure.

Extent of Groundwater Impacts

In addition to the soil removal project at SB-1, a work plan must be submitted to investigate the extent of groundwater impacts including the presence of separate phase oil at the former tank location, groundwater impacts in the area of SB-1, and clarify the relationship of on-site discharges and off-site impacts to the west beneath adjacent properties. The work plan is due within 45-days of issuance of this letter.

If you have any questions or would like to meet to discuss this case, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Joan Fleck
Engineering Geologist

120119_JEF_SPTransCo

cc:

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Mr. Richard Devine, Devine & Gong, Inc. 100 Bush Street, Suite 600, San Francisco, CA 94104-3703 (rdevine@devinegong.com)
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, Ca 94109
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Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100
Mr. John Nemeth (jnemeth@sonomamarintrain.org)
Ms. Lisa Pheatt, County Counsel (lpheatt@sonoma-county.org)

Appendix B

Site Details and Summary of Previous Environmental Investigations

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

Over the history of environmental activities at the site, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by Environmental Protection Agency (EPA) method 8015B or 8260B. Antea Group uses the designation GRO for total petroleum hydrocarbons as gasoline within the C_5 to C_{10} carbon range, DRO for total petroleum hydrocarbons as diesel within the C_{10} to C_{28} carbon range, and RRO for total petroleum hydrocarbons as residual range organics (oil) within the C_{24} to C_{40} carbon range.

Terms from previous reports may include total recoverable petroleum hydrocarbons (TRPH), total purgeable petroleum hydrocarbons (TPPH) for GRO, total extractable petroleum hydrocarbons (TEPH) for DRO, and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific historical terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO. Antea Group has left the original designation when summarizing historic data and the current designations when applied to recent investigations and summary discussions.

SITE HISTORY

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site. These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs (Industrial Compliance [IC], 1992).

In April 1990, the North Coast Regional Water Quality Control Board (RWQCB) drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (MW-2 and MW-3). Monitoring well MW-3 was located approximately 100 feet down gradient (to the southwest) of the former fuel oil UST. Based on information presented in a July 1992 report by IC, analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1. However, oil and grease was present in the soil sample collected from boring B-1 at 12 feet bgs at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PAHs). Soil samples collected at depths of 6 and 16 feet below ground surface (bgs) from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively. No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3 (Geomatrix Consultants, Inc. [Geomatrix], 2000).

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes

(BTEX compounds), or PAHs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX compounds were detected in the grab groundwater sample collected from IC-B6 (Geomatrix, 2000).

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995. In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHmo), PAHs, metals, and volatile organic compounds (VOCs). Soil samples collected for analyses of TPHd, PAHs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHmo at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHmo at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHmo was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHmo was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs (Geomatrix, 2000).

PAHs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure. Concentrations of PAHs detected at this time are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PAH concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)4 in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs. No TPHd, TPHmo, or VOCs were detected in groundwater above laboratory reporting limits. The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These items, which are the focus of the work described herein, include additional evaluation of historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations (Geomatrix, 2000).

In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An up-gradient, single-screen monitoring well was installed on the eastern portion of the property in vicinity of the main line railroad tracks.

Extensive investigative activities were performed in 2002 on the northwest area of the project site at the historical location of the Santa Rosa Woolen Mills Facility. Soil samples collected as part of an investigation within this area reported significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former above ground fuel storage tank (AST), and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons. From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil (EBA, 2008b).

In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed, whereupon the excavation was advanced to a total depth of approximately 18 feet bgs. A significant amount of free-phase petroleum hydrocarbon product was encountered on the groundwater surface during the excavation activities. The product and water was subsequently pumped, treated, and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently terminated due to concerns of structure stability. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in the excavation sidewalls and groundwater in this area (EBA, 2008b).

Excavation activities in the northwestern portion of the property also included the removal off a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 350 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths below first encountered groundwater, which was encountered at approximately 19 feet bgs. The maximum depth attained by the excavation was approximately 22 feet bgs. Impacted groundwater encountered within the excavation pit, which included free-phase petroleum hydrocarbon product, was subsequently removed using pumps, treated, and disposed of to the sanitary sewer (EBA, 2008b).

Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area. Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the “southern warehouse area” (EBA, 2008b).

Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in a monitoring well identified as SRMW-13 located in the northwest corner of the property. In addition, the fuel oxygenate methyl tert-butyl ether (MTBE) was detected in SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored (EBA, 2008b).

The RWQCB issued a *No Further Action* (NFA) letter for the previous case at the site on August 31, 2007. In 2008, Sonoma Marin Area Rail Transit District (SMART) granted an option to purchase the site, formerly owned by Northwestern Pacific Railroad Authority (NWRPA) to New Railroad Square Associates, LLC for transit-oriented development purposes. In anticipation of property ownership for the site, New Railroad Square Associates, LLC (with consent from SMART) contracted the services of EBA Engineering (EBA) to perform environmental assessment activities. EBA's November 2008 *Comprehensive Report on Findings* concluded that on-site hazardous materials presently exist at various locations on the property. These materials include an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and impacted shallow soil across the site. The RWQCB reopened the environmental case for the site on January 16, 2009 based on EBA's findings.

In a letter dated February 4, 2011, the RWQCB directed UPRR to remove the oil UST on the property. In November 2011, United Pumping Services (UPS) removed the UST as directed. However, during the initial day-lighting activities of the oil UST, an additional 500-gallon UST containing oil was discovered adjacent and west of the known tank. UPS evacuated, cleaned, and removed the second UST in conjunction with the known UST. UPS excavated and disposed of approximately 213.03 tons of impacted soil surrounding the USTs, and pumped approximately 500 gallons of oil impacted groundwater from the excavation. Antea Group collected 16 soil samples and one grab groundwater sample from within the excavation. Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears that a release from the removed USTs only affected the immediate soils surrounding the USTs. Sidewall samples NWB and SWB collected at 15 feet bgs reported concentrations of VOCs and PAHs not found in any other (shallower) samples collected. From the available data, soil VOCs and PAHs impacts appear to be the result of impacted groundwater within the capillary fringe, originating from outside of the excavated area, and not due to a release from the USTs at that location.

SENSISTIVE RECEPTORS

Geomatrix performed a well survey in 2000. Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which is fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use (Geomatrix, 2003).

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site. Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically down-gradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately up gradient and two approximately down gradient. Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use (Geomatrix, 2003).

Information about the possible presence of an additional water producing well located near the site was provided by the RWQCB. This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek; its actual location has not been field-verified. At this time the well is not in use, and based on a conversation with the site redeveloper, the well will not be used in the future and will be appropriately destroyed (Geomatrix, 2003).

Appendix C

EBA Engineering's Soil Excavation Work Plan

NCRWQCB

OCT 14 2009

EO ____ WMgmt ____ Admin ____
AEO ____ Timber ____ Legal ____
Reg/NPS ____ Cleanup: SEF
____

Prepared for

Railroad Square Associates LLC
c/o Mr. John Stewart
1388 Sutter Street, 11th Floor
San Francisco, California 94109

SOIL EXCAVATION WORK PLAN
SONOMA MARIN AREA RAIL TRANSIT PROPERTY
2 FOURTH STREET AND 34 SIXTH STREET

SANTA ROSA, CALIFORNIA

OCTOBER 2009

EBA Project No. *08-1528*

Prepared by

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APPENDIX A – FIGURES
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1.0 INTRODUCTION

EBA Engineering (EBA) has contracted with Railroad Square Associates LLC (Client) to prepare this Soil Excavation Work Plan (Work Plan) in relation to the proposed redevelopment of the Sonoma Marin Area Rail Transit (SMART) property located in Santa Rosa, California. The scope of work includes the excavation and disposal of soil impacted by petroleum hydrocarbons and the select sampling of soil for chemical analysis. The proposed work addresses recommendations outlined in EBA's November 2008 *Report of Findings* (EBA, 2008b), which were subsequently approved by the North Coast Regional Water Quality Control Board (NCRWQCB) in their letter dated January 16, 2009.

2.0 BACKGROUND

2.1 Project Site Description and History

The seven-acre project site consists of two contiguous parcels of land identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-003 (34 Sixth Street). The project site currently consists of a former railroad yard located in a historic district of downtown Santa Rosa. The properties are bounded on the south by Third Street, on the west by former commercial properties identified herein as the 3 West Third Street and 60 West Sixth Street Warehouses, on the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties, including Aroma Roasters and Hotel La Rose. Santa Rosa Creek is located approximately 160 feet west of the western project site boundary, on the west side of the adjacent commercial properties. Please refer to Figure 2, Appendix A for an illustration of the general features for both the project site and adjacent properties.

Research suggests the project site was used as a railroad freight depot and maintenance/fueling yard from the late 1800's up until the 1960's. Historically, site structures included the main line track system that occupied the eastern side of the property, several associated railroad spurs and siding, a turntable, warehouses and freight houses. Multiple aboveground and underground fuel and water tanks were located throughout the property. Additionally, a Sanborn Fire Insurance map dated 1885 indicates the Santa Rosa Woolen Mills, which operated until 1906, was located in the northwestern portion of the project site.

Presently, the northern portion of the project site contains rough access ways, fencing, and waste lumber. The San Francisco and North Pacific Railroad line right-of-way and associated tracks trend along the eastern boundary of the project site. A freight house lies along the railroad tracks in the south-central portion of the property. The southern portion of the project site has several north-south trending railroad tracks, which disperse throughout the property as spur and main line tracks. Existing utilities include a sanitary sewer line, which trends axially northward from Third Street to Sixth Street and is fed by tie-ins from both Fourth and Fifth Streets. Both Fourth and Fifth Streets also have storm drains, which extend across the project site and terminate at Santa Rosa Creek to the west.

2.2 Project Site Investigation and Remediation Activities

Environmental investigation and remediation efforts have been conducted at the project site from the late 1980's up until the present. Previous efforts have included the removal of underground storage tanks (USTs), soil and groundwater sampling, and excavations. A substantial amount of this work is summarized in the March 2008 *Phase I Environmental Site Assessment* (EBA, 2008a). A brief list of previous remediation efforts which more directly affect the extent of this work plan, and where that work occurred, is provided as follows:

- Extensive investigative activities were performed in the northwest area of the project site at the historic location of the Santa Rosa Woolen Mills facility, which operated in this area from the late 1800's until it was destroyed by fire in the 1906 earthquake. After this time, the area was utilized by the railroad for various uses including fuel storage and fueling operations. Soil samples collected during the investigation of structures within this area indicated significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former aboveground fuel storage tank, and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons.

- In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of the monitoring wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An upgradient, single-screen monitoring well was installed on the eastern portion of the property in the vicinity of the main line railroad tracks.

- From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil.

- In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed and excavation proceeded to depths of approximately 18 feet below ground surface (BGS). Significant amounts of free phase petroleum hydrocarbons were encountered on the groundwater surface during the excavation activities that were subsequently pumped, treated and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently stopped due to concerns of stability of the structure. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in excavation sidewalls and groundwater in this area.

- Excavation activities in the northwestern portion of the property also included the removal of a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 3,500 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths of first encountered groundwater at approximately 19 feet BGS. Impacted groundwater was encountered with free phase petroleum hydrocarbons present. The impacted groundwater was removed using pumps, treated, and disposed of to the sanitary sewer. Excavation activities were performed below groundwater to a final depth of approximately 22 feet BGS.

- Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the southern warehouse area.

- Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area.

- Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in monitoring well SRMW-13 located in the northwest corner of the property. The fuel oxygenate methyl tert-butyl ether (MtBE) was detected in monitoring well SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored.

- During September and October, 2008, EBA conducted a subsurface investigation at the project site. The scope of work included the performance of a geophysical survey, preliminary assessment of suspect areas, advancement of 80 soil borings, and the collection of soil and groundwater samples for chemical analysis. Significant concentrations of petroleum hydrocarbons were detected in soil and groundwater in the vicinity of soil boring SB-1A to a depth of approximately 14 feet BGS. The soil and groundwater sample analytical results collected during this investigation are included as Appendix B. Further details regarding this investigation are available in EBA's *Report of Findings* (EBA, 2008b).

3.0 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology

The project site is centrally located within the Santa Rosa Plain, which is part of the Coast Range Geomorphic Province of northern California. The Coast Range Geomorphic Province is generally characterized as a series of northwest trending elongated ridges and valleys that are a result of folding and faulting. The Santa Rosa Plain, in turn, consists of alluvial fan deposits of Pleistocene and Holocene age. The alluvial fan deposits form a nearly continuous blanket over

the Santa Rosa Plain and consist of poorly sorted coarse sand and gravel, moderately sorted fine sand and silt, and silty clay. The region of the project site has been mapped as having basement materials that underlie the alluvial fan deposits. The basement materials consist of marine sedimentary rocks of the Miocene Age Wilson Grove Formation. Portions of the Wilson Grove Formation are overlain in places by younger continental sedimentary rocks of the Pliocene-Pleistocene Age Glen Ellen Formation (Cardwell, 1958).

3.2 Project Site Geology and Hydrogeology

The geology of the project site is generally characterized by shallow (one to two feet BGS) rocky fill underlain by various lithologies including sandy silt and clayey sediments that contain varying amounts of angular to sub-rounded gravel. These finer-grained sediments extend to approximately 20 feet BGS, and are underlain by a laterally continuous coarser grained unit, defined in general as sand by cone penetration testing (CPT), which extends to at least 25 feet BGS, the maximum depth explored at the project site to date.

The hydrogeology of the project site is likely controlled by aggradational packages of sediments separated by clayey layers. At an average depth of approximately 13 to 15 feet BGS, a thin, laterally extensive sandy unit overlays a similarly laterally extensive clayey bed. This more impervious underlying clay likely acts as a confining layer and inhibits the vertical migration of fluids. Based on this characteristic, the resulting perched groundwater in the more permeable sandy unit at 15 feet BGS was independently sampled from the deeper water-bearing zone that is present at approximately 20 to 25 feet BGS.

Historical groundwater monitoring has indicated the predominant groundwater flow direction to be approximately west-southwest across the project site, towards Santa Rosa Creek. As a result, the eastern portion of the project site is upgradient relative to the western portion.

4.0 PROPOSED SCOPE OF WORK

The proposed scope of work will entail the removal of petroleum hydrocarbon impacted soil from the project site in the area of former soil boring SB-1. It is anticipated that the excavation will proceed laterally to the limits depicted on Figure 2 (Appendix A) of this Work Plan with final vertical limits of approximately 15 feet BGS, which is at or below the anticipated depth to groundwater. As shown on Figure 2, the lateral extent of the soil excavation is anticipated to measure approximately 45 feet by 15 feet. The total in-place volume of soil proposed for excavation is approximately 375 cubic yards. The rationale for the proposed lateral and vertical limits of the excavation are based on analytical results of soil samples collected from soil borings SB-1A through SB-1F. Please refer to Appendix B for tabulated soil sample analytical results.

The excavation activities will be performed by a properly licensed excavation contractor under the direct supervision of EBA. During the excavation activities, the breathing zone and surrounding vicinity will be monitored for health and safety purposes using a photoionization detector (PID). Results of the site monitoring will be recorded on field notes and be available

upon request. The following subsections outline the methodologies that will be used during the removal of the petroleum hydrocarbon impacted soil from the project site.

4.1 Permitting and Utility Clearance

A permit for soil remediation will be forwarded to the Santa Rosa Fire Department (SFRD) for approval and a grading permit will be obtained from the Santa Rosa Community Development Department. Notification will also be made to the Bay Area Air Quality Management District prior to excavation activities. Prior to the start of excavation activities, the project site will be marked for Underground Service Alert (USA).

4.2 Confirmation Soil Sample Collection

When observation and field screening procedures indicate that petroleum hydrocarbon impacted soil has been removed, EBA will collect confirmation soil samples at a frequency of one sample per 100 square feet of pit bottom and sidewall. Additional soil samples may be collected at the direction of the NCRWQCB and/or the SRFD. Soil samples selected for the analysis of volatile organic compounds (VOCs) will be collected in accordance with EPA Method 5035 using Encore® samplers. All sample containers will be capped, labeled and placed under refrigerated conditions pending transport under Chain-of-Custody protocols to K Prime, Inc., a State-certified laboratory, for chemical analysis.

4.3 Groundwater Management and Disposal

Groundwater that is encountered during the excavation activities will be pumped from the excavation and containerized on-site in a temporary storage tank. Groundwater samples will be collected from the tank and/or the excavation pit and analyzed for the constituents listed below in Subsection 4.6. Results from the groundwater sampling will be used in subsequent mass contaminant removal estimates. The containerized groundwater will then be treated with granular activated carbon (GAC) and discharged to the sanitary sewer under permit from the City of Santa Rosa Industrial Waste Department.

4.4 Soil Management and Disposal

The soil that is removed during soil excavation activities will be placed on, and covered with, plastic sheeting on-site pending chemical analysis. The soil will subsequently be loaded and hauled under manifest for disposal to a permitted solid waste disposal facility.

4.5 Backfill and Compaction

Following approval from the NCRWQCB and SRFD, the excavation will be backfilled with clean imported fill. The backfill material will be placed in lifts and the final five feet BGS will be compacted to 90 percent of the maximum dry density

4.6 Laboratory Testing

Each soil and groundwater sample retained for chemical analysis will be analyzed for Total Petroleum Hydrocarbons as diesel (TPH-d) and as motor oil (TPH-mo) using EPA Method 8015. Selected soil samples may also be analyzed for VOCs using EPA Method 8260 and California Assessment Manual (CAM) 5 metals (cadmium, chromium, lead, nickel and zinc) using EPA Method 6000/7000 series.

5.0 REPORT OF FINDINGS

A Report of Findings (Report) will be prepared upon completion of the fieldwork. The Report will document the work performed and corresponding conclusions and recommendations will be summarized. Specifically, recommendations will be presented addressing the necessity for further investigative or corrective action work in the vicinity of SB-1. In addition, summary tables of analytical results will be presented and copies of the corresponding Certified Analytical Reports will be appended to the Report.

6.0 SITE HEALTH AND SAFETY PLAN

A Site Health and Safety Plan for the scope of work presented herein is enclosed in Appendix B.

7.0 SCHEDULE

Work will commence following NCRWQCB and SRFD review and approval of this Work Plan and at the direction of the Client.

8.0 REFERENCES

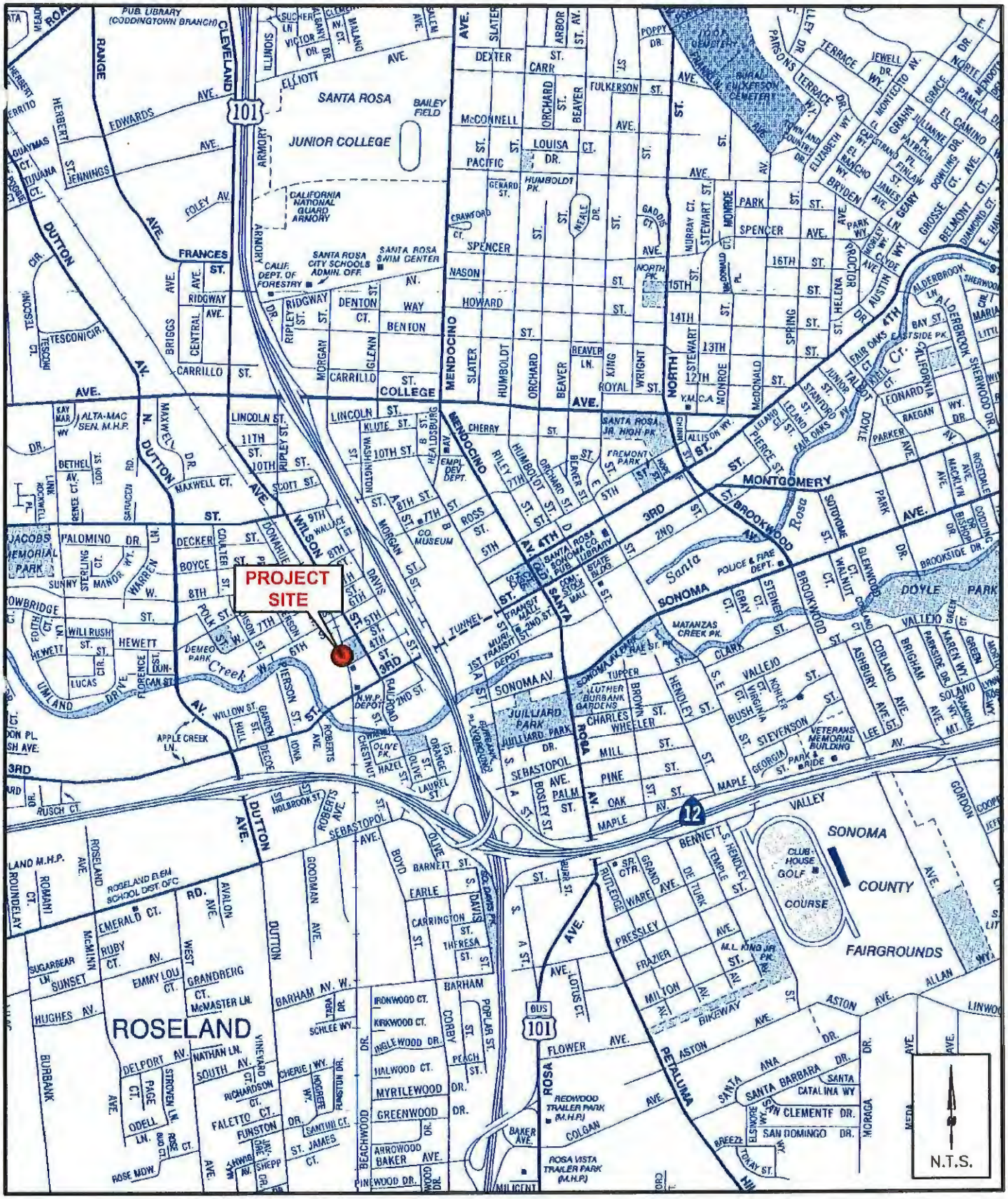
Cardwell, G.T., 1958, *Geology and Ground Water in the Santa Rosa and Petaluma Valley Areas Sonoma County California.* Geological Survey Water-Supply Paper 1427.

EBA Engineering, March 2008a, *Environmental Site Assessment, SMART Railroad Property, Santa Rosa, California.* EBA Engineering, Santa Rosa, California.

EBA Engineering, November 2008b, *Report of Findings, SMART Railroad Property, Santa Rosa, California.* EBA Engineering, Santa Rosa, California.

APPENDIX A

FIGURES



EBA ENGINEERING

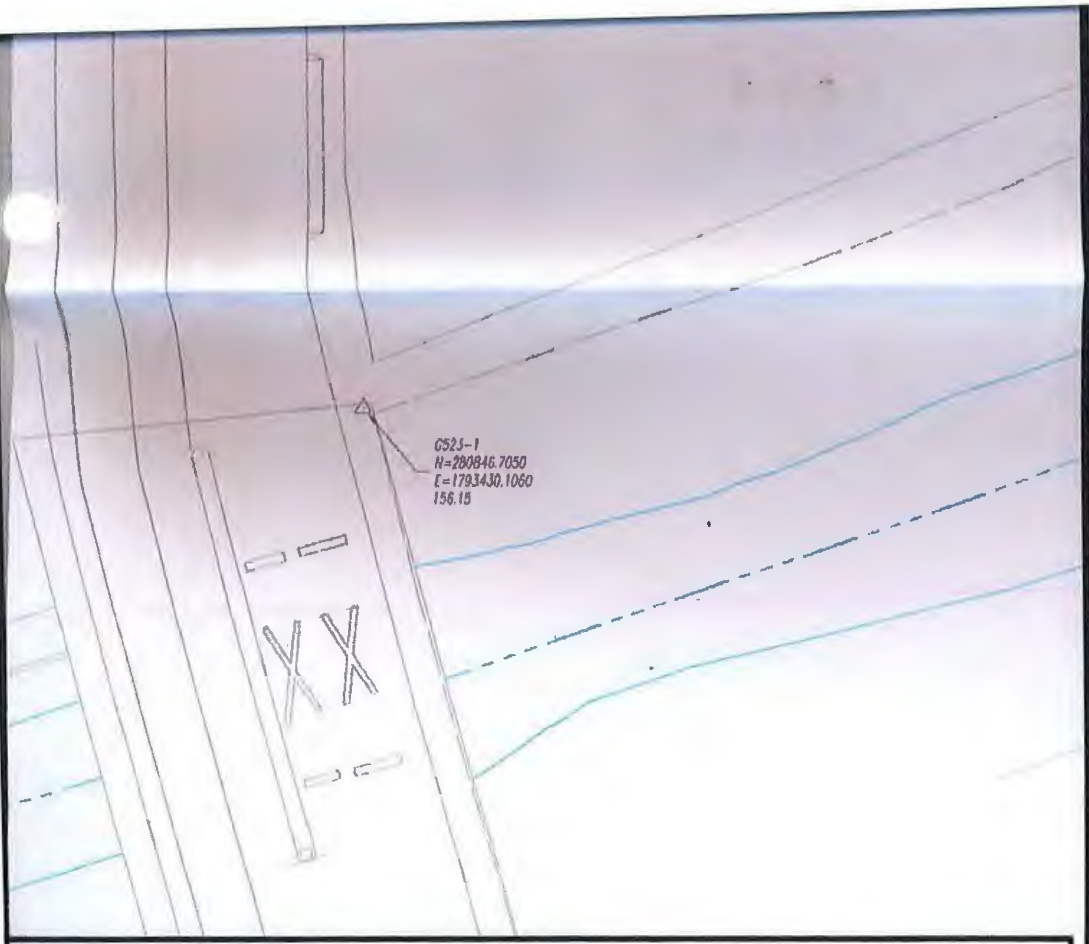
VICINITY MAP

SMART PROPERTY
2 FOURTH AND 34 SIXTH STREETS
SANTA ROSA, CALIFORNIA

FIGURE 1

08-1528

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PROPOSED SOI

SMART PROPERTY
2 FOURTH AND 34 SIX
SANTA ROSA, CALIFO

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Job No:	08-1528
Drawn By:	SGH
Checked By:	PN
Date:	2008-10-24

Figure

2

2 of 2

! OF SOIL EXCAVATION

BA)

WATER CHARACTERIZATION (~15' BGS)

ER CHARACTERIZATION (~25' BGS)

-12 THROUGH SB-14
OUNDWATER CHARACTERIZATION FOR
AND STORM DRAINS)

-18 THROUGH SB-61
ARACTERIZATION FOR RAILROAD
MISCELLANEOUS LOCATIONS)

OMATRIX)

OUND STORAGE TANK (UST)

SRMW-07 EXISTING MONITORING WELL

SRMW-10 DESTROYED MONITORING WELL

SS SANITARY SEWER

SD STORM DRAIN

W WATER

U PIPE OF UNKNOWN USE

FENCE

RAIL ROAD TRACKS

TELEPHONE POLE

(E) EXISTING

BGS BELOW GROUND SURFACE

CMP CORRUGATED METAL PIPE

APPENDIX B

TABLES

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
TPH-d, TPH-mo, and TPH-g
SMART Property, Santa Rosa, California

[illegible]	Date Sampled	TPH-d (mg/kg)	[illegible] (mg/kg)	TPH-g (mg/kg)
SB-1A@2'	9/15/2008	385[AC]	360	NA
SB-1A@5.5	9/15/2008	2,160	1,060	NA
SB-1A@7.5	9/15/2008	4,410	2,170	NA
SB-1A@10	9/15/2008	1,880	1,010	NA
SB-1A@15	9/15/2008	<10.0	<10.0	NA
SB-1B@5'	9/23/2008	<10.0	<10.0	NA
SB-1B@10'	9/23/2008	<10.0	<10.0	NA
SB-1C@8'	9/24/2008	2,960[AC]	2,170	NA
SB-1C@15	9/24/2008	41.8	21.0	NA
SB-1D@15	9/24/2008	<10.0	<10.0	NA
SB-1E@5'	9/24/2008	99.3[AC]	304	NA
SB-1E@10'	9/24/2008	32.9	31	NA
SB-1F@2	9/24/2008	<10.0	<10.0	NA
SB-1F@10'	9/24/2008	<10.0	<10.0	NA
SB-2A@2'	9/17/2008	1,460[AC]	3,460	NA
SB-2A@5	9/17/2008	<10.0	<10.0	NA
SB-3A@2'	9/17/2008	<10.0	41.8	NA
SB-3A@5'	9/17/2008	<10.0	<10.0	NA
SB-4A@2'	9/18/2008	36.4	<10.0	NA
SB-4A@5'	9/18/2008	<10.0	<10.0	NA
SB-5A@2'	9/18/2008	<10.0	<10.0	NA
SB-5A@5'	9/18/2008	<10.0	<10.0	NA
SB-6A@2'	9/19/2008	<10.0	<10.0	NA
SB-6A@5'	9/19/2008	<10.0	<10.0	NA
SB-7A@2'	9/22/2008	<10.0	<10.0	NA
SB-7A@5'	9/22/2008	<10.0	<10.0	NA
SB-8A@2'	9/22/2008	<10.0	<10.0	NA
SB-8A@5'	9/22/2008	<10.0	<10.0	NA
SB-9A@2'	9/23/2008	<10.0	<10.0	NA
SB-9A@5'	9/23/2008	<10.0	<10.0	NA
SB-11@2.5'	9/24/2008	<10.0	<10.0	NA
SB-11@15.5'	9/24/2008	<10.0	<10.0	NA
SB-12@2	9/24/2008	<10.0	<10.0	<1.00
SB-13@2	9/24/2008	<10.0	<10.0	<1.00
SB-14@11'	9/24/2008	<10.0	<10.0	<1.00
SB-15@2'	9/16/2008	<10.0	<10.0	NA
SB-15@5	9/16/2008	<10.0	<10.0	NA
SB-16@2	9/16/2008	<10.0	<10.0	NA
SB-16@6'	9/16/2008	<10.0	<10.0	NA
SB-20@2'	9/16/2008	<10.0	<10.0	NA
SB-20@5	9/16/2008	<10.0	<10.0	NA
SB-21@2	9/16/2008	870[AC]	1,910	NA
SB-21@5	9/16/2008	<10.0	<10.0	NA
SB-22@2	9/16/2008	<10.0	<10.0	NA
SB-22@5	9/16/2008	<10.0	<10.0	NA
SB-23@3'	9/16/2008	<10.0	<10.0	NA
SB-23@5'	9/16/2008	<10.0	<10.0	NA
SB-24@2'	9/16/2008	546[AC]	3,240	NA
SB-24@5'	9/16/2008	56.2[AC]	79.2	NA
SB-25@2'	9/16/2008	238	328	NA
SB-25@5'	9/16/2008	<10.0	<10.0	NA
SB-26@2'	9/17/2008	<10.0	98.3	NA
SB-26@5.5'	9/17/2008	52.2[AC]	84.1	NA
SB-27@2'	9/17/2008	98.3[AC]	353	NA
SB-27@5.5	9/17/2008	52.4	244	NA
SB-28@2'	9/17/2008	936[AC]	1,780	NA
SB-28@5'	9/17/2008	<10.0	<10.0	NA
SB-29@2'	9/17/2008	2,340[AC]	5,570	NA
SB-29@5	9/17/2008	[illegible]	<10.0	NA
SB-30@2'	9/17/2008	1,150	621	NA
SB-30@4'	9/17/2008	474	280	NA
SB-30@7'	9/17/2008	<10.0	<10.0	NA
SB-30A@5	9/24/2008	<10.0	<10.0	NA
SB-30B@5'	9/24/2008	<10.0	<10.0	NA
SB-31@2	9/17/2008	318[AC]	715	NA
SB-31@5'	9/17/2008	<10.0	<10.0	NA
SB-32@2'	9/17/2008	<10.0	<10.0	NA
SB-32@5'	9/17/2008	<10.0	<10.0	NA
SB-33@2'	9/18/2008	<10.0	<10.0	NA
SB-33@5'	9/18/2008	58.2[AC]	138	NA

[illegible]\SB-SMART_Table

TABLE 1
SOIL SAMPLE ANALYTICAL RESULTS
TPH-d, TPH-mo, and TPH-g
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	TPHd (mg/kg)	TPHmo (mg/kg)	TPHg (mg/kg)
SB-34@2'	9/18/2008	11.1[AM]	<10.0	NA
SB-34@5'	9/18/2008	<10.0	<10.0	NA
SB-35@2'	9/18/2008	<10.0	<10.0	NA
SB-35@5'	9/18/2008	<10.0	<10.0	NA
SB-36@2'	9/18/2008	<10.0	<10.0	NA
SB-36@5'	9/18/2008	<10.0	<10.0	NA
SB-37@2'	9/18/2008	<10.0	<10.0	NA
SB-37@5'	9/18/2008	<10.0	<10.0	NA
SB-38@2'	9/18/2008	<10.0	<10.0	NA
SB-38@5'	9/18/2008	<10.0	<10.0	NA
SB-39@2'	9/18/2008	<10.0	<10.0	NA
SB-39@5'	9/18/2008	<10.0	<10.0	NA
SB-40@2'	9/15/2008	<10.0	<10.0	NA
SB-40@5'	9/15/2008	<10.0	<10.0	NA
SB-41@2'	9/15/2008	<10.0	<10.0	NA
SB-41@5'	9/15/2008	<10.0	<10.0	NA
SB-43@2'	9/15/2008	<10.0	<10.0	NA
SB-43@5'	9/15/2008	<10.0	<10.0	NA
SB-43@2'	9/15/2008	150	<10.0	NA
SB-43@5'	9/15/2008	<10.0	<10.0	NA
SB-44@2'	9/15/2008	<10.0	<10.0	NA
SB44@5'	9/15/2008	<10.0	46.6	NA
SB-45@2'	9/15/2008	<10.0	<10.0	NA
SB-45@5'	9/15/2008	<10.0	<10.0	NA
SB-45R@5'	9/22/2008	<10.0	<10.0	NA
SB-46@2'	9/15/2008	<10.0	<10.0	NA
SB-46@5'	9/15/2008	<10.0	<10.0	NA
SB-47@2'	9/22/2008	<10.0	<10.0	NA
SB47@5'	9/22/2008	<10.0	<10.0	NA
SB-48@2'	9/22/2008	44.2	<10.0	NA
SB-48@6'	9/22/2008	<10.0	<10.0	NA
SB-49@2'	9/22/2008	<10.0	<10.0	NA
SB-49@5'	9/22/2008	<10.0	<10.0	NA
SB-50@2'	9/22/2008	<10.0	<10.0	NA
SB-50@5'	9/22/2008	<10.0	<10.0	NA
SB-51@2'	9/22/2008	<10.0	<10.0	NA
SB-51@5'	9/22/2008	<10.0	<10.0	NA
SB-52@2'	9/22/2008	<10.0	<10.0	NA
SB-52@5'	9/22/2008	<10.0	<10.0	NA
SB-53@2'	9/22/2008	<10.0	<10.0	NA
SB-53@5'	9/22/2008	<10.0	<10.0	NA
SB-54@2'	9/22/2008	<10.0	<10.0	NA
SB-54@5'	9/22/2008	<10.0	<10.0	NA
SB-55@2'	9/23/2008	<10.0	<10.0	NA
SB-55@5'	9/23/2008	<10.0	<10.0	NA
SB-56@2'	9/23/2008	<10.0	36.9	NA
SB-56@5'	9/23/2008	52.7[AC]	126	NA
SB-57@2'	9/23/2008	<10.0	<10.0	NA
SB-57@5'	9/23/2008	<10.0	<10.0	NA
SB-58@2'	9/23/2008	<10.0	<10.0	NA
SB-58@5'	9/23/2008	<10.0	<10.0	NA
SB-59@2'	9/23/2008	2,270[AC]	3,550	NA
SB-59@5'	9/23/2008	<10.0	36.5	NA
SB-60@2'	9/23/2008	<10.0	<10.0	NA
SB-60@5'	9/23/2008	<10.0	<10.0	NA
SB-61@2'	9/23/2008	<10.0	<10.0	NA
SB-61@5'	9/23/2008	<10.0	<10.0	NA
S-N-GATE@2'	9/29/2008	2,530[AC]	3,400	NA
S-N-GATE@5'	9/29/2008	<10.0	<10.0	NA
S-PB@2'	9/29/2008	615[AC,AC]	1,060	402

NA = Not Analyzed
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
TPHmo = Total Petroleum Hydrocarbons as motor oil
mg/kg = milligrams per kilogram
AC = Heavier hydrocarbons contributing to diesel range quantitation
AM = Lighter hydrocarbon than diesel
AN = Unknown hydrocarbon with several peaks

TABLE 2
SOIL SAMPLE ANALYTICAL RESULTS
POLYCYCLIC AROMATIC HYDROCARBONS
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	Acenaphthene	Acenaphthylene	Anthracene	Benzo (A) Anthracene	Benzo (B) Fluoranthene	Benzo (K) Fluoranthene	Benzo (A) Pyrene	Benzo (G,H,I) Perylene	Chrysene	Dibenzo (A,H) Anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-CD) Pyrene	Naphthalene	Phenanthrene	Pyrene
		µg/kg															
SB-1A@7.5'	9/16/2008	212	102	<5.00	131	<5.00	<5.00	43.2	70.7	69.2	<20.0	32.6	85.3	28.1	82.3	18.5	139
SB-5A@2'	9/18/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-8A@2'	9/22/2008	<2.50	<2.50	3.33	8.39	4.89	4.58	11.5	<10.0	9.81	<10.0	14.2	<2.50	<10.0	<2.50	5.04	17.0
SB-8A@5'	9/22/2008	<2.50	<2.50	<2.50	3.99	<2.50	<2.50	3.26	<10.0	2.94	<10.0	3.25	<2.50	<10.0	<2.50	<2.50	3.55
SB-11@9.5'	9/24/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-11@15.5'	9/24/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-18@2'	9/16/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-25@2'	9/16/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-28@2'	9/17/2008	<25.0	<25.0	<25.0	34.6	<25.0	<25.0	360	670	79.4	<100	<25.0	<25.0	<100	<25.0	27.6	<25.0
SB-28@5'	9/17/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-34@2'	9/18/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-45@2'	9/19/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-47@2'	9/22/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-56@2'	9/23/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50
SB-60@2'	9/23/2008	<2.50	<2.50	<2.50	4.42	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	3.54	<2.50	<10.0	<2.50	<2.50	4.77
SB-61@2'	9/23/2008	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<10.0	<2.50	<10.0	<2.50	<2.50	<10.0	<2.50	<2.50	<2.50

µg/kg = micrograms per kilogram.

TABLE 3
SOIL SAMPLE ANALYTICAL RESULTS
CAM 17 Metals
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	Antimony (Sb)	Arsenic (As)	Barium (Ba)	Beryllium (Be)	Cadmium (Cd)	Chromium (Cr)	Cobalt (Co)	Copper (Cu)	Lead (Pb)	Mercury (Hg)	Molybdenum (Mo)	Nickel (Ni)	Selenium (Se)	Silver (Ag)	Thallium (Tl)	Vanadium (V)	Zinc (Zn)
		mg/kg																
SB-5A@2'	9/18/2008	<2.50	3.76	172	<2.50	<2.50	61.1	16.6	26.1	21.1	<0.100	<2.50	73.8	<2.50	<2.50	<2.50	59.0	46.6
SB-8A@2'	9/22/2008	<2.50	4.92	216	<2.50	<2.50	107	23.2	33.1	8.02	<0.100	<2.50	169	<2.50	<2.50	<2.50	64.8	63.8
SB-11@9.5'	9/25/2008	<2.50	2.69	191	<2.50	<2.50	119	16.9	22.6	6.82	<0.100	<2.50	141	<2.50	<2.50	<2.50	44.4	48.8
SB-11@15.5'	9/25/2008	<2.50	<2.50	161	<2.50	<2.50	83.7	10.7	23.4	6.82	<0.100	<2.50	117	<2.50	<2.50	<2.50	38.5	47.1
SB-18@2'	9/16/2008	<2.50	2.92	128	<2.50	<2.50	78.3	13.1	22.2	7.35	<0.100	<2.50	89.8	<2.50	<2.50	<2.50	43.2	46.0
SB-18@5'	9/16/2008	<2.50	5.25	185	<2.50	<2.50	98.2	17.9	24.5	5.60	<0.100	<2.50	135	<2.50	<2.50	<2.50	58.8	49.8
SB-25@2'	9/16/2008	<2.50	<2.50	71.5	<2.50	<2.50	30.5	9.88	33.9	20.6	<0.100	<2.50	54.3	<2.50	<2.50	<2.50	35.7	48.4
SB-28@2'	9/17/2008	<2.50	2.72	34.4	<2.50	<2.50	28.7	7.43	13.9	12.4	<0.100	<2.50	61.9	<2.50	<2.50	<2.50	24.5	26.4
SB-34@2'	9/18/2008	<2.50	2.84	170	<2.50	<2.50	63.7	14.0	23.6	6.58	<0.100	<2.50	79.1	<2.50	<2.50	<2.50	47.7	43.7
SB-45@2'	9/19/2008	<2.50	3.56	157	<2.50	<2.50	64.3	15.5	24.0	8.35	<0.100	<2.50	84.5	<2.50	<2.50	<2.50	47.1	44.7
SB-47@2'	9/22/2008	<2.50	3.94	168	<2.50	<2.50	62.8	18.0	22.5	5.98	<0.100	<2.50	91.2	<2.50	<2.50	<2.50	46.5	49.6
SB-56@2'	9/23/2008	<2.50	5.20	124	<2.50	<2.50	110	23.0	30.5	7.44	<0.100	<2.50	165	<2.50	<2.50	<2.50	64.3	61.2
SB-60@2'	9/23/2008	<2.50	5.03	147	<2.50	<2.50	79.1	18.9	48.2	86.0	0.255	<2.50	118	<2.50	<2.50	<2.50	54.3	49.1
SB-61@2'	9/23/2008	<2.50	4.95	209	<2.50	<2.50	107	22.6	31.8	8.53	<0.100	<2.50	154	<2.50	<2.50	<2.50	64.0	64.2

mg/kg = milligrams per kilogram.

CAM = California Assessment Manual.

TABLE 4
SOIL SAMPLE ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS
SMART Property, Santa Rosa, California

Sample ID	Date	Units	PCE	Other VOCs
SB-1A@7.5'	9/16/2008	µg/kg	<200	*
SB-5A@2'	9/18/2008	µg/kg	<1.45	ND
SB-5A@6'	9/18/2008	µg/kg	<1.33	ND
SB-8A@2'	9/22/2008	µg/kg	**4.55**	ND
SB-8A@5'	9/22/2008	µg/kg	**5.86**	ND
SB-11@9.5'	9/24/2008	µg/kg	<1.37	ND
SB-12@8'	9/23/2008	µg/kg	<1.11	ND
SB-13@9'	9/23/2008	µg/kg	**1.44**	ND
SB-13-W@5'	10/15/2008	µg/kg	<1.35	ND
SB-14@11'	9/23/2008	µg/kg	<1.35	ND
SB-18@2'	9/16/2008	µg/kg	<1.27	ND
SB-18@5'	9/16/2008	µg/kg	<1.21	ND
SB-25@2'	9/16/2008	µg/kg	<1.27	ND
SB-28@2'	9/17/2008	µg/kg	**1.87**	ND
SB-28@5'	9/17/2008	µg/kg	**2.58**	ND
SB-28-W@10'	10/15/2008	µg/kg	**4.10**	ND
SB-34@2'	9/18/2008	µg/kg	<1.33	ND
SB-34@7'	9/18/2008	µg/kg	<1.31	ND
SB-45@2'	9/19/2008	µg/kg	<1.36	ND
SB-45@5'	9/19/2008	µg/kg	<1.28	ND
SB-47@2'	9/22/2008	µg/kg	<1.32	ND
SB-47@5'	9/22/2008	µg/kg	<1.33	ND
SB-56@2'	9/23/2008	µg/kg	<1.28	ND
SB-56@5'	9/23/2008	µg/kg	<1.61	ND
SB-61@2'	9/23/2008	µg/kg	**6.06**	ND
SB-61@5'	9/23/2008	µg/kg	**2.94**	ND
SB-61-W@10'	10/15/2008	µg/kg	**1.69**	ND
S-FE@1'	9/29/2008	µg/kg	<400	**

PCE = Tetrachloroethene
VOCs = Volatile Organic Compounds
µg/kg = micrograms per kilogram.
ND = Not detected at or above the laboratory's Reporting Limit. Please refer to the Certified Analytical Reports for actual reporting limits.
* = bromomethane (480 µg/kg).
** = m+p xylene(422 µg/kg), o-xylene(443 µg/kg), n-propylbenzene(556 µg/kg), 1,3,5-trimethylbenzene(4,200 µg/kg), 1,2,4-trimethylbenzene(12,100 µg/kg), sec-butylbenzene(1,080 µg/kg), 4-isopropyltoluene(1,680 µg/kg), n-butylbenzene(919 µg/kg). Remaining VOCs for S-FE@1' were non-detect.

TABLE 5
GROUNDWATER SAMPLE ANALYTICAL RESULTS
TPH-g, TPH-d, and TPH-mo
SMART Property, Santa Rosa, California

Sample ID	Date Sampled	TPH-g (mg/L)	TPH-d (mg/L)	TPH-mo (mg/L)
SB-1-W	10/6/2008	**1.44**[AS]	**29.7**	**19.7**
SB-1A-W	9/16/2008	**0.125**[AS]	**27.0**	15.4
SB-1B-W	9/25/2008	<0.050	<0.500	<0.500
SB-1D-W	9/25/2008	<0.050	<0.500	<0.500
SB-3A-W	9/17/2008	<0.050	<0.500	<0.500
SB-2-W	10/6/2008	<0.050	<0.050	<0.050
SB-3A-W	9/13/2008	<0.050	<0.500	<0.500
SB-3-W	10/7/2008	<0.050	<0.050	<0.050
SB-4A-W	9/13/2008	<0.050	<0.500	<0.500
SB-4-W	10/7/2008	<0.050	<0.050	<0.050
SB-5-W	10/6/2008	<0.050	<0.050	<0.050
SB-6A-W	9/19/2008	<0.050	<0.500	<0.500
SB-6-W	10/6/2008	<0.050	<0.050	<0.050
SB-7A-W	9/22/2008	<0.050	<0.500	<0.500
SB-7-W	10/7/2008	<0.050	<0.050	<0.050
SB-8A-W	9/23/2008	<0.050	<0.500	<0.500
SB-8-W	10/7/2008	<0.050	<0.050	<0.050
SB-9-W	10/7/2008	<0.050	**0.064**	<0.050
SB-10-W	10/7/2008	<0.050	**0.064**	<0.050
SB-11-W	9/25/2008	<0.050	<0.050	<0.050
SB-13-W	10/15/2008	<0.050	**0.279**	**0.246**
SB-28-W	10/15/2008	<0.050	<0.050	<0.050
SB-55-W	10/15/2008	**4.65**[AS]	**2.64**[AK]	<0.050
SRMW-07	10/2/2008	<0.050	<0.050	<0.050
SRMW-08	10/2/2008	<0.050	<0.050	<0.050

TPH-g = Total Petroleum Hydrocarbons as gasoline.
TPH-d = Total Petroleum Hydrocarbons as diesel.
TPH-mo = Total Petroleum Hydrocarbons as motor oil.
mg/L = milligrams per liter.
AK = Lighter hydrocarbon than diesel.
AS = Heavier hydrocarbon than gasoline contributing to value.

TABLE 6
GROUNDWATER SAMPLE ANALYTICAL RESULTS
VOLATILE ORGANIC COMPOUNDS
SMART Property, Santa Rosa, California

Sample ID	Water-Bearing Zone: Shallow/Deep	Date	Units	PCE	TCE	CIS-1,2-DCE	MtBE	Xylene (M+P)	N-Propylbenzene	1,2,4-Trimethylbenzene	All other VOCs
SB-1A-W	Shallow (~15' BGS)	9/16/2008	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-1B-W	Shallow (~15' BGS)	9/25/2008	µg/L	**0.520**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-1D-W	Shallow (~15' BGS)	9/25/2008	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-1-W	Deep (~25' BGS)	10/6/2008	µg/L	<1.00	<1.00	**1.15**	**1.40**	<1.00	<1.00	<1.00	<RL
SB-2A-W	Shallow (~15' BGS)	9/17/2008	µg/L	**1.96**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-2-W	Deep (~25' BGS)	10/6/2008	µg/L	**3.06**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-3A-W	Shallow (~15' BGS)	9/18/2008	µg/L	**3.03**	**0.750**	<0.500	**3.80**	<0.500	<0.500	<0.500	<RL
SB-3-W	Deep (~25' BGS)	10/7/2008	µg/L	**1.06**	**1.95**	**6.77**	**23.8**	<0.500	<0.500	<0.500	<RL
SB-4A-W	Shallow (~15' BGS)	9/18/2008	µg/L	**1.03**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-4-W	Deep (~25' BGS)	10/7/2008	µg/L	**12.7**	**1.96**	**0.530**	**21.3**	<0.500	<0.500	<0.500	<RL
SB-5-W	Deep (~25' BGS)	10/6/2008	µg/L	**5.88**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-6A-W	Shallow (~15' BGS)	9/19/2008	µg/L	**2.18**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-6-W	Deep (~25' BGS)	10/6/2008	µg/L	**9.63**	**2.70**	**1.20**	**47.1**	<0.500	<0.500	<0.500	<RL
SB-7A-W	Shallow (~15' BGS)	9/22/2008	µg/L	**3.40**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-7-W	Deep (~25' BGS)	10/7/2008	µg/L	<0.500	<0.500	<0.500	**2.31**	<0.500	<0.500	<0.500	<RL
SB-8A-W	Shallow (~15' BGS)	9/23/2008	µg/L	**1.03**	**0.720**	<0.500	**0.710**	<0.500	<0.500	<0.500	<RL
SB-8-W	Deep (~25' BGS)	10/7/2008	µg/L	**0.920**	<0.500	<0.500	**7.79**	<0.500	<0.500	<0.500	<RL
SB-9-W	Deep (~25' BGS)	10/7/2008	µg/L	**0.620**	<0.500	<0.500	**1.46**	<0.500	<0.500	<0.500	<RL
SB-10-W	Deep (~25' BGS)	10/7/2008	µg/L	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-11-W	Shallow (~15' BGS)	9/25/2008	µg/L	**0.730**	**1.15**	<0.500	**2.73**	<0.500	<0.500	<0.500	<RL
SB-13-W	Shallow (~15' BGS)	10/15/2008	µg/L	**1.22**	**1.40**	**1.18**	<0.500	<0.500	<0.500	<0.500	<RL
SB-28-W	Shallow (~15' BGS)	10/15/2008	µg/L	**3.63**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SB-55-W	Shallow (~15' BGS)	10/15/2008	µg/L	<1.00	<1.00	<1.00	<1.00	**1.14**	**1.27**	**1.13**	<RL
SRMW-07	Screened across both	10/2/2008	µg/L	**0.920**	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<RL
SRMW-08	Screened across both	10/2/2008	µg/L	**8.74**	**4.75**	**5.69**	**24.5**	<0.500	<0.500	<0.500	<RL

PCE = tetrachloroethene
TCE = trichloroethene
CIS-1,2-DCE = cis-1,2-dichloroethene
MtBE = methyl tert-butyl ether
VOCs = Volatile Organic Compounds
µg/L = micrograms per liter.
BGS = below ground surface.
~ = approximately
RL = method reporting limit.

Appendix D

Geoprobe® CPT and UVOST Product Summaries

CPT



The new NOVA CPT equipment integrates easily with the Geoprobe® 6622CPT machine which was designed specifically for pushing CPT, as well as having standard Geoprobe® direct push sampling capabilities using a hydraulic percussion hammer. Using RW (Radio Wave) NOVA, the user can push cones through the center chuck system while collecting cordless cone data real-time via a RW antenna. Communication between the cone and data acquisition is automatic. By integrating these two major components, expect to see improved efficiency in CPT. Setup and pushing capability will be easier for CPT soundings using the 6622CPT with automatic anchor placement, wireless remote control for tracks, throttle, & rear blade, and center pushing through a CPT clamp system. NOVA CPT adds to the advancements by offering two cordless options for operators where data can be acquired at 18-bit resolution through either RW or sound data transmission approaches.

Geoprobe Systems® teamed up with Geotech AB of Sweden to be the exclusive US distributor for Geotech AB Cone Penetration Testing tools for geotechnical and environmental studies. Now it is possible to combine the efficiency of Geoprobe® technology (lightweight, mobile) with the innovative cone penetration technique. These cordless CPT probes can be used from a variety of push platforms to provide continuous data, repeatable penetration results, and cost savings over more traditional boring and sampling methods. A CPT test is commonly used to determine the subsurface statigraphy in situ (in place) and to estimate geotechnical parameters of the materials present. The Geotech NOVA CPT system is unique in the geotechnical industry for its cordless data transmission system: a constant stream of data is sent to the surface through the soundingrods. No cable through the rods is needed.



Basic components of the RW NOVA CPT System (clockwise from the left): Instrumentation Cords, Depth Encoder, Computer Interface, RW NOVA Receiver, and RW NOVA Transmitter assembled to the NOVA CPT Probe.

Cone meets the ASTM D-5778 Standard Test Method for Performing Electronic Friction Cone and Piezocone Penetration Testing of Soils.

New cordless cone and data transmission technology makes logging quicker and easier!

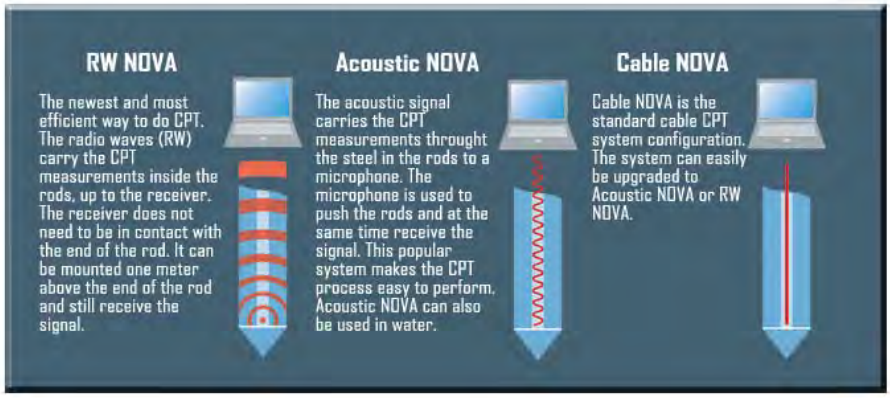
- This only CPT probe industry-wide that provides a constant stream of real-time data while you're probing... without a cord downhole. Information collected includes soil resistance on the cone tip, resistance on the outer sides, and pore pressures generated during the test.
- The only data transmission system of its kind.
- The operator does not have to manage data cable as the rods are cycled in and out of the sounding hole. Rod handling is efficient and the risk of cable damage is eliminated.
- New, RW NOVA technology uses radio waves to transmit measurements back to the receiver, opening the door for cordless SCPT, downhole video camera capabilities, and other data collecting sensors.
- Data transmission methods: Acoustic NOVA, Cable NOVA, RW NOVA
- New cone design offers 18 bit resolution with improved strength and gauge measurement accuracy.
- Repeatable penetration results
- Since the rod bore is free and clear, it can be used for lubrication grouting as the rods are pushed into the ground and for retraction grouting (hole sealing) as the rods are pulled. Click here for a drawing of this feature.

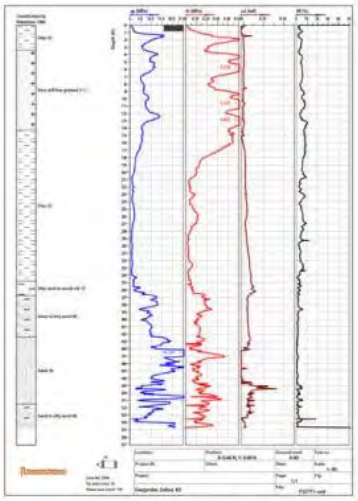


Make sure you use the best machine when running CPT logs. The 6622CPT machine has the ability to anchor up to 16in. (406 mm) in diameter. This

- Can be used with multiple push platforms: drill rigs, cone trucks, Geoprobe® direct push machines....
- Interpret results quickly with user-friendly CPT-PRO software for comprehensive data evaluation.

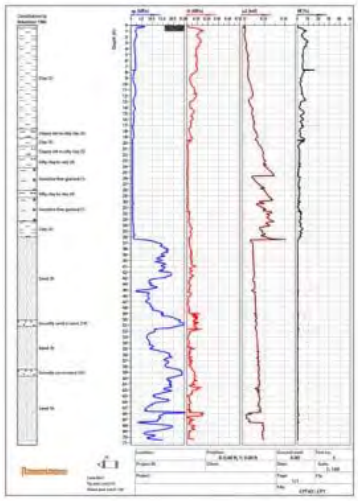
can be used for stabilizing the machine during a logging or sampling event.





[View PDF]

CPT log showing Soil Classification, Tip (qc), Sleeve (fs), Pore Pressure (u2), and Friction Ratio (RF). Log easily shows the varying soil conditions encountered when pushing CPT in Saline County, KS. Log created using CPT-Pro (post-processing software).



[View PDF]

CPT log showing Soil Classification, Tip (qc), Sleeve (fs), Pore Pressure (u2), and Friction Ratio (Rf). Log clearly shows the change from clay to sand in both tip pressure and pore pressure. Note the steady increase in pore pressure beginning at 36ft., indicating the probe encountered the water table. Log created using CPT-Pro (post-processing software).



There's lots more to be said about this innovative CPT equipment. To request more detailed information about how this CPT system can work for you request info from us or visit Geotech AB's website.

Geoprobe Systems Salina, Kansas
Teamed up to provide reliable CPT products with excellent technical service.
GEOTECH Askim, Sweden

Call Doug Koehler at 1-800-436-7762 ext 1101
for more information on our Direct Image Products!

Laser Induced Fluorescence (UVOST)

Gregg Drilling conducts Laser Induced Fluorescence (LIF) Cone Penetration Tests using a UVOST module that is located behind the standard piezocone, *Figure UVOST*. The laser induced fluorescence cone works on the principle that polycyclic aromatic hydrocarbons (PAH's), mixed with soil and/or groundwater, fluoresce when irradiated by ultra violet light. Therefore, by measuring the intensity of fluorescence, the lateral and vertical extent of hydrocarbon contamination in the ground can be determined.

The UVOST module uses principles of fluorescence spectrometry by irradiating the soil with ultra violet light produced by a laser and transmitted to the cone through fiber optic cables. The light is then passes through a small window in the side of the cone into the soil. Any hydrocarbon molecules present in the soil absorb the light energy during radiation and immediately re-emit the light at a longer wavelength. This re-emission is termed fluorescence. The UVOST system also measures the emission decay with time at four different wavelengths (350nm, 400nm, 450nm, and 500nm). This allows the software to determine a product "signature" at each data point. This process allows determination of the type of contaminant as shown in Figure *Concept*.

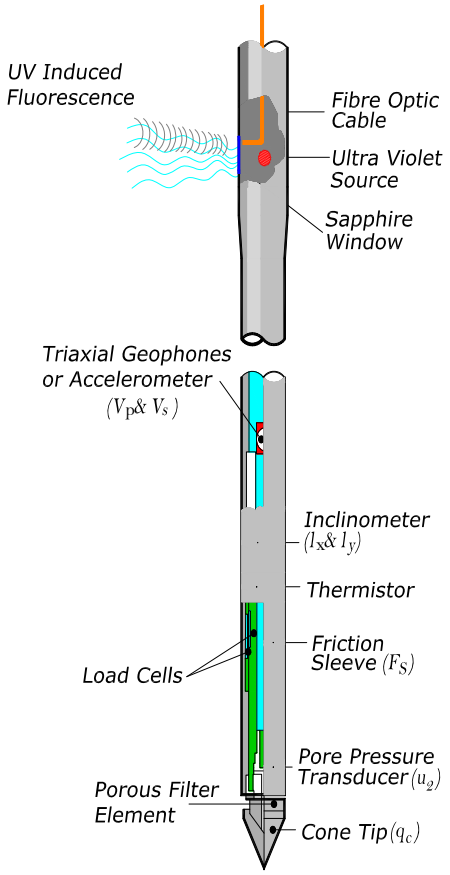


Figure UVOST: UVOST system deployed with the CPT

In general, the typical detection limit for the UVOST system is <100 ppm and it will operate effectively above and below the saturated zone. With the capability to push up to 600 feet per day, laser induced fluorescence offers a fast and efficient means for delineating PAH contaminant plumes. Color coded logs offer qualitative information in a quick glance and can be produced in the field for real-time decision making. Coupled with the data provided by the CPT, a complete site assessment can be completed with no samples or cuttings, saving laboratory costs as well as site and environmental impact.

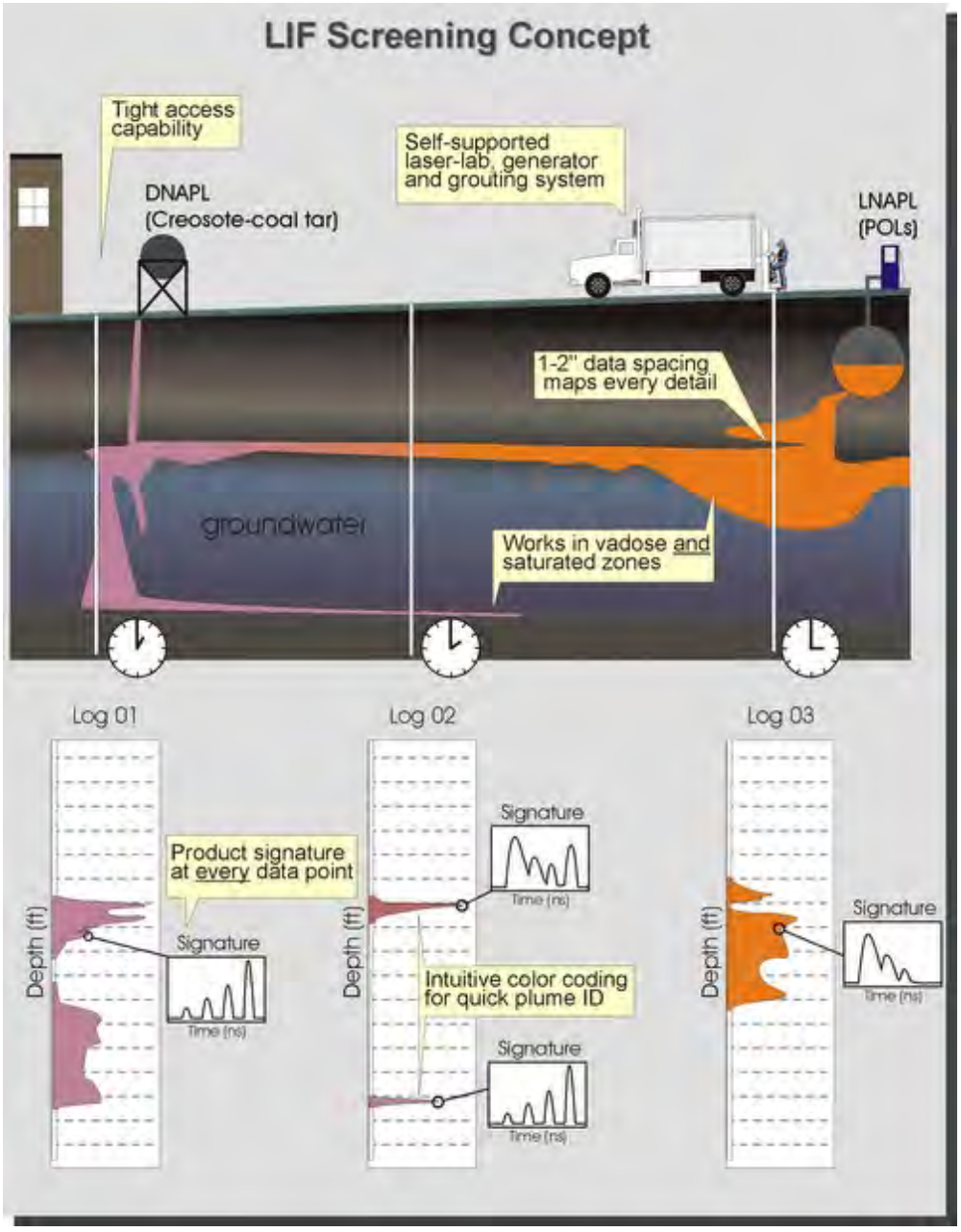
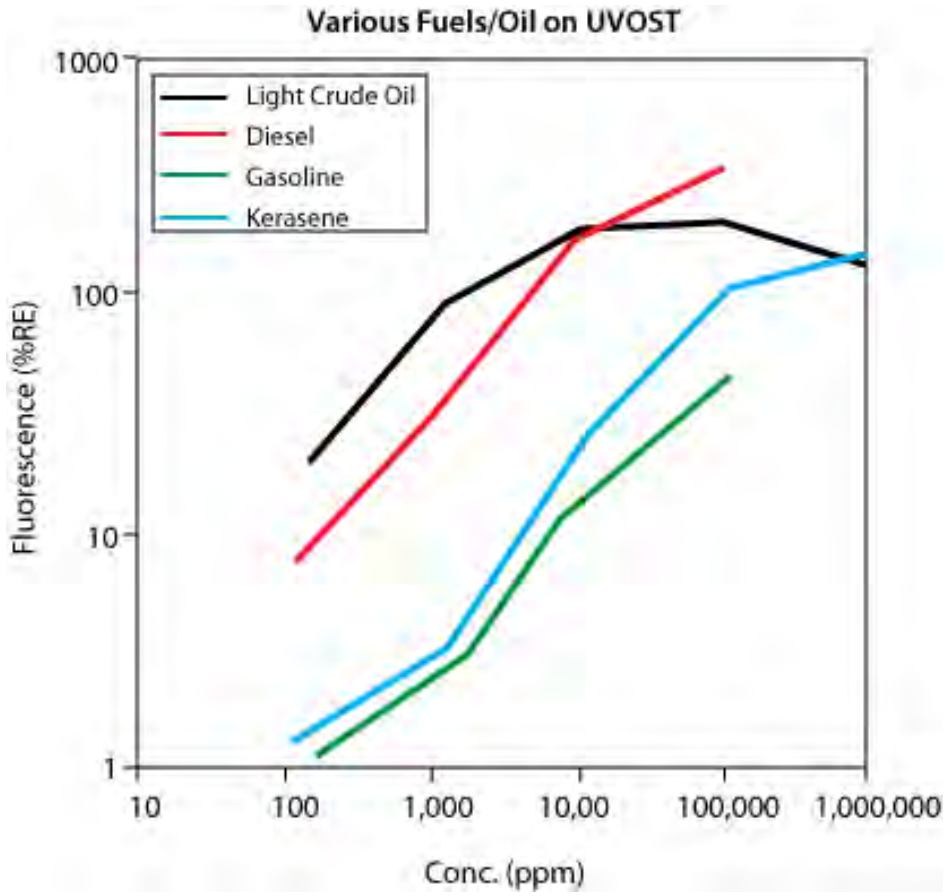


Figure Concept (figure provided by Dakota Technologies)

Hydrocarbons detected with UVOST	Hydrocarbons rarely detected using UVOST
Gasoline	Extremely weathered gasoline
Diesel	Coal tar
Jet (Kerosene)	Creosote
Motor Oil	Bunker Oil
Cutting fluids	Polychlorinated bi-phenols (PCB's)
Hydraulic fluids	Chlorinated solvent DNAPL
Crude Oil	Dissolved phase (aqueous) PAH's

Potential False Positives (fluorescence observed)	**Potential False Negatives** (do not fluoresce)
Sea-shells (weak-medium)	Extremely weathered fuels (especially gasoline)
Paper (medium-strong depending on color)	Aviation gasoline (weak)
Peat/meadow mat (weak)	Coal tars (most)
Calcite/calcareous sands (weak)	Creosotes (most)
Tree roots (weak-medium)	"Dry" PAHs such as aqueous phase, lamp black, purifier chips
Sewer lines (medium-strong)	Most chlorinated solvents
	Benzene, toluene, zylenes (relatively pure)



Dakota Technologies
UVOST Log Reference

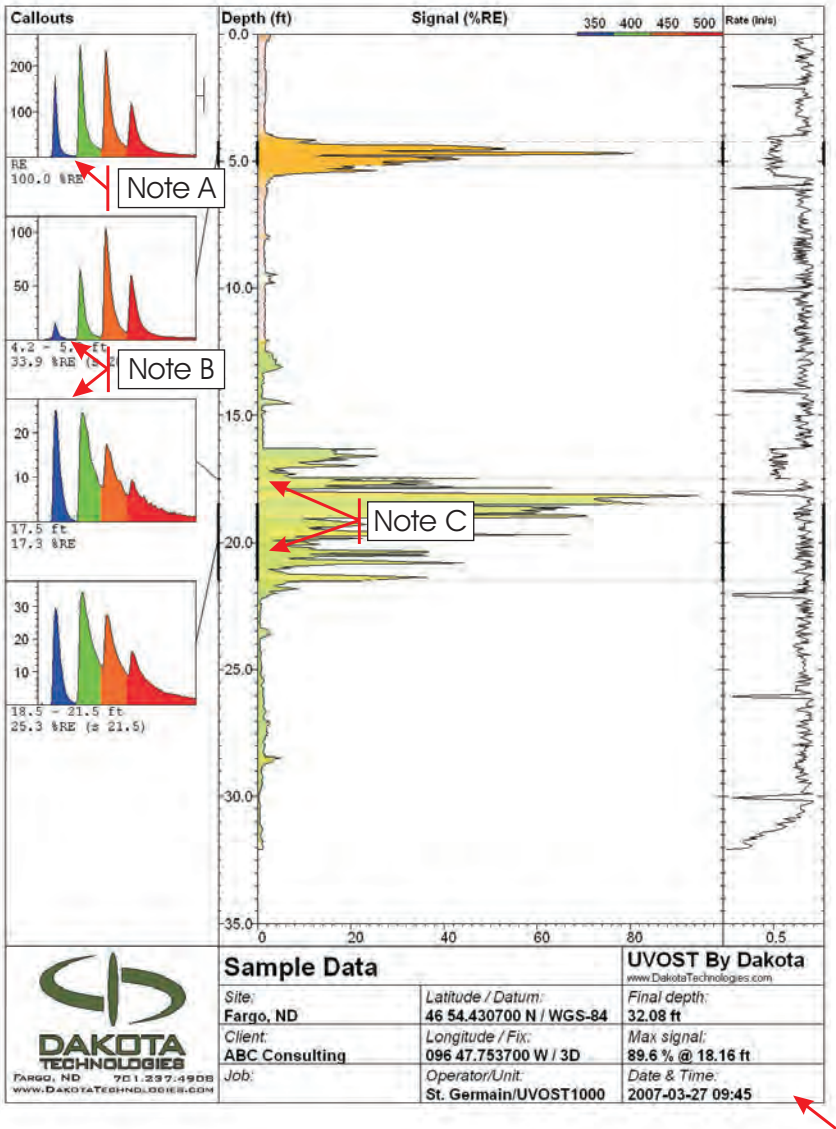
Main Plot :
Signal (total fluorescence) versus depth where signal is relative to the Reference Emitter (RE). The total area of the waveform is divided by the total area of the Reference Emitter yielding the %RE. This %RE scales with the NAPL fluorescence. The fill color is based on relative contribution of each channel's area to the total waveform area (see callout waveform). The channel-to-color relationship and corresponding wavelengths are given in the upper right corner of the main plot.

Callouts :
Waveforms from selected depths or depth ranges showing the multi-wavelength waveform for that depth.

The four peaks are due to fluorescence at four wavelengths and referred to as “channels”. Each channel is assigned a color.

Various NAPLs will have a unique waveform "fingerprint" due to the relative amplitude of the four channels and/or broadening of one or more channels.

Basic waveform statistics and any operator notes are given below the callout.



Rate Plot :
The rate of probe advancement. ~ 0.8in (2cm) per second is preferred.

A noticeable decrease in the rate of advancement may be indicative of difficult probing conditions (gravel, angular sands, etc.) such as that seen here at ~5 ft.

Notice that this log was not terminated arbitrarily, but due to "refusal", as indicated by the sudden advancement rate drop at final depth.

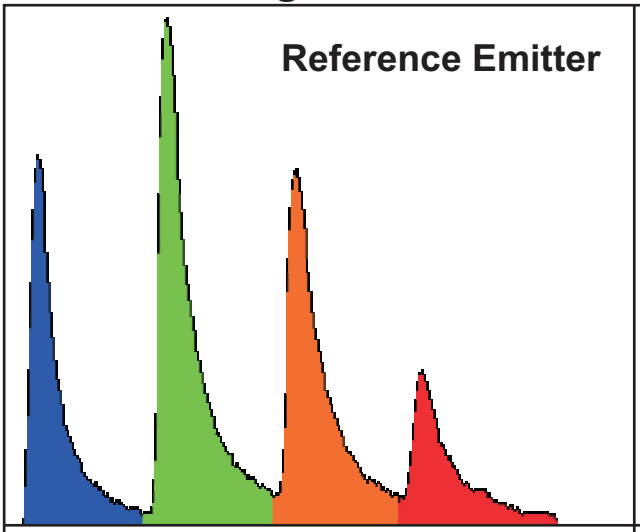
Info Box :
Contains pertinent log info including name and location.

Note A :
Time is along the x axis. No scale is given, but it is a consistent 320ns wide.
The y axis is in mV and directly corresponds to the amount of light striking the photodetector.

Note B :
These two waveforms show two different products, each with a unique waveform. The first is used motor oil and the second is diesel.

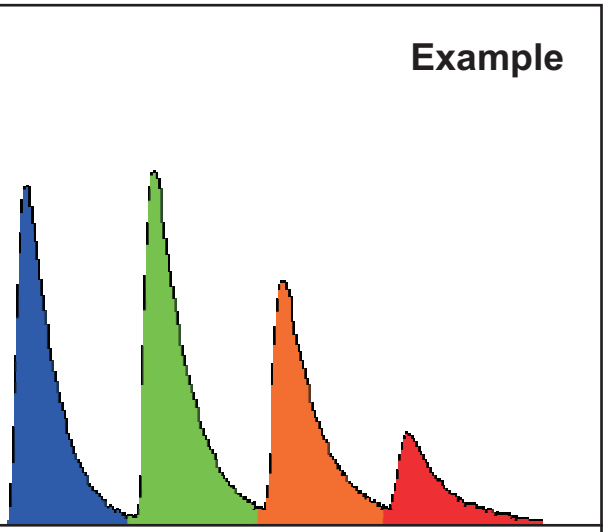
Note C :
Callouts can be a single depth (see 3rd callout) or a range (see 4th callout). The range is noted on the depth axis by a bold line. When the callout is a range, the average and standard deviation in %RE is given below the callout.

Waveform Signal Calculation



CH1		CH2		CH3		CH4		Total
4820	+	8108	+	6249	+	2984	=	**22161**
21.7		36.6		28.2		13.5		**100%**

Channel Area (pVs) Percent RE

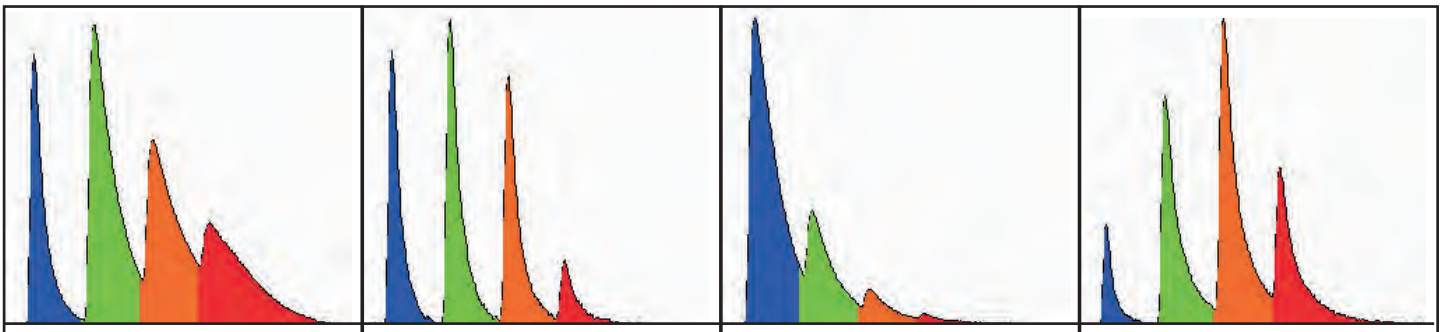


CH1		CH2		CH3		CH4		Total
4923	+	5743	+	4166	+	1735	=	**16587**
22.3		25.9		18.8		7.8		**75%**

Data Files

***.lif.raw.bin**	Raw data file. Header is ASCII format and contains information stored when the file was initially written (e.g. date, total depth, max signal, gps, etc., and any information entered by the operator). All raw waveforms are appended to the bottom of the file in a binary format.
***.lif.plt**	Stores the plot scheme history (e.g. callout depths) for associated Raw file. Transfer along with the Raw file in order to recall previous plots.
***.lif.jpg**	A jpg image of the OST log including the main signal vs. depth plot, callouts, information, etc.
***.lif.dat.txt**	Data export of a single Raw file. ASCII tab delimited format. No string header is provided for the columns (to make importing into other programs easier). Each row is a unique depth reading. The columns are: Depth, Total Signal (%RE), Ch1%, Ch2%, Ch3%, Ch4%, Rate, Conductivity Depth, Conductivity Signal. Summing channels 1 to 4 yields the Total Signal.
***.lif.sum.txt**	A summary file for a number of Raw files. ASCII tab delimited format. The file contains a string header. The summary includes one row for each Raw file and contains information for each file including: the file name, gps coordinates, max depth, max signal, and depth at which the max signal occured.
***.lif.log.txt**	An activity log generated automatically located in the OST application directory in the 'log' subfolder. Each OST unit the computer operates will generate a separate log file per month. A log file contains much of the header information contained within each separate Raw file, including: date, total depth, max signal, etc.

Common Waveforms (highly dependent on soil, weathering, etc.)



Diesel	Gas	Kerosene	Motor Oil

Site Remedial Action and Investigation Report

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board
Case No. 1TSR196

Antea Group Project No. UPR8248
October 16, 2012

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Site Remedial Action and Investigation Report

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board Case No. 1TSR196

1.0 INTRODUCTION

Antea™Group has prepared this *Site Remedial Action and Investigation Report* on behalf of Union Pacific Railroad (UPRR) in response to the North Coast Regional Water Quality Control Board (RWQCB) directive letter dated January 19, 2012 and work plan approval letter dated March 19, 2012 **(Appendix A).** This report summarizes the following activities to address RWQCB concerns:

- additional soil excavation in the vicinity of EBA Engineering (EBA) boring SB-1,
- qualitative groundwater assessment in the vicinity of the recently removed underground storage tanks (USTs) to investigate the extent of separate phase hydrocarbons (SPH) encountered during UST removal;
- to determine the optimal placement of up to four groundwater monitoring wells, and
- the advancement of twelve soil borings (B1 through B12) along a section of the southwest property boundary to aid in determining the relationship between on-site and off-site contamination.

1.1 Site Description

Currently, the site is being used as a construction equipment supply storage area for Sonoma Marin Area Rail Transit (SMART) construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the 3 West Third Street and 60 West Sixth Street Warehouses, to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties (**Figure 1**).

1.2 Site History

The site was historically used as a railroad freight depot and maintenance/fueling yard from the late 1800's through the 1960's. This site has been vacant and generally unused since the late 1960's. Consultants have conducted environmental investigations and remediation efforts at the site since 1987. Former operations at the site include the use of aboveground storage tanks (ASTs), underground storage tanks (USTs), a main railroad track system that occupied the eastern portion of the property, several associated railroad spurs and siding, a turntable, warehouses, and freight houses. A Sanborn Fire Insurance map dated 1885 indicates the Santa Rosa Woolen Mills was located in the northwestern portion of the site until approximately 1906 (EBA, 2009a). **Appendix B** includes a summary of environmental investigations and remedial activities conducted at the site. **Figure 2** shows the locations of historic borings and wells at the site.

1.3 Geologic and Hydrogeologic Setting

1.3.1 Regional Geology

The site is centrally located within the Santa Rosa Plain, which is part of the Coast Range Geomorphic Province of northern California. The Coast Range Geomorphic Province is characterized as a series of northwest trending elongated ridges and valleys that are a result of folding and faulting. The Santa Rosa Plain consists of alluvial fan deposits of Pleistocene and Holocene age. The alluvial fan deposits form a nearly continuous blanket over the Santa Rosa Plain and consist of poorly sorted coarse sand and gravel, moderately sorted fine sand and silt, and silty clay. The region has been mapped as having basement materials that underlie the alluvial fan deposits. The basement materials consist of marine sedimentary rocks of the Miocene Age Wilson Grove Formation. Portions of the Wilson Grove Formation are overlain by younger continental sedimentary rocks of the Pliocene-Pleistocene Age Glen Ellen Formation (EBA, 2008b).

1.3.2 Site Geology and Hydrogeology

The geology of the project site is characterized by shallow rocky fill or organic clay in the upper one to two feet below ground surface (bgs) that is underlain by sandy silt and clayey sediments containing varying amounts of angular to sub-rounded gravel. These finer-grained sediments extend to approximately 20 feet bgs, and are underlain by a laterally continuous sandy coarse-grained unit extending to at least 26 feet bgs, the maximum depth explored at the project site to date (EBA, 2008b).

The hydrogeology of the project site is likely controlled by gradational lenses of sediments separated by clayey layers. A thin, semi-continuous sandy unit located at an average depth of approximately 9-15 feet bgs overlays a similarly laterally extensive clayey bed. The more impervious clay units likely act as confining layers and inhibit the downward vertical migration of fluids. Based on this observation, the resulting perched groundwater in the upper permeable sand unit (Zone A) has been independently sampled from the deeper water-bearing zone present at a depth of approximately 20 to 25 feet bgs (EBA, 2008). However, EBA noted that wells SRMW-7 and SRMW-8 were screened across both zones. The predominant groundwater flow direction is approximately west-southwest across the project site towards Santa Rosa Creek (approximately 160 feet beyond the western side of the property). Therefore, the eastern portion of the project site is considered up gradient relative to the western portion (EBA, 2008b).

2.0 SITE INVESTIGATION

2.1 Scope of Work

As stated in the introduction, Antea Group addressed RWQCB concerns by conducting the following activities:

- **Soil Borings (B1 through B5):** Antea Group advanced five soil borings along the southwest property boundary to evaluate the relationship between on-site and off-site contamination.

- **Qualitative Borings (B6 through B12):** Antea Group advanced seven soil borings utilizing direct push rods equipped with cone penetration testing (CPT) tip and Ultra-Violet Optical Screening Tool (UVOST). Borings were advanced in the vicinity of the UST excavation where in November 2011, United Pumping Services (UPS) removed two 550-gallon tanks and encountered SPH within the excavation. UVOST technology was used to conduct a qualitative field screening of potential hydrocarbon distribution and to optimize sampling locations and potential monitoring well placement.

- **Soil Excavation**: Antea Group excavated soil in the area of soil boring SB-1 to remove hydrocarbon impacted soil observed at 12 feet bgs by EBA during their 2008 investigation.

2.2 Pre-Field Activities

Prior to initiating field activities, Antea Group produced a Health and Safety Plan (HASP) in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP contained a list of regulatory and emergency contacts, as well as a hospital route map to the nearest emergency facility. Field personnel conducted a daily review for site-specific updates or changes in work conditions. Antea Group obtained all necessary soil boring permits from Sonoma County for soil boring activities. UPS obtained the necessary permits for the excavation from the City of Santa Rosa Fire Department and Planning agencies. In addition, Antea Group and UPS conducted pre-field notifications, as required by the regulatory and permitting agencies. **Appendix C** includes copies of the permits obtained from Sonoma County and the City of Santa Rosa.

2.3 Field Activities

Prior to ground disturbance, Antea Group and UPS contacted Underground Service Alert (USA) North to mark the site for subsurface utilities and employed a private locator to clear each drilling location for subsurface obstructions and hazards. In addition, a California C-57 licensed drilling company cleared each soil boring using a hand auger to a minimum depth of five feet bgs.

2.3.1 Exploratory Soil Borings

On April 23, 2012, Antea Group advanced five soil borings (B1 through B5) on the southwestern boundary of the site utilizing 3.25-inch diameter direct-push rods driven to the terminus of each boring. **Figure 3** illustrates the location of the soil borings. The soil borings were logged continuously using the Unified Soil Classification System (USCS) under the direction of a State Registered Professional Geologist and screened at approximate 2-foot intervals with a photoionization detector (PID). The terminus for each exploratory boring was approximately 20 feet bgs.

Antea Group collected samples from three depth intervals in each boring for laboratory analysis based upon field observations. In each boring a sample was collected from one to five feet bgs, the deepest unsaturated soil interval and any intervals exhibiting the highest PID response or other criteria. The samples were collected from the acetate liner, immediately packed tightly into laboratory provided container and placed in an ice-chilled cooler pending transportation to the laboratory.

Following completion of each of the five soil borings, the driller inserted a pre-packed well screen for the collection of groundwater samples. The pre-packed well screens were five feet in length and consisted of 3/4-inch diameter Schedule 40 polyvinyl chloride (PVC) casing with 0.010-inch slots surrounded by 1.5-inches of 20/40 Grade sand encased in a stainless steel mesh. Antea Group collected grab groundwater samples from each boring utilizing a stainless steel bailer which was decontaminated after each location. The samples were placed in ice pending transportation to the laboratory. Following the collection of groundwater samples, each pre-packed screen was removed and the borehole was sealed with Portland cement grout.

Soil and groundwater samples collected from B1 through B5 were analyzed for the following:

- Diesel range organics (DRO), carbon chain range C10 – C28, and Motor oil range organics (MORO), carbon chain range C24 – C36, by Environmental Protection Agency (EPA) Method 8015B with silica gel cleanup;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM

Laboratory analytical reports are included in **Appendix E** and a summary of soil and groundwater analytical data is provided in **Tables 1 and 2**, respectively. Boring logs are included in **Appendix D.** Cross sections showing subsurface soils and current soil and groundwater analytical data are provided as **Figures 6 and 7**.

2.3.2 Qualitative Borings

On April 24 through 25, 2012, Antea Group advanced direct push rods equipped with CPT and UVOST modules (CPT-UVOST) in seven locations (B6 through B12) around the tank pit area recently evaluated by Antea Group. The CPT and UVOST sensors were simultaneously advanced in the same hole. The CPT-UVOST borings were advanced in the locations indicated on **Figure 2.**

During CPT advancement, shallow perched water (Zone A) was detected in borings B8, B10, and B12 at approximately 9 to 12 feet bgs. In these locations, advancement halted at the depth of the shallow water-bearing zone and a grab groundwater sample was collected by evacuating the CPT/UVOST rods from the borehole and advancing standard direct-push rods to the depth of the saturate zone to collect a groundwater sample. Although CPT logs (and pore pressure readings) did not indicate the presence of shallow perched water in B-7, due to the indication of hydrocarbons in boring B-7 illustrated by the UVOST screening profile, Antea Group attempted to collect a shallow groundwater sample from B-7 in the 10- to 14-foot depth interval. Boring B-7 would not yield

water for sample collection in the shallow interval as the perched zone was not present; an attempt to collect a shallow groundwater sample from B-11 was also unsuccessful.

Following the collection of groundwater samples from Zone A, the standard direct-push rods were evacuated from the borehole, and the CPT/UVOST rods were re-advanced in each borehole to complete the soil profile to the total explored depth. The terminus for each test location was approximately 22 to 25 feet bgs.

To avoid cross contamination of shallow and deeper groundwater zones, a second adjacent boring was advanced at each location for the collection of a deeper groundwater sample (Zone B).

Each groundwater sample was collected from a temporary well consisting of ¾-inch diameter Schedule 40 polyvinyl chloride (PVC) casing with 0.010-inch slots was inserted into the direct-push rods. The rods were then raised to expose the screen and allow groundwater to flow into the casing. Samples were collected from the casings utilizing a stainless steel bailer, then decanted into laboratory-provided containers and placed on ice pending transportation to the laboratory.

Following sample collection, each temporary well casing was removed, and the each borehole immediately sealed by tremmying bentonite grout into the boring.

Groundwater samples collected from B6 through B12 were analyzed for the following:

- Diesel range organics (DRO), carbon chain range C10 – C28, and Motor oil range organics (MORO), carbon chain range C24 – C36, by Environmental Protection Agency (EPA) Method 8015B with silica gel cleanup;
- Polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM

Laboratory analytical reports are included in **Appendix E**; a summary groundwater analytical data is provided in **Table 2.** The CPT and UVOST profiles are included in **Appendix D**. Cross sections showing subsurface soils and current soil and groundwater analytical data are provided as **Figures 6 and 7**.

2.3.3 Soil Excavation

On July 9 through July 13, 2012 UPS and Antea Group conducted soil excavation in the area of former EBA soil boring SB-1. **Figure 5** depicts the extent of the excavation which was 45 feet by 15 feet. The final depth of the excavation was 13 feet bgs, which was the depth to groundwater, as directed by the RWQCB in their October 30, 2009 correspondence.

During the excavation, the breathing zone and surrounding vicinity was monitoring for health and safety purposes using a PID. No significant detections were observed on monitoring devices during excavation activities. Antea Group collected side wall and base samples from the pit. All of the side wall samples were collected roughly 10

feet apart at approximately 6.5 feet bgs with the exception of side wall samples NSW5, NSW6, ESW2, SSW6, and WSW2, which were collected roughly 20 feet apart at approximately 12 feet bgs. The location of sidewall and base samples are illustrated on **Figure 3**. Antea Group submitted the soil samples for the following analysis with the exception of BASE3 and SSW5, which not analyzed due to groundwater saturation:

- DRO and MORO by EPA Method 8015B with Silica Gel Cleanup;
- PAHs by EPA Method 8270C SIM;

For proper waste profiling, three composite soil samples were collected from the excavation area and were submitted for the analytes listed above, plus the following volatile organic compounds (VOCs), semi volatile organic compounds (SVOCs), and metals:

- Gasoline range organics (GRO), benzene, toluene, ethylbenzene and xylenes (BTEX compounds) by EPA Method 8260B;
- Tetrachloroethene (PCE) and trichloroethene (TCE) by EPA Method 8260;
- California Assessment Manual (CAM) 5 metals: cadmium, chromium, nickel, lead, zinc by EPA Method 6010B.

At the request of Sonoma County, Antea Group pumped and containerized groundwater from the excavation. The groundwater recovered from the excavation was temporarily stored on-site, and a composite sample was collected and submitted to a laboratory for the following rush analysis to allow for expedited disposal:

- DRO, and MORO, by EPA Method 8015B with Silica Gel Cleanup;
- GRO and VOCs by EPA Method 8260B;
- SVOCs by EPA Method 8270C;
- PAHs by EPA Method 8270C SIM;
- Total and dissolved CAM 5 Metals: cadmium, chromium, nickel, lead, and zinc, by EPA Method 6010B.

Once the analytical data was received, the groundwater was transported off-site and properly disposed. Composite samples that contained metals (chromium and nickel) detections above initial non-hazardous waste screening requirements were further analyzed for the soluble threshold limit concentration (STLC). STLC regulatory limits were not exceeded. Laboratory analytical reports are provided as **Appendix E** and a summary of soil analytical data is provided in **Table 1**. Waste water analytical is summarized in **Table 2**.

Approximately 758 tons of soil were excavated and properly disposed. Upon completion of soil removal and approval of the City of Santa Rosa Fire Department and RWQCB, the excavation was backfilled with approximately two feet of ballast rock, or 94.36 tons, at the base of the excavation pit. The ballast rock was covered with geofabric, then pea gravel backfilled the excavation and was simultaneously compacted to approximately five feet bgs. Approximately 285 tons of pea gravel was used to backfill the excavation pit, followed by 405 tons of base material, also simultaneously compacted from 5 feet bgs to ground surface. A licensed compaction engineer was onsite to oversee backfilling/compaction activities.

2.3.4 Decontamination and Disposal of Investigation Derived Waste

Soil Borings

Prior to use and between boring locations, down-hole equipment was decontaminated using high-pressure hot water spray. Soil cuttings and wastewater generated during soil boring activities were be placed in Department of Transportation (DOT) approved 55-gallon drums, sealed and labeled in accordance with the corresponding DOT protocols for non-hazardous waste. The drums were sampled for characterization and temporarily stored on-site pending laboratory results, profiling, and the completion of excavation activities. UPS transported the laboratory-profiled waste from the investigation to an appropriate licensed facility at the time of disposal of waste generated during soil excavation activities.

Soil Excavation

UPS pumped approximately 1500 gallons of water from the base of the excavation pit on July 12, 2012. All liquid waste was shipped as non-hazardous liquid to Sea Port at 679 Seaport Blvd in Redwood City. An approximate 757.96 tons of waste soil was generated during excavation activities. Soil was shipped as non-hazardous to Recology Hay Road Facility located in Vacaville, CA on July 10, 2012 and Keller Canyon Sanitary Landfill located in Pittsburg, CA on July 11, 2012.

Appendix F includes the certified laboratory analytical reports of the waste characterization samples; **Appendix G** includes copies of waste manifests.

3.0 ANALYTICAL RESULTS AND DISCUSSION

Conestoga-Rovers and Associates (CRA) performed a data quality assessment and validation for laboratory reports generated for this investigation. CRA concluded that data included in the reports are valid for the intended purpose. Validation forms are included with laboratory analytical reports in **Appendix E**.

3.1 Exploratory Soil Borings

3.1.1 Soil Sampling Analytical Results

The analytical results from soil samples collected on April 23, 2012 are summarized in **Table 1.** Of the soil samples submitted only six samples (B1-5', B1-10', B1-16', B2-11', B4-5', and B4-12') had detections above laboratory reporting limits (LRLs). Of the detection above the LRLs, only two concentrations are above their San Francisco Bay RWQCB environmental screening levels (ESLs). The DRO concentration

in sample B2-11' [240 milligrams per kilogram (mg/kg)] and the concentration of DRO (810 mg/kg) detected in B4-12' exceeded the ESL of 83 mg/kg.

3.1.2 Grab Groundwater Results

The analytical results from groundwater samples collected on April 23, 2012 are summarized in **Table 2.** Detections of MORO, DRO, benzo(b)fluoranthene and pyrene were detected above ESLs in boring B1 and B2. Concentrations of MORO and DRO were detected above ESLs in boring B3 and concentrations of DRO and pyrene were detected above ESLs in boring B4. There were no detections above LRLs in the sample collected from B5. .

3.2 UVOST/CPT Borings

3.2.1 UVOST/CPT Advancement Results

The boring logs and results of the UVOST/CPT advancements are included in **Appendix D.** Analysis of the UVOST data suggests that the only boring displaying minor indications of hydrocarbon impacts is boring B7 at approximately 5 to 10 feet bgs.

3.2.2 Grab Groundwater Results

The analytical results from groundwater samples collected on April 24 through 25, 2012 are summarized in **Table 2.** There were no detections above the LRLs in in the groundwater samples collected from borings B6 though B12.

3.3 Soil Excavation

3.3.1 Soil Analytical Results

The analytical results from the samples collected on July 10 through 11, 2012 are included in **Table 1**. Multiple sidewall and base samples showed detection above the LRLs; however, only four samples had detections above ESLs. In samples SSW1 and SSW2, concentrations of MORO and DRO were above their residential ESL. Sample NSW5 had a detection of benzo(a)pyrene above its residential ESL. DRO in BASE2 and DRO/MORO in SSW1 and SSW2 exceed commercial/industrial ESLs.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Antea Group concludes the following regarding the recent investigation.

- Antea Group recognizes that PCE and TCE have been detected in groundwater beneath the site at various sampling locations; however, the former RWQCB case worker agreed with omitting VOC analysis due to the widespread nature of low-level VOCs & SVOCs, specifically PCE, TCE, and MTBE, which appear to be ubiquitous throughout the area and not related to former onsite activities. This is indicated by elevated VOC detections in up gradient well, MW-8. Additionally, soil samples collected onsite show only trace levels of VOCs, at concentrations that are below ESLs.
- Highest soil concentrations were reported along the southwestern property boundary.

- Groundwater concentrations detected above ESLs were on the southern-most portion of the southwestern property boundary (borings B1 and B2).
- Analysis of the UVOST data surrounding the former UST location suggests that the only boring displaying hydrocarbon impacts is boring B7 at approximately 5 to 10 feet bgs.
- None of the groundwater samples collected from the UVOST/CPT borings contained concentrations above ESLs.
- Based on the results of the UVOST/CPT borings, the 2011 UST removal and excavation appears to have been successful in removing contaminated soil to the extent practicable. In addition, data from the current investigation showed no detections in either water bearing zone around the former tank pit area.
- Significant secondary source soils were successfully removed during excavation activities in the area including and surrounding former EBA boring SB-1, as indicated by visual observation of soils removed as well as waste composite hydrocarbon concentrations.
- The results of the sidewall and base samples of the excavation in the vicinity of EBA boring SB-1 indicate that only samples from the southwest portion of the excavation exceed commercial/industrial ESLs for DRO and MORO.
- The potential exists that impacts along the southwest boundary of the site may be attributed to former operations on the neighboring property (60 West Sixth Street), which has its own history of petroleum product storage tanks and environmental investigations. EBA Engineering's (EBA) Report of Investigation Report dated February 27, 2006 indicates that there were significant groundwater impacts along the property boundary adjacent to the site. Impacts of motor oil concentrations ranged from 130 mg/L - 130,000 mg/L along the property boundary of the adjacent site. In addition, a former underground concrete diesel storage tank was on the adjacent property, near recently advanced boring B3, as well as former underground oil storage tanks just northwest of B-3 and B-2, as depicted on Figure 2 of Kennedy/Jenks Consultant's *Source Area Removal Report, Santa Rosa Station, Santa Rosa, California*, dated January 29, 2004.
- Analytical data from the current investigation and historic data points near and hydraulically upgradient of the property line also suggest that onsite discharges may not be the primary source of impacts along the southwestern property boundary. The highest hydrocarbon impacts appear to reside within the permeable soils that lie at depths between 15 and 20 feet at the property boundary, with relatively low impacts at these depths between former onsite source areas and current significant impacts at the property boundary, suggesting that lateral transport from offsite sources may have occurred preferentially through permeable soil layers rather than from onsite sources in the direction of groundwater flow (**Figure 7**).
- In their August 10, 2012 correspondence, the RWQCB requested submittal of this report and a work plan for the installation of monitoring wells, proposed locations and installation schedule. The *Site*

Assessment Work Plan dated February 29, 2012 included the proposed work scope for monitoring well installation. Antea Group recommends proceeding with the installation of groundwater monitoring wells as proposed in Antea Group's *Site Assessment Work Plan* dated February 29, 2012, but in the locations shown on **Figure 2**. Proposed well locations were selected based upon areas with the highest groundwater impacts along the property boundary, and to monitor the vicinity immediately upgradient of these locations as well as downgradient of the recent UST excavation.

- An extension to the Right of Entry Agreement between UPRR and SMART was obtained on October 3, 2012. This agreement, coupled with the well proposed locations, will allow for prompt well installation.

5.0 SCHEDULE FOR PROPOSED WELL INSTALL AND REPORTING

Antea Group anticipates regulatory comment of the proposed scope of work within 60 days. Antea Group will obtain all necessary permits following RWQCB and SMART approval of the proposed well locations shown on **Figure 2** and the well installation scope as outlined in Antea Group's *Site Assessment Work Plan* dated February 29, 2012. Antea Group will commence field activities within 45 days of receipt approval from the RWQCB.

Upon completion of the fieldwork, Antea Group will prepare a report describing field activities, methods, and analytical results. Antea Group will evaluate the findings of the investigation and include additional recommendations as appropriate.

It is further estimated that the final report will be ready for submittal approximately 45 days after receipt of the sample analytical results.

6.0 REMARKS

The recommendations contained in this document represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This document is based upon a specific scope of work requested by the client. For any reports cited that were not generated by Delta or Antea Group, the data from those reports is used "as is" and is assumed to be accurate. Antea Group does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document will be performed. This document is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this document. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this document.

Prepared by:

Renee Ransom
Staff Professional
Antea Group

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:

Lia N. Holden, P.G.
Project Geologist
California Registered Professional Geologist No. 8584
Antea Group



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John Nemeth SMART, jnemeth@sonomamarintrain.org (electronic only)

7.0 REFERENCES

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Tables

Table 1 Site Soil Sampling Analytical Data
Table 2 Groundwater Sampling Analytical Data

Table 1
Soil Sampling Analytical Data
Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

Field Point	Sample Name	Sample Date	Sample Depth (feet bgs)	GRO[1] (mg/Kg)	MORO[1] (mg/kg)	DRO[1] (mg/Kg)	PAHs[2] (mg/kg)	Metals[3] (mg/kg)
Site Assessment Soil Samples								
B1-5'	SO-2344-B1-5'-042312	4/23/2012	5.0	NA	**51**	**15**	**Benzo[b]fluoranthene (0.035), Fluoranthene (0.027)**	NA
B1-10'	SO-2344-B1-10'-042312	4/23/2012	10.0	NA	**87**	**25**	<LRLs	NA
B1-16'	SO-2344-B1-16'-042312	4/23/2012	16.0	NA	<50	**49**	<LRLs	NA
B2--5'	SO-2344-B2-5'-042312	4/23/2012	5.0	NA	<50	<1.0	<LRLs	NA
B2-11'	SO-2344-B2-11'-042312	4/23/2012	11.0	NA	**610**	**240**	<LRLs	NA
B2-14'	SO-2344-B2-14'-042312	4/23/2012	14.0	NA	<49	<0.98	<LRLs	NA
B3-5'	SO-2344-B3-5'-042312	4/23/2012	5.0	NA	<50	<1.0	<LRLs	NA
B3-12'	SO-2344-B3-12'-042312	4/23/2012	12.0	NA	<50	<1.0	<LRLs	NA
B3-15.5'	SO-2344-B3-15.5'-042312	4/23/2012	15.5	NA	<50	<1.0	<LRLs	NA
B4-5'	SO-2344-B4-5'-042312	4/23/2012	5.0	NA	**220**	**77**	<LRLs	NA
B4-12'	SO-2344-B4-12'-042312	4/23/2012	12.0	NA	<500	**810**	**Napthalene (0.02) and Pyrene (0.017)**	NA
B4-16'	SO-2344-B4-16'-042312	4/23/2012	16.0	NA	<50	<0.99	<LRLs	NA
B5-5'	SO-2344-B5-5'-042312	4/23/2012	5.0	NA	<49	<0.99	<LRLs	NA
B5-10'	SO-2344-B5-10'-042312	4/23/2012	10.0	NA	<50	<1.0	**Benzo[b]fluoranthene (0.0052)**	NA
B5-16'	SO-2344-B5-16'-042312	4/23/2012	16.0	NA	<50	<1.0	<LRLs	NA
2012 Excavation Soil Samples								NA
BASE 1	SO-2344-BASE1-100712	7/10/2012	13.0	NA	**63**	**40**	<LRLs	NA
BASE 2	SO-2344-BASE2-100712	7/10/2012	13.0	NA	**180**	**170**	**Pyrene (0.0082)**	NA
BASE 4	SO-2344-BASE4-110712	7/11/2012	13.0	NA	<50	<0.99	<LRLs	NA
ESW1	SO-2344-ESW1-110712	7/11/2012	6.5	NA	<49	**20**	<LRLs	NA
ESW2	SO-2344-ESW2-110712	7/11/2012	12.0	NA	<50	<1.0	<LRLs	NA
NSW1	SO-2344-NSW1-100712	7/10/2012	6.5	NA	<50	**18**	<LRLs	NA
NSW2	SO-2344-NSW2-100712	7/10/2012	6.5	NA	<50	<1.0	<LRLs	NA
NSW3	SO-2344-NSW3-110712	7/11/2012	6.5	NA	<50	<1.0	<LRLs	NA
NSW4	SO-2344-NSW4-110712	7/11/2012	6.5	NA	<49	<0.99	<LRLs	NA
NSW5	SO-2344-NSW5-110712	7/11/2012	12.0	NA	**55**	**28**	**Benzo[a]pyrene (0.067), benzo[b]fluoranthene (0.110), benzo[g,h,i]perylene (0.054), Chrysene (0.053), Fluoranthene (0.074), Phenanthrene (0.060), and Pyrene (0.120)**	NA
NSW6	SO-2344-NSW6-110712	7/11/2012	12.0	NA	<49	<0.98	**Fluoranthene (0.0056), Phenanthene (0.0077), and Pyrene (0.025)**	NA
SSW1	SO-2344-SSW1-100712	7/10/2012	6.5	NA	**500**	**320**	<LRLs	NA
SSW2	SO-2344-SSW2-100712	7/10/2012	6.5	NA	**2000**	**1,800**	**Benzo[a]anthracene (0.056), Chrysene (0.072), and Pyrene (0.062)**	NA
SSW3	SO-2344-SSW3-110712	7/11/2012	6.5	NA	**93**	**39**	<LRLs	NA
SSW4	SO-2344-SSW4-110712	7/11/2012	6.5	NA	<50	<0.99	<LRLs	NA
SSW6	SO-2344-SSW6-110712	7/11/2012	12.0	NA	<50	**2.7**	<LRLs	NA
WSW1	SO-2344-WSW1-100712	7/10/2012	6.5	NA	<50	**1.0**	<LRLs	NA
WSW2	SO-2344-WSW2-110712	7/11/2012	12.0	NA	<50	**37**	**Phenanthrene (0.020)**	NA
Excavation Soil Comp - 1	SO-2344-COMP1-100712	7/10/2012	--	<230	84	44	<LRLs	Chromium (120)**, Nickel (140)**, Lead (8.0) and Zinc (56)
Excavation Soil Comp - 2	SO-2344-COMP2-100712	7/10/2012	--	**800**	**4600**	**4200**	**Acenaphthene (180), Acenphthylene (53), Fluorene (57)** and **Pyrene (85)**	Cadmium (0.51), Chromium (90)**, Nickel (140)**, Lead (6.9) and Zinc (56)
Excavation Soil Comp - 3	SO-2344-COMP3-110712	7/11/2012	--	<260	**310**	**160**	**Benzo[g,h,i]perylene (38)**	Chromium (81)**, Nickel (140)**, Lead (4.7) and Zinc (42)

Table 1
Soil Sampling Analytical Data
Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

Field Point	Sample Name	Sample Date	Sample Depth (feet bgs)	GRO[1] (mg/Kg)	MORO[1] (mg/kg)	DRO[1] (mg/Kg)	PAHs[2] (mg/kg)	Metals[3] (mg/kg)
Residential ESL (shallow/deep)	--	--	--	83	370/5000	83	Acenaphthene (16*), Acenphthylene (13*), Fluorene (8.9*), Benzo[b]fluoranthene (0.38/15), Benzo [a]pyrene (0.038/0.13), Benzo[g,h,i]perylene (27*), Chrysene (23*), Fluoranthene (40/60), Phenanthrene (11*), Pyrene (85*), Napthalene (1.3/3.4)	Cadmium (1.7/390), Chromium (1000/2500), Nickel (150/260), Lead (200/750) and Zinc (600/2500)
Commercial/Ind ESL (shallow/deep)	--	--	--	83	2500/5000	83	Acenaphthene (16*), Acenphthylene (13*), Fluorene (8.9*), Benzo[b]fluoranthene (13/15), Benzo[a]pyrene (1.5*), Benzo[g,h,i]perylene (27*), Chrysene (23*), Fluoranthene (40/60), Phenanthrene (11*), Pyrene (85*), Napthalene (2.8/3.4)	Cadmium (7.4/390), Chromium (2500/5000), Nickel (150/260), Lead (750/750) and Zinc (600/2500)

Notes:
< - Denotes less than the Laboratory Reporting Limit (LRL)
mg/kg - milligrams per kilogram
mg/L - Millilgrams per Liter
bgs - Below Ground Surface
Bold - Reported concentration exceeded the LRL
NA - Not Analyzed
EPA - Environmnetal; Protection Agency
ESL - San Francisco Bay RWQCB Environmental Screening Levels
* - ESL is the same for shallow and deep soils
** - Based on the total concentration detected, a Soluble Threshold Limit Concentration (STLC) analysis was also performed

Analytical Notes
1 - Analyzed by EPA Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8270C SIM
3- Analyzed by EPA Method 6010B

Analyte Definitions:
MORO - Motor Oil Range Organics
DRO - Diesel range organics
GRO - Gasoline range organics
VOCs - Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons

Table 2
Groundwater Sampling Analytical Data
Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

Field Point	Sample Name	Sample Date	MORO[1] (ug/L)	DRO[1] (ug/L)	PAHs[2] (ug/L)	Metals[3] (mg/L)
B1	W-2344-B1-042312	4/23/2012	**4,700**	**5,600**	**Naphthalene (1.7), Benzo(b)fluoranthene (1.2), and Pyrene (2.7)**	NA
B2	W-2344-B2-042312	4/23/2012	**94,000**	**110,000**	**Naphthalene (1.4), Benzo(b)fluoranthene (1.0), and Pyrene (2.5)**	NA
B3	W-2344-B3-042312	4/23/2012	**1,900**	**2,000**	<LRLs	NA
B4	W-2344-B4-042312	4/23/2012	<1,100	**32,000**	**Naphthalene (0.36) and Pyrene (0.38)**	NA
B5	W-2344-B5-042312	4/23/2012	<110	<56	<LRLs	NA
B6B	W-2344-B6B-042412	4/24/2012	<120	<59	<LRLs	NA
B7B	W-2344-B7B-042412	4/24/2012	<120	<62	<LRLs	NA
B8A	W-2344-B8A-042512	4/24/2012	<120	<62	<LRLs	NA
B8B	W-2344-B8B-0424-12	4/24/2012	<120	<62	<LRLs	NA
B9B	W-2344-B9B-042512	4/25/2012	<120	<61	<LRLs	NA
B10A	W-2344-B10A-042512	4/25/2012	<120	<58	<LRLs	NA
B10B	W-2344-B10B-042512	4/25/2012	<120	<62	<LRLs	NA
B11B	W-2344-B11B-042512	4/25/2012	<120	<62	<LRLs	NA
B12A	W-2344-B12A-042512	4/25/2012	<110	<57	<LRLs	NA
B12B	W-2344-B12B-042512	4/25/2012	<120	<61	<LRLs	NA
Excavation Waste Water	W2344-COMP-120712	7/12/2012	6,100	1,900	<LRLs	Lead (0.006) and Zinc (0.023)
Residential	--	--	100	100	Naphthalene (17), Benzo(b)fluoranthene (0.029), and Pyrene (2.0)	Lead (2.5) and Zinc (81)
Commercial/Ind	--	--	100	100	Naphthalene (17), Benzo(b)fluoranthene (0.029), and Pyrene (2.0)	Lead (2.5) and Zinc (81)

Notes:
< - Denotes less than the Laboratory Reporting Limit (LRL)
ug/L - Micrograms per Liter
bgs - Below Ground Surface
Bold - Reported concentration exceeded the LRL
EPA - Environmnetal; Protection Agency
B12"A" - "A" Indicates that the water samples was collected from shallow/perched water zone
B12"B" - "B" Indicates that the water samples was collected from the deep water zone
NA - Not Analyzed

Analytical Notes
1 - Analyzed by EPA Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8270C SIM
3- Analyzed by EPA Method 6010B

Analyte Definitions:
MORO - Motor Oil Range Organics
DRO - Diesel range organics
GRO - Gasoline range organics
VOCs - Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons

Figures

Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3 Soil Concentration Map (Soil Borings)
Figure 4 Groundwater Concentration Map
Figure 5 2012 Excavation Soil Data Map
Figure 6 Cross Section A – A'
Figure 7 Cross Section B – B'





North

0 1000 2000 FT

SCALE

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup

LEGEND

2012 INVESTIGATION (ANTEA GROUP)
- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)

2008 INVESTIGATION (EBA)
- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

1996 INVESTIGATION (GEOMATRIX)
- SOIL BORING

- SRMW-07 EXISTING MONITORING WELL
- SRMW-10 DESTROYED MONITORING WELL
- SANITARY SEWER
- STORM DRAIN
- WATER
- PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE
- PROPOSED MONITORING WELL LOCATION

ADAMSON STREET
WEST SIXTH STREET
JEFFERSON STREET
FIFTH STREET
FOURTH STREET
WEST THIRD STREET
SANTA ROSA CREEK
(E) CONCRETE WALK
(E) RR TRACKS
(E) FORMER LOADING DOCK
FORMER REMEDIATION AREA (GENERAL)
CMP STRUCTURE
FORMER STRUCTURE
FORMER FUEL DISPENSER ISLAND
EVALUATED SUSPECT AREA
APPROXIMATE LOCATION OF FORMER CONCRETE SLABS
2011 EXCAVATION
2012 EXCAVATION
SOUTHERN WAREHOUSE AREA
FENCED ENCLOSURE
60 WEST SIXTH STREET WAREHOUSE (PLANT 5)
3 WEST THIRD STREET WAREHOUSE
S-N-GATE@2'
S-N-GATE@3'
S-FE@1'
(E) 12" SS
(E) 24" SD
(E) 18" SD
(E) 8" SD
(E) 6" SD

N

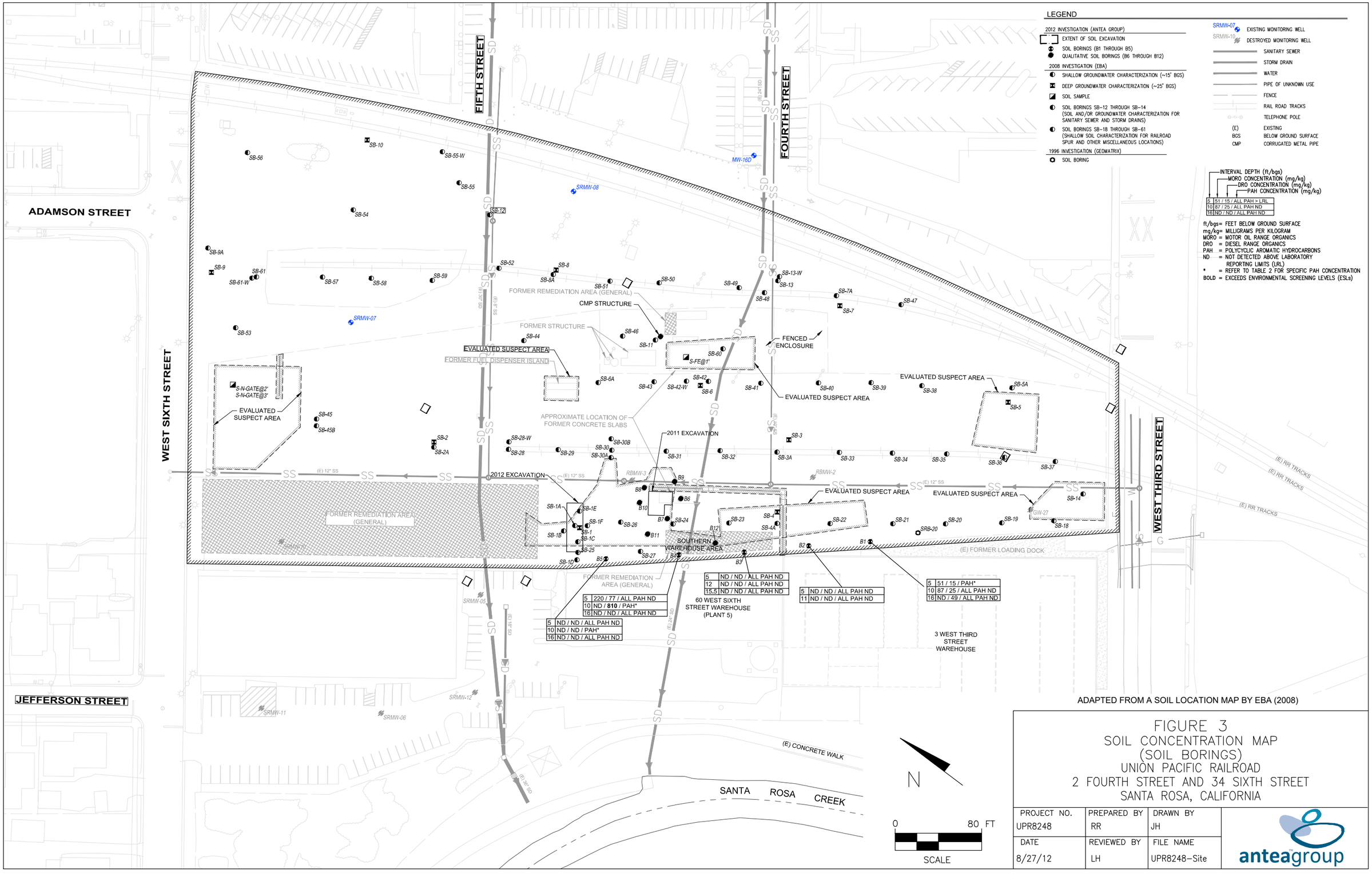
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SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

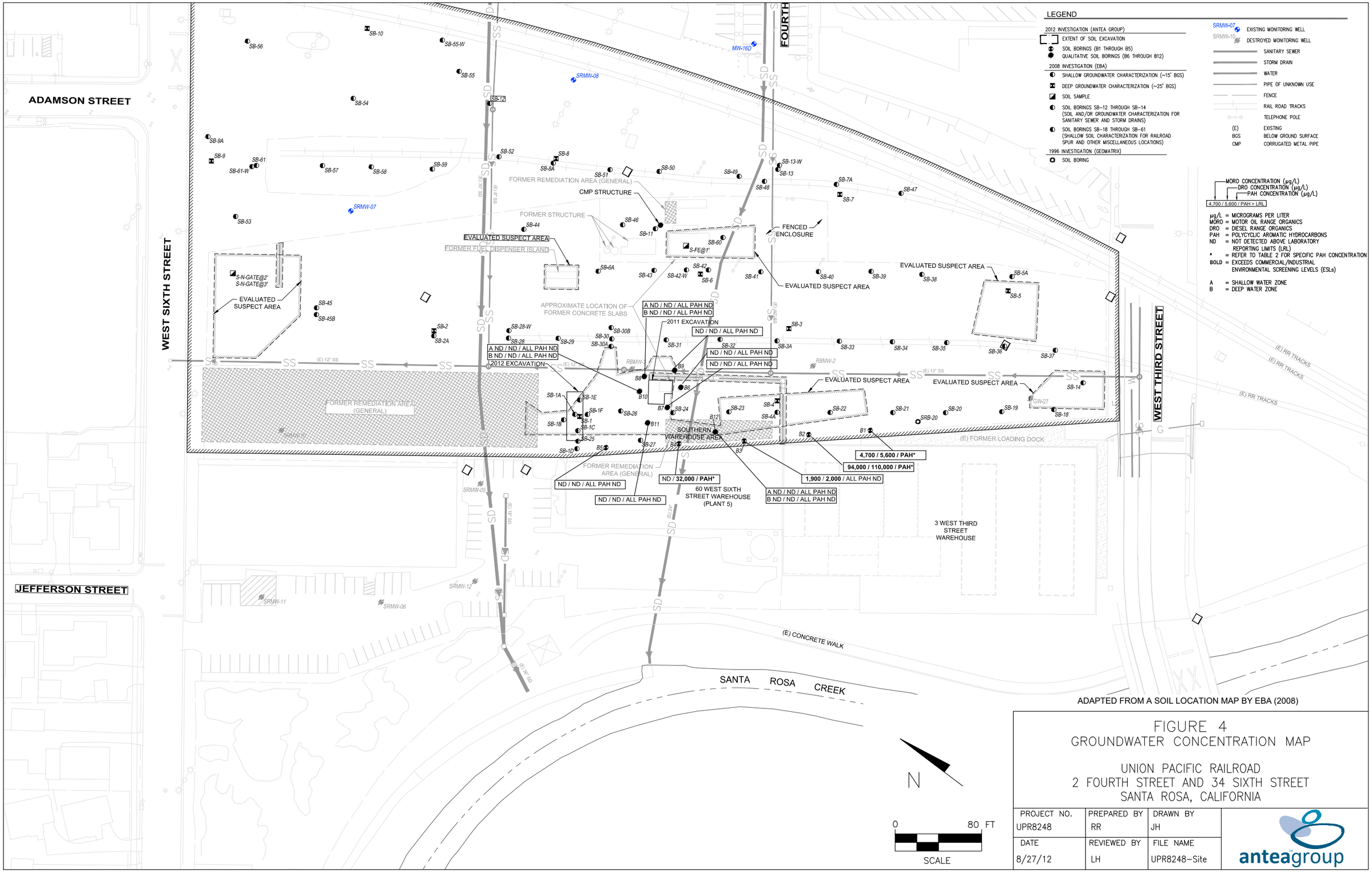
PROJECT NO.	PREPARED BY	DRAWN BY	
UPR8248	RR	JH	anteagroup
DATE	REVIEWED BY	FILE NAME	
10/15/12	LH	UPR8248-Site	



ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 3
SOIL CONCENTRATION MAP (SOIL BORINGS)
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

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UPR8248	RR	JH	
DATE	REVIEWED BY	FILE NAME	
8/27/12	LH	UPR8248-Site	anteagroup



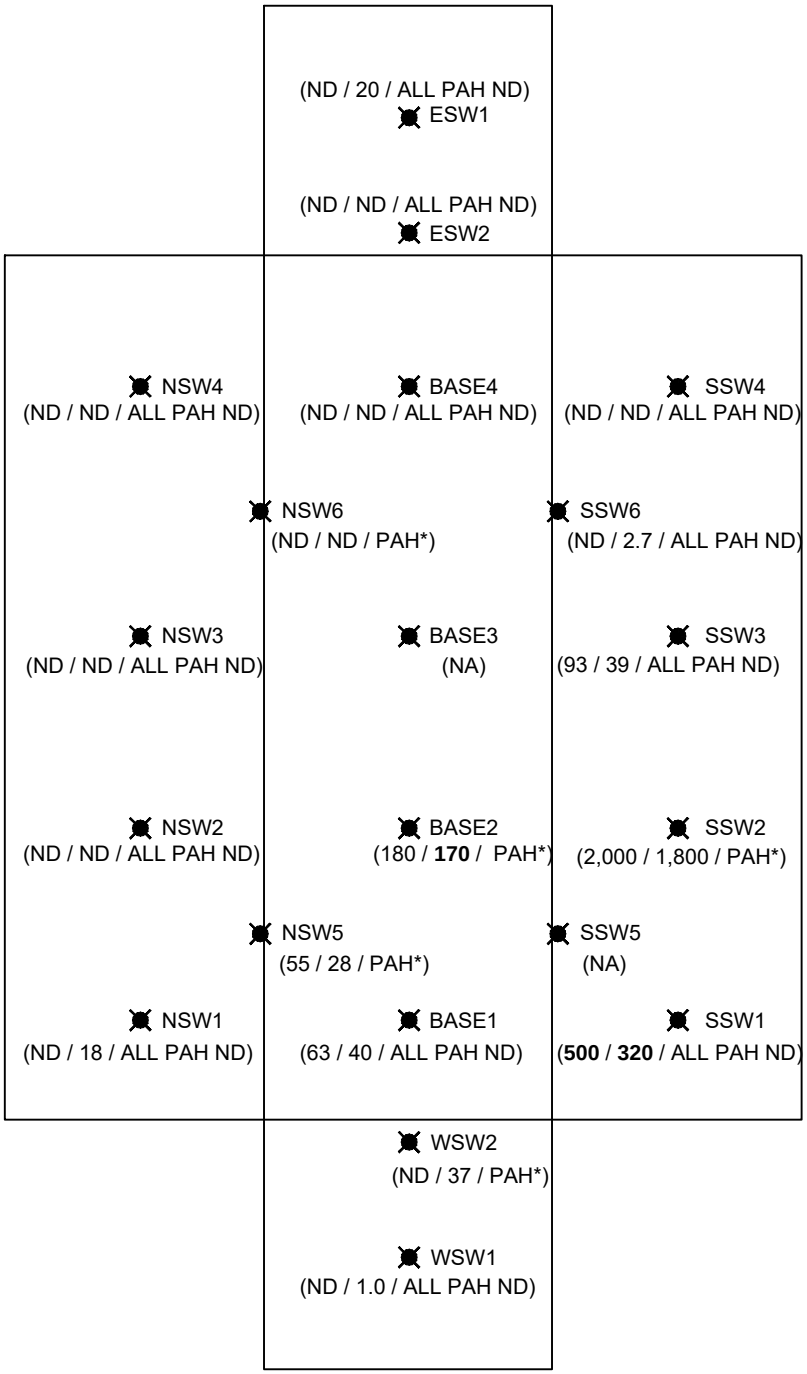
ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 4
GROUNDWATER CONCENTRATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
8/27/12	LH	UPR8248-Site

anteagroup



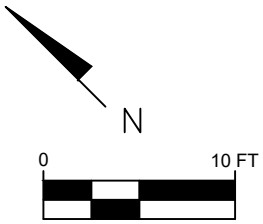
LEGEND

SOIL SAMPLE LOCATION

(93 / 39 / ALL PAH ND) MORO / DRO/ PAH CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/kg)

NOTES

mg/kg = MILLIGRAMS PER KILOGRAM
MORO = MOTOR OIL RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
PAH = POLYCYCLIC AROMATIC HYDROCARBONS
* = REFER TO TABLE 1 FOR SPECIFIC PAH CONCENTRATION
ND = LESS THAN LABORATORY INDICATED REPORTING LIMITS (LRL)
NA = NOT ANALYZED
BOLD = EXCEEDS ENVIRONMENTAL SCREENING LEVEL (ESL)



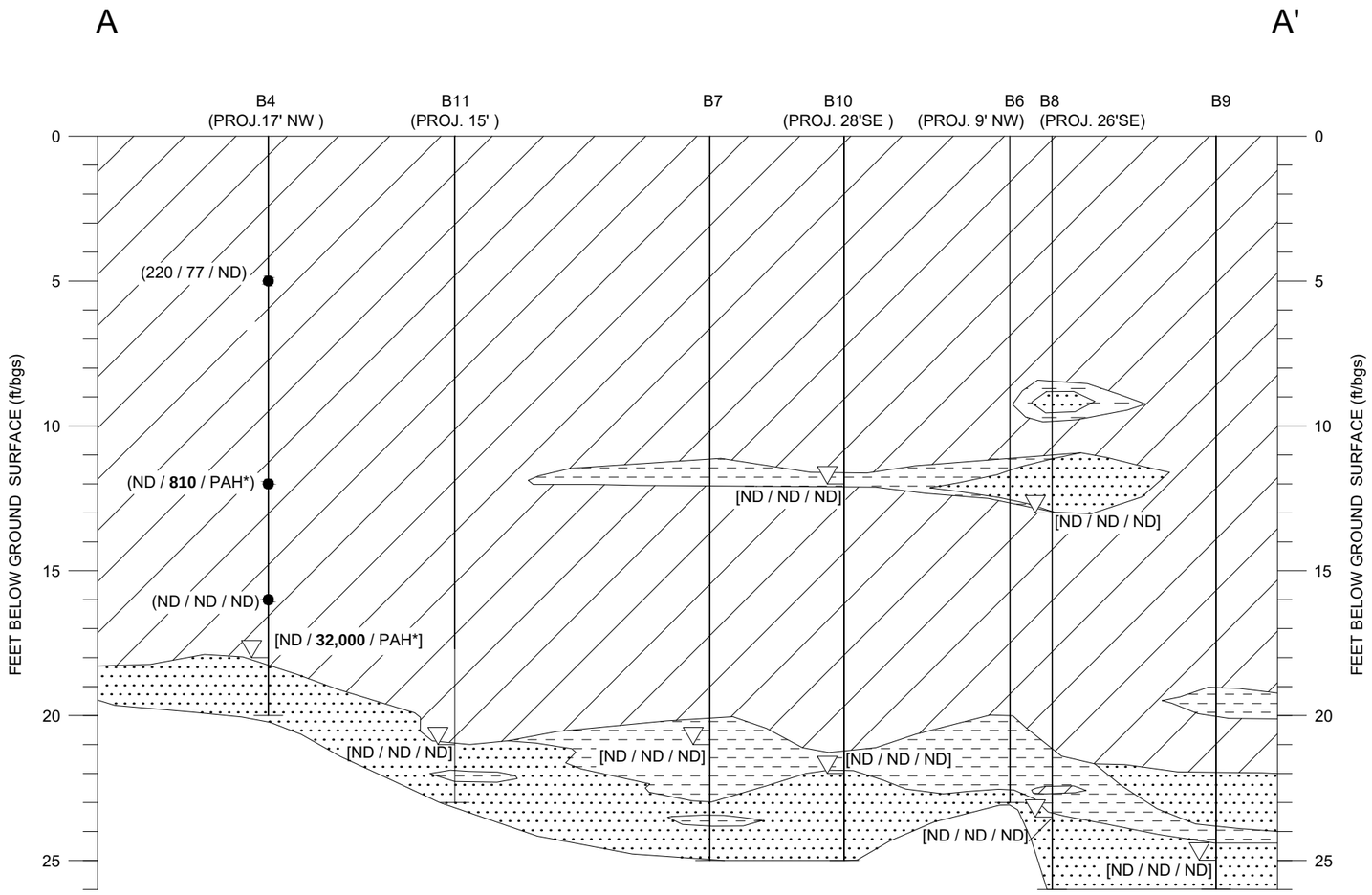
APPROX. SCALE

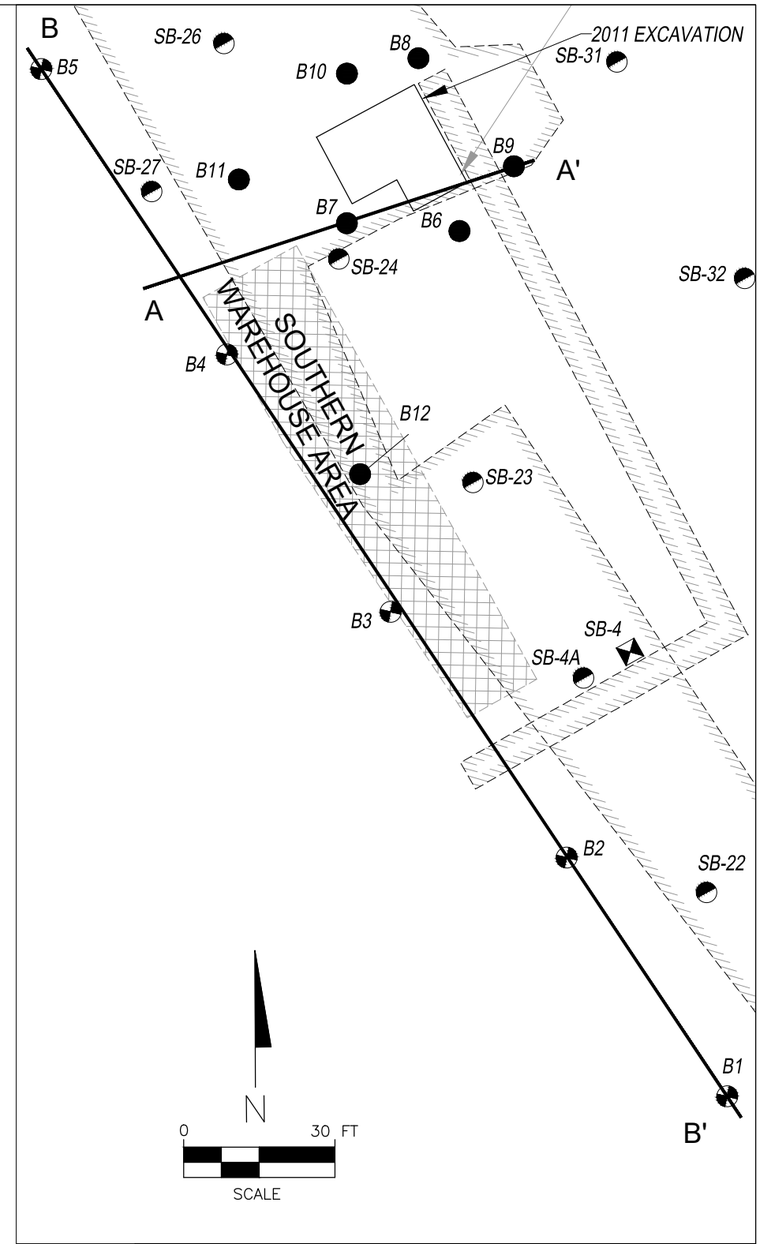
FIGURE 5
2012 EXCAVATION SOIL DATA MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
8/27/12	LH	UPR8248-Excav

anteagroup





LEGEND

B-9 / PROJ 4' SW — BORING LOCATION; PROJECTED DISTANCE FROM SECTION LINE (FEET)

EXPLORATORY BORING

(ND / ND / ND) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (mg/kg)

[ND / ND / ND] — DEPTH TO FIRST ENCOUNTERED GROUNDWATER; GRAB GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (µg/L)

LOW PERMEABILITY (CLAY AND SILT)

MEDIUM PERMEABILITY (SILTY AND CLAYEY SANDS)

HIGH PERMEABILITY (SAND AND GRAVELS)

APPROXIMATE STRATIGRAPHIC BOUNDARY

0 — 10 — SCALE IN FEET — 5

NOTES:

MORO= MOTOR OIL RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
PAH = POLYCYCLIC AROMATIC HYDROCARBONS
PAH* = REFER TO TABLES 1 & 2 FOR SPECIFIC PAH CONCENTRATION
mg/kg = MILLIGRAMS PER KILOGRAM
µg/L = MICROGRAMS PER LITER
ND = LESS THAN LABORATORY INDICATED REPORTING LIMITS
BOLD= EXCEEDS ENVIRONMENTAL SCREENING LEVELS (ESL)

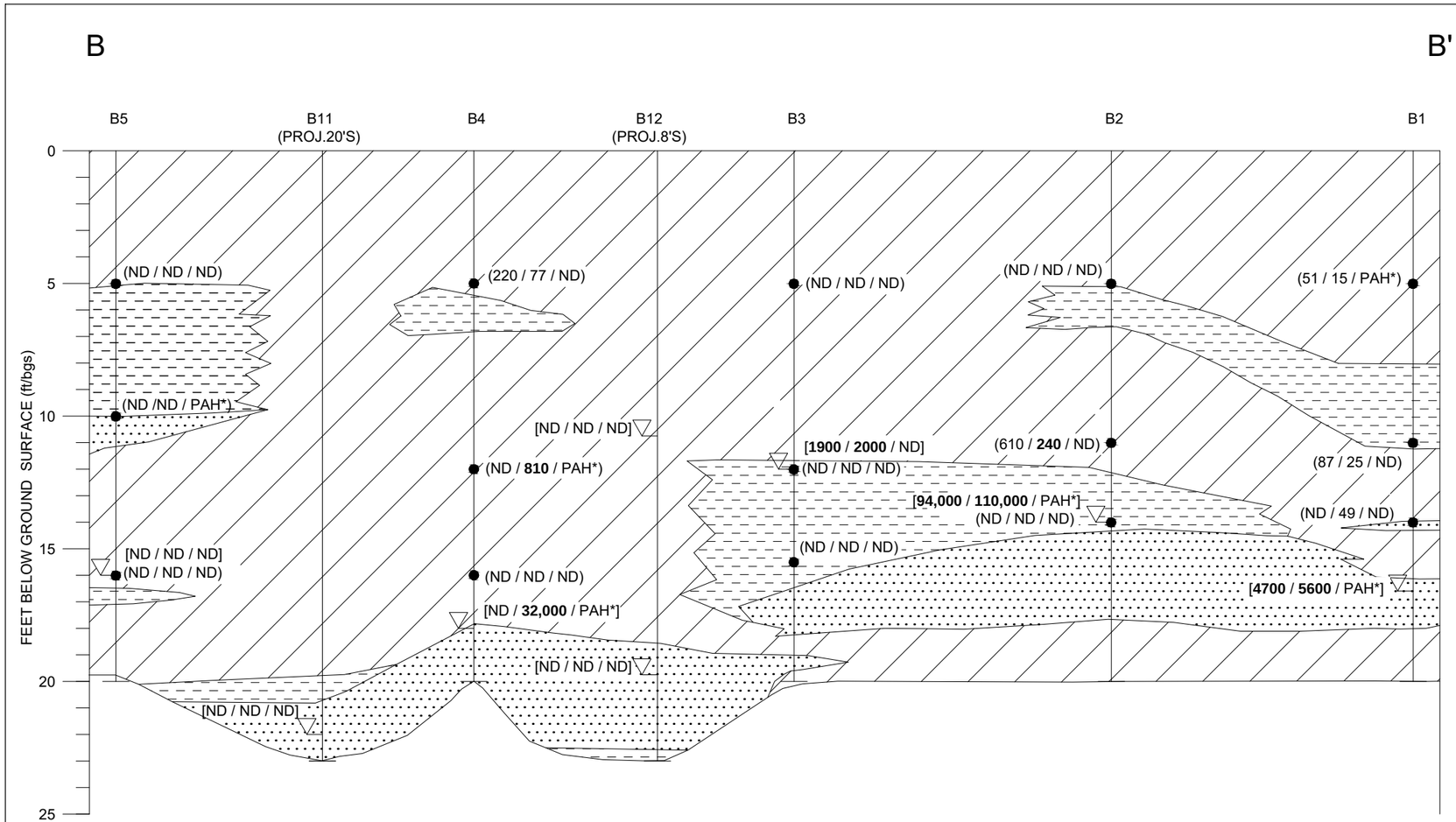
STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

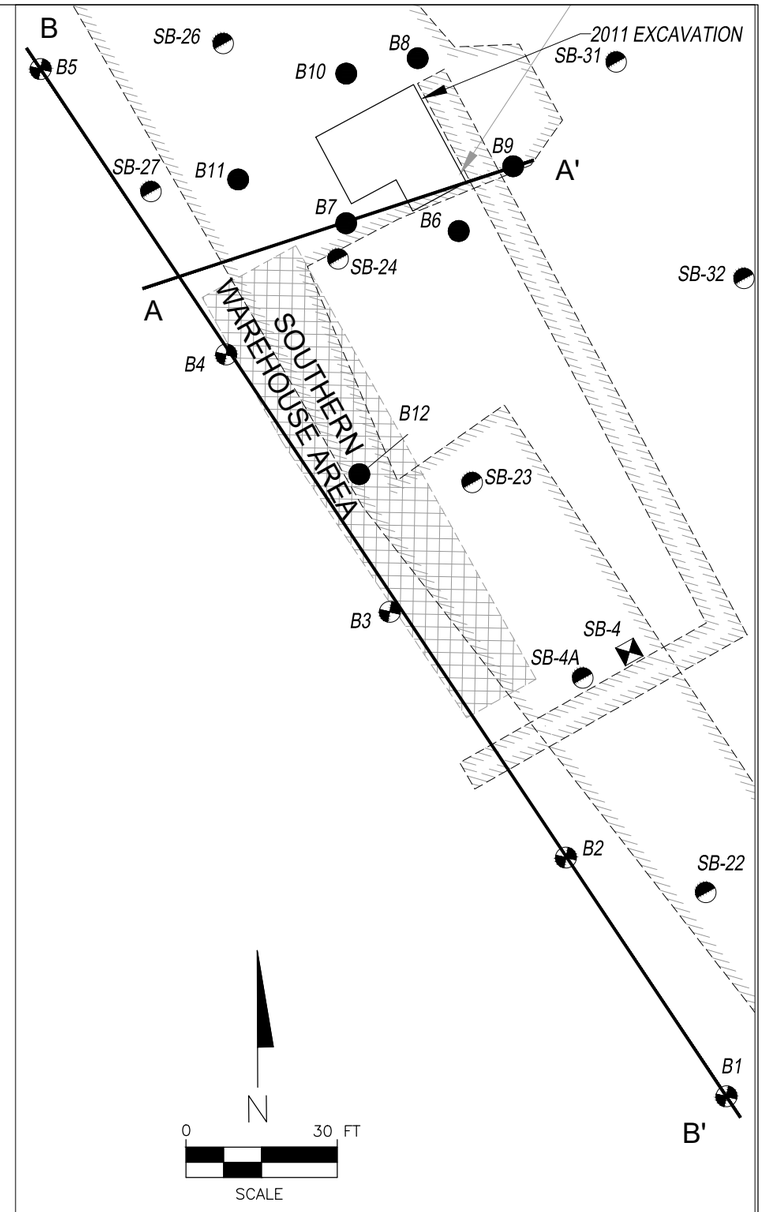
FIGURE 6
CROSS SECTION A – A'

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
8/29/12	LH	UPR8248-Cross

anteagroup





LEGEND

B-9 / PROJ 4' SW — BORING LOCATION, PROJECTED DISTANCE FROM SECTION LINE (FEET)

EXPLORATORY BORING

(ND / ND / ND) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (mg/kg)

DEPTH TO FIRST ENCOUNTERED GROUNDWATER

[ND / ND / ND] — GRAB GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (µg/L)

LOW PERMEABILITY (CLAY AND SILT)

MEDIUM PERMEABILITY (SILTY AND CLAYEY SANDS)

HIGH PERMEABILITY (SAND AND GRAVELS)

APPROXIMATE STRATIGRAPHIC BOUNDARY

0 — 25

SCALE IN FEET

5

NOTES:

MORO= MOTOR OIL RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
PAH = POLYCYCLIC AROMATIC HYDROCARBONS
PAH* = REFER TO TABLES 1 & 2 FOR SPECIFIC PAH CONCENTRATION
mg/kg = MILLIGRAMS PER KILOGRAM
µg/L = MICROGRAMS PER LITER
ND = LESS THAN LABORATORY INDICATED REPORTING LIMITS
BOLD= EXCEEDS ENVIRONMENTAL SCREENING LEVELS (ESL)

STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

FIGURE 7
CROSS SECTION B – B'

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
8/29/12	LH	UPR8248–Cross

anteagroup

Appendix A

Agency Correspondence

California Regional Water Quality Control Board
North Coast Region
Geoffrey M. Hales, Chairman

Matt Rodriquez
Secretary for
Environmental Protection

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Edmund G. Brown Jr.
Governor

January 19, 2012

Mr. James Diel
Union Pacific Railroad
9451 Atkinson Street
Suite 100
Roseville, CA 95747

Mr. John Nemeth
Sonoma Marin Area Rail Transit
750 Landaro Street,
Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: Case Status

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case Nos. 1TSR196 and 1NSR196

In the Regional Water Board staff letter dated July 22, 2011, remaining items to be completed were identified, which included the removal of the oil underground storage tank; removal of known shallow soil impacts; and removal of impacted soil in the vicinity of SB-1. It was stated that if evidence of a discharge is revealed at the time of tank removal, contaminated soil must be removed and depending upon the degree of discharge, the impact to water quality may need to be investigated. The purpose of this letter is to bring this file up to date summarizing work conducted since July 2011 and reiterating work items that remain to be completed.

Underground Storage Tanks

On November 3, 2011, the underground oil storage tank was removed. At the time of removal, a second tank was discovered and removed along with visually impacted soil. The excavation was continued to groundwater where separate phase oil product was observed.

Based on recent communications with Antea Group staff working on behalf of Union Pacific Railroad, report preparation is in progress and submittal is anticipated in the next few weeks.

Shallow Soil Impacts

As previously stated, shallow soil impacts may be addressed prior to and/or during property development.

Soil Removal at SB-1

Soil removal in the area of SB-1 must be completed as soon as possible and prior to land development activities. The work may be conducted according to the existing work plan prepared by EBA Engineering submitted on behalf of the Railroad Square Associates, LLC (who is not a responsible party) or a new work plan. If someone other than EBA Engineering implements the existing work plan, the licensed professional in responsible charge of the project must be identified.

Based on the current development plans, a delay in completing remedial actions in the area of SB-1 may impact the installation of proposed infrastructure.

Extent of Groundwater Impacts

In addition to the soil removal project at SB-1, a work plan must be submitted to investigate the extent of groundwater impacts including the presence of separate phase oil at the former tank location, groundwater impacts in the area of SB-1, and clarify the relationship of on-site discharges and off-site impacts to the west beneath adjacent properties. The work plan is due within 45-days of issuance of this letter.

If you have any questions or would like to meet to discuss this case, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Joan Fleck
Engineering Geologist

120119_JEF_SPTransCo

cc:

Santa Rosa Fire Department (GBuckheit@srcity.org)
Mr. Paul Nelson (pnelson@ebagroup.com)
Ms. Joan Thomas, SMART jthomas@sonomamarintrain.org
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Richard Devine, Devine & Gong, Inc. 100 Bush Street, Suite 600, San Francisco, CA 94104-3703 (rdevine@devinegong.com)
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, Ca 94109
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514

Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100
Mr. John Nemeth (jnemeth@sonomamarintrain.org)
Ms. Lisa Pheatt, County Counsel (lpheatt@sonoma-county.org)

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

March 19, 2012

Mr. James Diel
Union Pacific Railroad
9451 Atkinson Street
Suite 100
Roseville, CA 95747

Mr. John Nemeth
Sonoma Marin Area Rail Transit
750 Landaro Street,
Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: UST Removal Report and Site Assessment Work Plan

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case Nos. 1TSR196 and 1NSR196

Regional Water Board staff (staff) reviewed the January 24, 2012 *UST Removal Report* and the February 29, 2012 *Site Assessment Work Plan* prepared by Antea™Group for the former rail yard in Santa Rosa. Staff has no comments on the *UST Removal Report*. The *Site Assessment Work Plan* was discussed with Antea™Group staff on March 15, 2012. The discussions included:

- The excavation of impacted soil in the vicinity of SB-1 (as proposed in the EBA Engineering *Soil Excavation Work Plan* dated October 2009) is acceptable. The excavation depth is to groundwater and groundwater/separate phase hydrocarbon removal from the open excavation is planned.
- The drilling of qualitative borings using the CPT-UVOST technology is acceptable. However, the extent of dissolved phase hydrocarbons must also be defined. Staff request that grab groundwater samples also be collected for chemical analysis.
- The drilling of the exploratory soil borings on the southwestern boundary is acceptable.

By copy of this letter, Santa Rosa Fire and Sonoma County Environmental Health have been informed of our concurrence to enable the processing of the excavation and drilling permits, respectively. Due to competing interests at this property and the need to coordinate efforts, an expedited work plan implementation schedule is highly encouraged.

If you have any questions, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Original signed by

Joan Fleck
Engineering Geologist

120319_JEF_UPRR

cc:

Santa Rosa Fire Department GBuckheit@srcity.org
Mr. Paul Nelson pnelson@ebagroup.com
Ms. Joan Thomas, SMART jthomas@sonomamarintrain.org
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Richard Devine, Devine & Gong, Inc.rdevine@devinegong.com
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, CA 94109
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514
Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100
Mr. John Nemeth, SMART jnemeth@sonomamarintrain.org
Ms. Lisa Pheatt, County Counsel lpheatt@sonoma-county.org
Ms. Laura Giraud, SMART Real Estate Manager lgiraud@sonomamarintrain.org
Ms. Lia Holden, Antea™Group, lia.holden@anteagroup.com
Ms. Kathleen A. Millison, City Manager, City of Santa Rosa kmillison@srcity.org

Appendix B

Site Details and Summary of Previous Environmental Investigations

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

Over the history of environmental activities at the site, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by Environmental Protection Agency (EPA) method 8015B or 8260B. Antea Group uses the designation GRO for total petroleum hydrocarbons as gasoline within the C_5 to C_{10} carbon range, DRO for total petroleum hydrocarbons as diesel within the C_{10} to C_{28} carbon range, and RRO for total petroleum hydrocarbons as residual range organics (oil) within the C_{24} to C_{40} carbon range.

Terms from previous reports may include total recoverable petroleum hydrocarbons (TRPH), total purgeable petroleum hydrocarbons (TPPH) for GRO, total extractable petroleum hydrocarbons (TEPH) for DRO, and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific historical terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO. Antea Group has left the original designation when summarizing historic data and the current designations when applied to recent investigations and summary discussions.

SITE HISTORY

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site. These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs (Industrial Compliance [IC], 1992).

In April 1990, the North Coast Regional Water Quality Control Board (RWQCB) drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (MW-2 and MW-3). Monitoring well MW-3 was located approximately 100 feet down gradient (to the southwest) of the former fuel oil UST. Based on information presented in a July 1992 report by IC, analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1. However, oil and grease was present in the soil sample collected from boring B-1 at 12 feet bgs at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PAHs). Soil samples collected at depths of 6 and 16 feet below ground surface (bgs) from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively. No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3 (Geomatrix Consultants, Inc. [Geomatrix], 2000).

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes

(BTEX compounds), or PAHs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX compounds were detected in the grab groundwater sample collected from IC-B6 (Geomatrix, 2000).

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995. In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHmo), PAHs, metals, and volatile organic compounds (VOCs). Soil samples collected for analyses of TPHd, PAHs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHmo at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHmo at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHmo was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHmo was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs (Geomatrix, 2000).

PAHs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure. Concentrations of PAHs detected at this time are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PAH concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)4 in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs. No TPHd, TPHmo, or VOCs were detected in groundwater above laboratory reporting limits. The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These items, which are the focus of the work described herein, include additional evaluation of historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations (Geomatrix, 2000).

In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An up-gradient, single-screen monitoring well was installed on the eastern portion of the property in vicinity of the main line railroad tracks.

Extensive investigative activities were performed in 2002 on the northwest area of the project site at the historical location of the Santa Rosa Woolen Mills Facility. Soil samples collected as part of an investigation within this area reported significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former above ground fuel storage tank (AST), and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons. From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil (EBA, 2008b).

In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed, whereupon the excavation was advanced to a total depth of approximately 18 feet bgs. A significant amount of free-phase petroleum hydrocarbon product was encountered on the groundwater surface during the excavation activities. The product and water was subsequently pumped, treated, and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently terminated due to concerns of structure stability. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in the excavation sidewalls and groundwater in this area (EBA, 2008b).

Excavation activities in the northwestern portion of the property also included the removal off a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 350 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths below first encountered groundwater, which was encountered at approximately 19 feet bgs. The maximum depth attained by the excavation was approximately 22 feet bgs. Impacted groundwater encountered within the excavation pit, which included free-phase petroleum hydrocarbon product, was subsequently removed using pumps, treated, and disposed of to the sanitary sewer (EBA, 2008b).

Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area. Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the “southern warehouse area” (EBA, 2008b).

Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in a monitoring well identified as SRMW-13 located in the northwest corner of the property. In addition, the fuel oxygenate methyl tert-butyl ether (MTBE) was detected in SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored (EBA, 2008b).

The RWQCB issued a *No Further Action* (NFA) letter for the previous case at the site on August 31, 2007. In 2008, Sonoma Marin Area Rail Transit District (SMART) granted an option to purchase the site, formerly owned by Northwestern Pacific Railroad Authority (NWRPA) to New Railroad Square Associates, LLC for transit-oriented development purposes. In anticipation of property ownership for the site, New Railroad Square Associates, LLC (with consent from SMART) contracted the services of EBA Engineering (EBA) to perform environmental assessment activities. EBA's November 2008 *Comprehensive Report on Findings* concluded that on-site hazardous materials presently exist at various locations on the property. These materials include an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and impacted shallow soil across the site. The RWQCB reopened the environmental case for the site on January 16, 2009 based on EBA's findings.

In a letter dated February 4, 2011, the RWQCB directed UPRR to remove the oil UST on the property. In November 2011, United Pumping Services (UPS) removed the UST as directed. However, during the initial day-lighting activities of the oil UST, an additional 500-gallon UST containing oil was discovered adjacent and west of the known tank. UPS evacuated, cleaned, and removed the second UST in conjunction with the known UST. UPS excavated and disposed of approximately 213.03 tons of impacted soil surrounding the USTs, and pumped approximately 500 gallons of oil impacted groundwater from the excavation. Antea Group collected 16 soil samples and one grab groundwater sample from within the excavation. Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears that a release from the removed USTs only affected the immediate soils surrounding the USTs. Sidewall samples NWB and SWB collected at 15 feet bgs reported concentrations of VOCs and PAHs not found in any other (shallower) samples collected. From the available data, soil VOCs and PAHs impacts appear to be the result of impacted groundwater within the capillary fringe, originating from outside of the excavated area, and not due to a release from the USTs at that location.

SENSISTIVE RECEPTORS

Geomatrix performed a well survey in 2000. Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which is fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use (Geomatrix, 2003).

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site. Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically down-gradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately up gradient and two approximately down gradient. Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use (Geomatrix, 2003).

Information about the possible presence of an additional water producing well located near the site was provided by the RWQCB. This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek; its actual location has not been field-verified. At this time the well is not in use, and based on a conversation with the site redeveloper, the well will not be used in the future and will be appropriately destroyed (Geomatrix, 2003).

Appendix C

Permits

City of
Santa Rosa

April 6, 2012

REVIEWED BY

DATE 4/19/12

RECEIVED
APR 09 2012
SANTA ROSA FIRE DEPT.

Yvette Pico
Antea Group
312 Piercy Road
San Jose, CA 94086

Ms. Pico,

Our Department has reviewed the Site Assessment Work Plan (Dated February 29, 2012) for the SMART project located at 2 Fourth Street and 34 Sixth Street. Our Department concurs with the work plan. However, we will need you to initiate our submittal for the soil remediation process so we can assist you in moving forward with this project.

Please contact Judy Tapparo at (707) 543-4547. Mrs. Tapparo can assist you in completing your permit application and plan review applications. During this process, we will be able to quickly review additional required information such as your site safety plan, licenses, permits, subcontractor information and sampling details.

Thank you in advance and please don't hesitate to contact me at (707)543-3531 if you have any questions.

Respectfully,

Tony Gossner
Deputy Fire Chief

Fire Department
2373 Circadian Way • Santa Rosa, CA 95407
Phone: (707) 543-3500 • Fax: (707) 543-3520
www.srcity.org

City of Santa Rosa

PERMIT

Santa Rosa Fire Department
2373 Circadian Way
Santa Rosa, CA 95407

Date: 04/24/2012

Permit For:
SOIL REMOVAL - 2 4TH ST & SIXTH ST - UNION PACIFIC RAILROAD

U.F.C. Section(s): 1844.105.8.h.1

Permittee: UNITED PUMPING SERVICE INC

PERMIT INFORMATION

Address:	2 4th St SR	Permit No:	F12-0170
Total Fees:	$630.00	Approved Date:	04/24/2012
Date Issued:	04/24/2012	Date Expires:	10/21/2012

A permit shall not take the place of any license required by law.

A permit issued under the Fire Code shall continue until revoked or for such a period of time as designated therein at the time of issuance. A permit shall not be transferable and any change in use, occupancy, operation or ownership shall require a new permit.

By: Marita Petersen/fat
Santa Rosa Fire Department

THIS PERMIT MUST AT ALL TIMES BE KEPT POSTED ON THE PREMISES.

Required Inspections:
Item: 00854 SOIL REMEDIATION
Item: 00868 OTHER HAZMAT

FIRE
PERMIT #:

City of Santa Rosa Fire Department
Fire & Life Safety Plan Review Division
2373 Circadian Way, Santa Rosa CA 95407
PERMIT APPLICATION & PLAN REVIEW

PHONE: (707) 543-4247
FAX: (707) 543-3539

Date:	Initial Submittal:	# Resubmittals:	Addl. Resubmittal:
Project Investigator:	Plans Submitted by:	Mail: ☐	Counter Pick-up: ☐

Project Address:

Project Description:

Building Information: Floor Area:	Sprinkler:	Permit #:

Applicant for Permit:

Company Name:

Address (Include City & Zip Code):

Phone Number:

Email:

THE PLANS YOU SUBMITTED HAVE BEEN:

☐ APPROVED subject to inspection and compliance with the attached Plan Review notes and drawings. Approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any provisions of the California Building Code or other ordinances of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of the California Building Code or other ordinances of the jurisdiction shall not be valid.

Date: [redacted]

Approved by:

☐ NOT APPROVED. Plans do not conform to the California Building Code and other ordinances of the jurisdiction. Changes and additions to the plans shall be required and resubmitted for review prior to the issuance of a permit. See the attached plan review notes.

Date:

Approved by:

Plans complete with corrected plans shall be re-submitted along with a copy of the Permit Application & Plan Review sheet. Failure to make the required corrections will result in the plans being withdrawn from the review process. Plans will be held for 90 days from the date of the last correspondence from this office. After 90 days, plans will be destroyed unless a written request is received to keep them longer.

The approved plans and Plan Review Form shall be on site and available for review during inspections. Please schedule inspections with the Area Inspector a minimum of [redacted] hours in advance.

Re-inspection approvals must be given prior to use of occupancy of the permitted portion of project.

Please complete if applicable:

Fire sprinkler plans & calculations under separate permit.

Fire alarm plans & cut sheets under separate permit.

Underground or aboveground tanks under separate permit.

I certify that I have read the application and state that the information contained within is correct. I agree to comply with all city and county ordinances and state laws relating to building construction. I hereby authorize representatives of this jurisdiction to enter upon the above-mentioned property for inspection purposes. I understand that a separate permit is required for electrical, plumbing, mechanical, and fire sprinkler work.

Signature

Date

Permit Issued:

Permit Expires:

Permit Fee:

Plan Review Fee:

Total Fee:

2373 Circadian Way
Santa Rosa, CA 95407
Phone: (707) 543-3500
Fax: (707) 543-3520
www.SantaRosaFD.com

HAZARDOUS MATERIALS PLAN REVIEW
A CERTIFIED UNIFIED PROGRAM AGENCY
C.U.P.A.

Project: Union Pacific Railroad
Address: 2 Fourth Street & 24 Sixth Street, Santa Rosa
Type of Review: Soil Remediation
Permit Number: F12-0170
Review Number: 1
Reviewed by: Marita Petersen (mpetersen@srcity.org) – 707-543-3548
Date: April 19, 2012

United Pacific Pumping Service, Inc.
Attn: Bob Rico / Pam Heintz
14000 E Valley Boulevard
City of Industry, CA 91746

THIS PERMIT HAS BEEN REVIEWED AND DETERMINED TO BE:

(X) **APPROVED with comments**

NOTE: Please review the comments and make corrections, changes and/or additions as required. Approval of this plan does not approve any omission or deviation from the applicable regulations. Final approval is subject to field inspection. Approved plans shall be on site and available for review at all times.

Item #	Code Section	Comments	Correction
1		The Site Assessment Work Plan prepared for the North Coast Regional Water Quality Control Board, dated February 29, 2012, has been reviewed.	
2		The Site Assessment Work Plan, under "Schedule and Reporting addresses the 'summary report'. A copy of all reports must also be submitted to Santa Rosa Fire Department. Submit test reports to SRFD within 30 days of commencement of field activities.	

Inspector (*signature*)

4/19/12
Date

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
475 Aviation Blvd., Suite 220, Santa Rosa, CA 95403
Phone (707) 565-6565 Fax (707) 565-6525 www.sonoma-county.org

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment / LOP Lead

DEPT OF HEALTH SVCS
ENVIRONMENTAL HEALTH DIVISION

For Office Use Only
Amount paid 1833.00
Receipt number 0448
Payment date 4-9-12 Rev. code 1349
Site ID# FA0041705
Permit # SR0010830

Well type: [ ] Monitoring well [ ] Recovery extraction well [ ] Boring [ ] Injection well [ ] Destruct [ ] Environmental assessment
[ ] Soil gas survey [X] Direct push [ ] Air sparging/venting [ ] Remediation well [ ] Other

Well depth 20' bgs Boring depth

On-site well/boring 21 ID # to be determined (Exploratory) # Off-site well/boring ID

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth St. & 34 Sixth St. APN# 010-171-004 & 010-166-03

Facility Name Union Pacific Railroad

On-site Owner UPRR Phone (888) 870-8777

Street 9451 Atkinson St. City Roseville State CA Zip 95747

Responsible Party UPRR Phone (888) 870-8777

Street 9451 Atkinson St. City Roseville State CA Zip 95747

Consultant Antea Group Phone (408) 826-1871

Street 312 Piercy Rd City San Jose State CA Zip 95138

License #/Type 548062 State Contractors License

Drilling Contractor Gregg Drilling & Testing, Inc. Phone (925) 313-5800

Street 950 Howe Rd City Martinez State CA Zip 94553

C-57 License # 485165

Type of work: [ ] Initial investigation # Wells [X] Subsequent investigation 21 # Wells [ ] Destruct # Wells

Groundwater investigation due to: [ ] Underground tank [ ] Surface impoundment [ ] Environmental assessment
[ ] Surface disposal practice—specify involved industry
[X] Other North Coast RWQCB letter dated 19Jan 2012

Perforated intervals N/A Chemical constituents separate phase hydrocarbons

Disposal method for soil cuttings 55 gallon drum Disposal method for development water N/A

Drilling method direct push Method of drill equip. rinsate containment 55 gallon drum

If destroying a well, abandonment method N/A

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? [ ] Yes [X] No
50 feet of any sanitary sewer line? [ ] Yes [ ] No
25 feet of any private sanitary sewer line? [ ] Yes [X] No

656055*#
0013480
ENVDRILL 1833.00
TTLAMT 1833.00
CHECKS 1833.00
CHANGE 0.00
0448 #2 10:30

In addition, all monitoring wells must include ***identification system*** affixed to interior surface: 04/09/12

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

DEPT. OF HEALTH SVCS
APR 06 2012
ENVIRONMENTAL HEALTH DIVISION

For Office Use Only

Address 24 4th St

Site ID# FA0041705

Permit #

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by this Department within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit ***only*** after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

[signature] Date 3/30/12

Signature of Well Driller—***no proxies***

Insurance Carrier Acord AICW01041100 Expiration Date 8/31/12

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

Please submit a soil boring report when completed.

ENTERED PK

FOR OFFICE USE ONLY -- ENVIRONMENTAL HEALTH DIVISION

Permit approved by Matt L. Villaber Date 4.9.12

Constr. approved by _____ Observed? [ ] Yes [ ] No Well # _____ Date ____/____/____

RWQCB / LOP approval _____ Date ____/____/____

Copies: White—File Yellow—Driller Pink—Consultant Gold—Owner/Resp. Party

Appendix D

Boring Logs

anteagroup

Project No:	UPR8248	Client:	Union Pacific Railroad	Well/ Boring ID: **B1**
Logged By:	Renee Ransom	Location:	2 Fourth Street and 34 Sixth Street	Page 1 of 1
Driller:	Gregg Drilling	Date Drilled:	4/13/2012	Location Map: See Site Plan
Drilling Method:	Direct Push	Hole Diameter:	3.25"	
Sampling Method:	Acetate Liners	Hole Depth:	20'	
Casing Type:	PVC-Pre-packed well screens	Well Diameter:	0.75"	
Slot Size:	0.010	Well Depth:	20' (temporary)	
Gravel Pack:	20/40	Screened Interval:	15'-20' (temporary)	
Elevation		Northing		Easting

Well Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Collected	Sample Recovery	Soil Type	LITHOLOGY / DESCRIPTION
Concrete									Topsoil to 6"
		moist		Hand auger to 5 ft	1			OH	**Organic Clay (OH)** - Dark brown, high plasticity, malleable, organics, 5% fine to coarse grained gravel, 95% fines
Cement Grout			7.5		2			CL	**Lean Clay (CH)**, dark brown, 5% fine to coarse gravel, 95% fines, medium firm, medium plasticity.
					3				
			4.5		4				- As above, brown mottling
					5				
				Direct Push to 20 ft	6				
			5.5		7				
					8				
		moist			9			SM	**Silty Sand (SM)** - Brown, 60% sand, 40% fines, medium grained sand, poorly graded, medium firm
					10				
		moist			11			ML	**Silt (ML)** - Brown, medium firm, low plasticity, dark brown mottling
			16.2		12				- As above, wet @ 12'
		wet							
		moist			13			CL	**Sandy Lean Clay with gravel (CL)** - Gray-black, 20% fine to coarse grained gravel, 20% fine to coarse grained sand, 60% fines, black staining
			216		14			SW	**@ 14'-14'4" - Gravelly Sand (SW)** - Black-gray, fine to coarse grained sand and gravel, well graded, 45%
		wet						CL	gravel, 55% sand, trace fines, medium plastic, malleable,
		moist			15				**Sandy Lean Clay with Gravel (CL) (as above)**
			27.6		16			GM	**Sandy Gravel with silt (GM) -** Black-gray, fine to coarse grained sand and gravel, well-graded, 40% gravel, 30% sand, 30% fines
		wet			17				
		wet			18			CL	**Lean Clay (CL)** - Brown-gray, medium plasticity, firm
					19				
					20				**Total depth of boring = 20.0' below ground surface.**
					21				
					22				

PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/13
STATE OF CALIFORNIA

anteagroup

Project No:	UPR8248	Client:	Union Pacific Railroad	Well/ Boring ID: **B2**	
Logged By:	Renee Ransom	Location:	2 Fourth Street and 34 Sixth Street	Page 1 of 1	
Driller:	Gregg Drilling	Date Drilled:	4/13/2012	Location Map	See Site Plan
Drilling Method:	Direct Push	Hole Diameter:	3.25"		
Sampling Method:	Acetate Liners	Hole Depth:	20'		
Casing Type:	PVC-Pre-packed well screens	Well Diameter:	0.75"		
Slot Size:	0.010	Well Depth:	15' (temporary)		
Gravel Pack:	20/40	Screened Interval:	10'-15' (temporary)		
Elevation		Northing		Easting	

Well Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Collected	Sample: Recovery	Soil Type	LITHOLOGY / DESCRIPTION
									Topsoil to 7"
Concrete		moist		Hand auger to 5 ft	1			OH	@7" - **Organic Clay (OH)** - Dark brown,high plasticity, malleable 10% coarse grained gravel, 90% fines, organics
			5.0		2				
Cement Grout					3			CL	**Lean Clay (CL)**, dark brown, 10% coarse gravel, 90% fines, medium firm
			6.1		4				
		moist		Direct Push to 20 ft	5	■		SM	**Silty Sand (SM) -** Orange-brown, malleable, fine to coarse grained sand, well-graded, 70% sand, 30% fines
			5.6		6				
		moist			7			ML	**Sandy Silt (ML) -** Dark brown, stiff, low plasticity, 40% sand, 60% fines
			4.2		8				
					9				
			4.3		10				
					11	■			
			406		12			SM	**Silty Sand with Gravel (SM)** - Gray, malleable, fine to medium grained sand, well graded, 15% fine to coarse grained gravel, 65% sand, 20% fines
		moist			13				
			229		14	■		SW	**Gravelly Sand with Silt (SW) -** Brown, malleable, fine to coarse grained sand and gravel, 40% gravel, 40% sand, 20% fines, odor, black staining
		wet			15				
			308		16				No Recovery
					17				
					18				
					19				
					20				**Total depth of boring = 20.0' below ground surface.**
					21				
					22				

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No. 8584
Exp. 4/13
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Project No:	UPR8248	Client:	Union Pacific Railroad	Well/ Boring ID: **B3**
Logged By:	Renee Ransom	Location:	2 Fourth Street and 34 Sixth Street	Page 1 of 1
Driller:	Gregg Drilling	Date Drilled:	4/13/2012	Location Map: See Site Plan
Drilling Method:	Direct Push	Hole Diameter:	3.25"	
Sampling Method:	Acetate Liners	Hole Depth:	20'	
Casing Type:	PVC-Pre-packed well screens	Well Diameter:	0.75"	
Slot Size:	0.010	Well Depth:	20' (temporary)	
Gravel Pack:	20/40	Screened Interval:	15'-20' (temporary)	
Elevation		Northing		Easting

Well Completion	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Collected	Sample Recovery	Soil Type	LITHOLOGY / DESCRIPTION
Backfill									Topsoil to 7"
Concrete		moist		Hand auger to 5 ft	1			OH	**Gravelly Organic Clay (OH)**- Dark brown, high plasticity, malleable, organics, 30% fine gravel, 70% fines
			4.1		2				
Cement Grout					3				
		moist	3.2		4			ML	**Sandy Silt with Gravel (ML) -** Dark brown, light brown mottling, low plasticity, medium firm, 20% fine to coarse gravel, 20% fine to coarse grained sand, 60% fines
					5				- As above, color change to brown
			7.4		6				
					7				
			5.8		8				
					9				
			4.6	Direct Push to 20 ft	10			ML	**Silt (ML) -** Orange-brown, low plasticity, medium firm, 5% fine gravel, 95% fines
		moist			11				
			5.4		12			SM	**Silty Sand with Gravel (SM)**- Brown, wet, fine to coarse grained sand and gravel, well graded, 50% sand, 25% gravel, 25% fines, unconsolidated
		wet	3.2		13				
			1.9		14				
					15				
			1.8		16			SM	**Silty Sand (SM),** Brown, 5% gravel, 60% sand, 25% fines, fine to coarse sand and gravel, well graded, unconsolidated
		wet			17			GW-GM	**Sandy Gravel with Silt (GM)** - Brown, malleable, fine to coarse grained sand and gravel, well graded, 40% gravel, 40% sand, 20% fines
		wet			18			CL	**Lean Clay (CL)** - Light brown, medium plastic, medium firm, 100% fines
					19			SW	Sand (SW)- Brown, unconsolidated, fine to coarse grained, well graded
					20			ML	Silt (ML) - Brown, low plasticity, medium firm
									Total depth of boring = 20.0' below ground surface.
					21				
					22				

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anteagroup	Project No: UPR8248	Client: Union Pacific Railroad	Well/ Boring ID: B4
	Logged By: Renee Ransom	Location: 2 Fourth Street and 34 Sixth Street	Page 1 of 1
	Driller: Gregg Drilling	Date Drilled: 4/13/2012	Location Map: See Site Plan
	Drilling Method: Direct Push	Hole Diameter: 3.25"	
	Sampling Method: Acetate Liners	Hole Depth: 20'	
	Casing Type: PVC-Pre-packed well screens	Well Diameter: 0.75"	
	Slot Size: 0.010	Well Depth: 20' (temporary)	
	Gravel Pack: 20/40	Screened Interval: 15'-20' (temporary)	
	Elevation	Northing	Easting

Well Completion (Backfill)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Collected	Sample Recovery	Soil Type	LITHOLOGY / DESCRIPTION
									Topsoil to 9"
Concrete		moist		Hand auger to 5 ft	1			OH	**@9" Organic Clay (OH)** - Dark brown, medium plasticty, malleable, organics, 5% fine to coarse grained gravel, 95% fines
			2.4		2				
Cement Grout					3				
		moist			4			CL	**Gravelly Lean Clay with Sand (CL) -** Dark brown, malleable, medium plasticity, fine to coarse grained sand and gravel, 25% gravel, 20% sand, 55% fines
			1.9		5				
		moist		Direct Push to 20 ft				ML	**Sandy Silt with Gravel (ML) -** Dark brown, orange mottling, indurated, 15% fine to medium grained gravel, 25% fine to coarse grained sand, 60% fines
			1.6		6				
					7				
		moist						CL	**Sandy Clay with Gravel (CL)** - Light brown, medium indurated, medium plastic, 10% fine grained gravel, 10% fine grained sand, 80% fines
			2.8		8				
					9				
			5.7		10				
					11				- As above, but color change to gray, odor
			49.3		12				
		moist			13			CL	**Lean Clay (CL)** - Brown, gray mottling, high plasticity, indurated
			5.6		14				
					15				
			4.5		16				No Recovery
					17				
					18				
		wet							- As above (Lean Clay), but wet
					19			SW-SM	**Gravelly Sand with Silt (SW-SM)** - Brown, malleable, fine to coarse grained sand and gravel, well graded, 40% gravel, 40% sand, 20% fines
					20				**Total depth of boring = 20.0' below ground surface.**
					21				
					22				

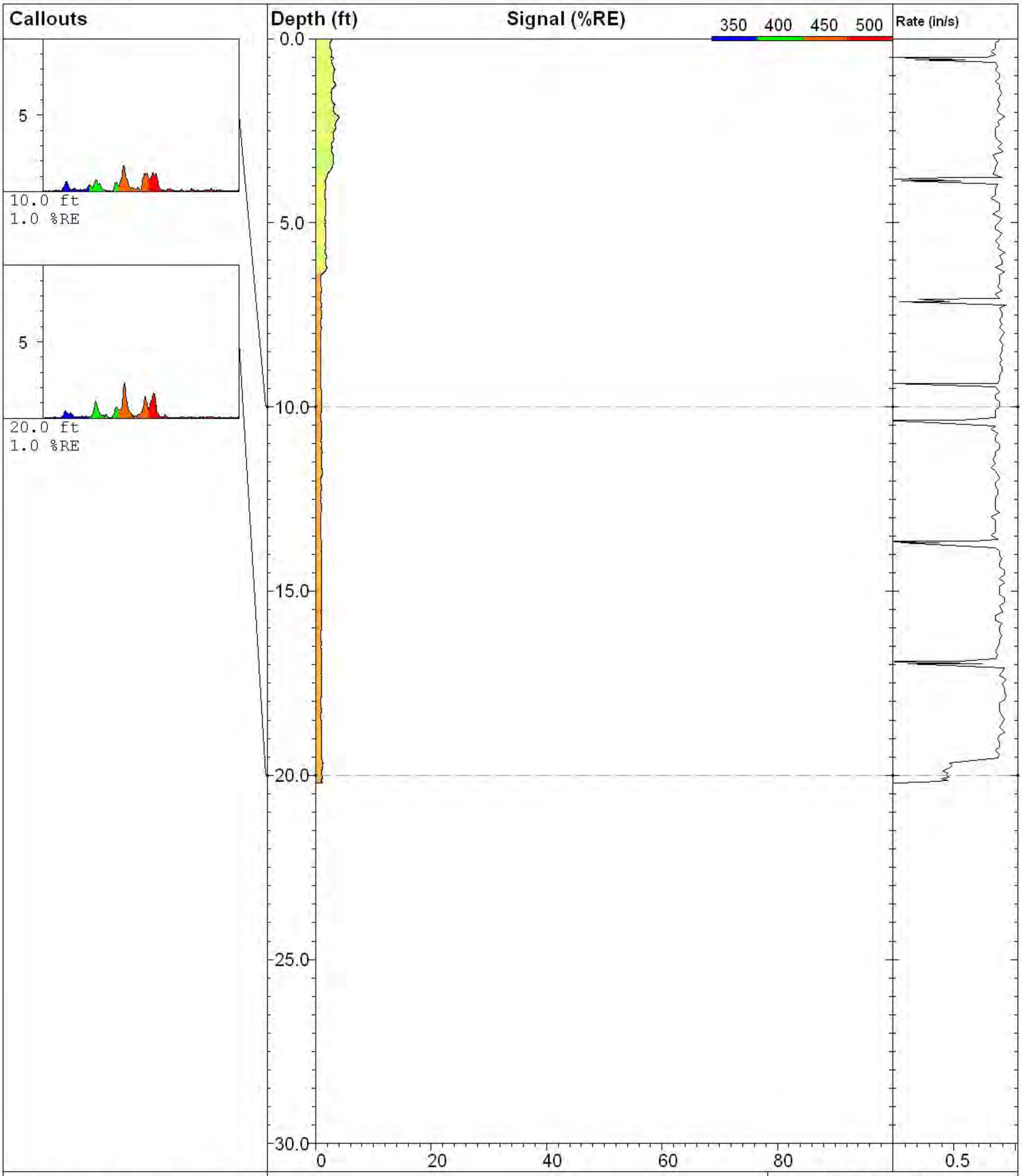
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No. 8584
Exp. 4/13
STATE OF CALIFORNIA

anteagroup

Project No:	UPR8248	Client:	Union Pacific Railroad	Well/ Boring ID: B5
Logged By:	Renee Ransom	Location:	2 Fourth Street and 34 Sixth Street	Page 1 of 1
Driller:	Gregg Drilling	Date Drilled:	4/13/2012	Location Map: See Site Plan
Drilling Method:	Direct Push	Hole Diameter:	3.25"	
Sampling Method:	Acetate Liners	Hole Depth:	20'	
Casing Type:	PVC-Pre-packed well screens	Well Diameter:	0.75" (temporary)	
Slot Size:	0.010	Well Depth:	20' (temporary)	
Gravel Pack:	20/40	Screened Interval:	15'-20' (temporary)	
Elevation		Northing		Easting

Well Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Collected	Sample: Recovery	Soil Type	LITHOLOGY / DESCRIPTION
									Topsoil to 6"
Concrete		moist		Hand auger to 5 ft	1			OH	**Organic Clay (OH)** - Dark brown, malleable, medium plastic, organics
			1.9		2			CL	**Lean Clay (CL)** - Dark brown, medium indurate, medium plastic
Cement Grout					3				
			4.6		4				
					5	■			
		moist						SM	**Silty Sand with Gravel (SM)** - Brown, 20% gravel, 60% sand, 20% fines, fine to coarse grained sand and gravel, well graded, low plasticity, indurated
			3.5		6				
					7				
			3.7		8				No Recovery
					9				
					10	■			
		moist		Direct Push to 20 ft				GW	**Sandy Gravel (GW)** - Light brown, 65% gravel, 35% sand, unconsolidated, fine to coarse grained sand and gravel, well graded,
			3.5		11				
		moist						CL	**Lean Clay (CL)** - Brown-orange, malleable, medium plasticity
			2.8		12				
					13				
			1.9		14				- As above, but color change to gray-brown, 10% medium grained sand
		moist			15			ML	**Sandy Silt (ML)** - Brown, 40% very fine sand, 60% fines, low plasticity, malleable.
			4.0		16	■			
		wet			17			SM	Silty Sand with clay (SM) - Brown, wet, dense, fine to coarse grained sand and gravel, well-graded, 55% sand, 20% fines, 25% gravel
					18			CL	Lean Clay (CL) - Brown w/orange mottling, medium plasticity, malleable
								CL	**Sandy Lean Clay with gravel (CL)** - Brown, 30% sand, 15% gravel, 55% fines, indurated
					19			CL	@18' 4" - **Lean Clay (CL)** - Brown w/orange mottling, malleable medium plasticity
					20				**Total depth of boring = 20.0' below ground surface.**
					21				
					22				

PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp.
STATE OF CALIFORNIA

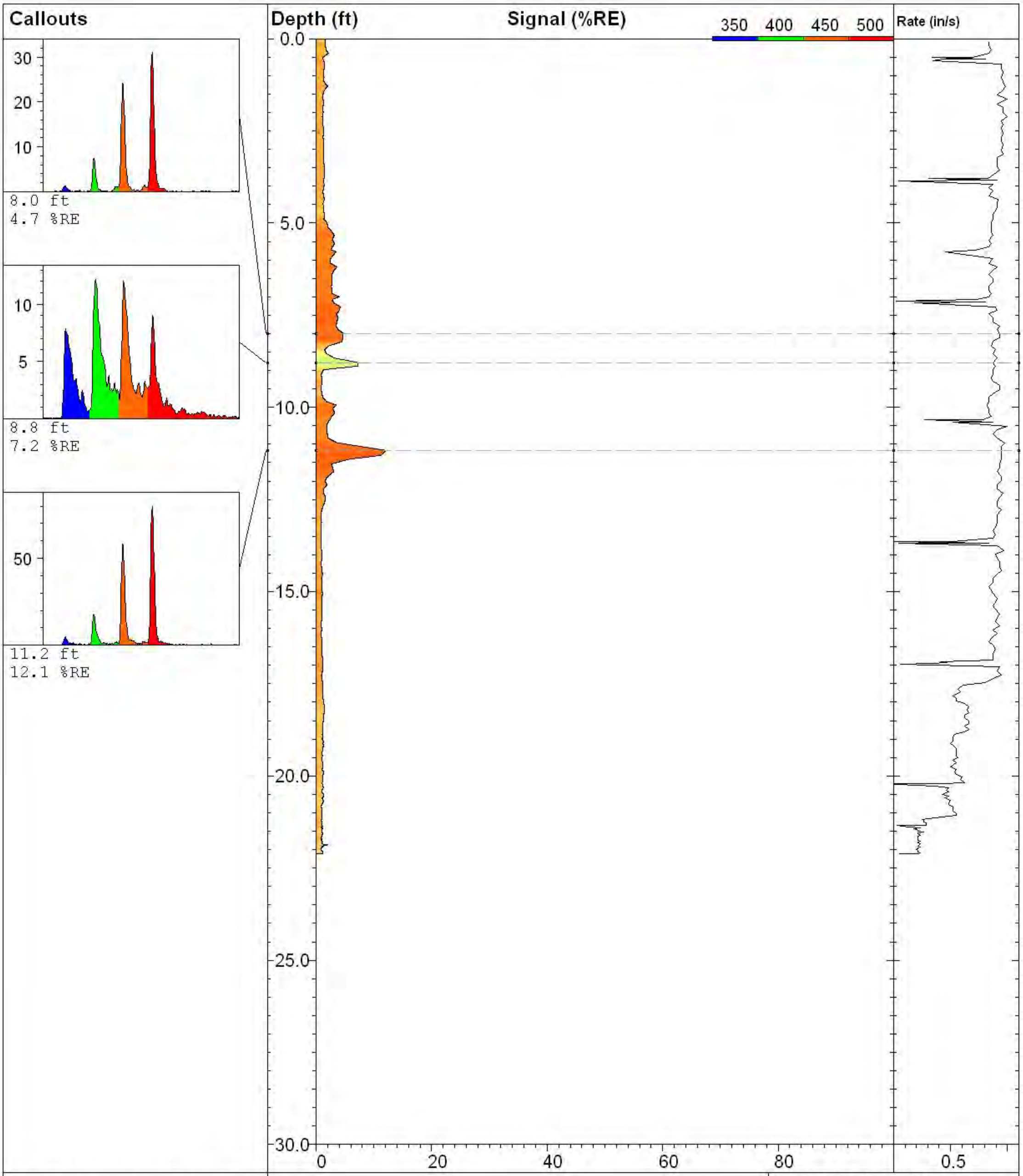


GREGG
www.greggdrilling.com

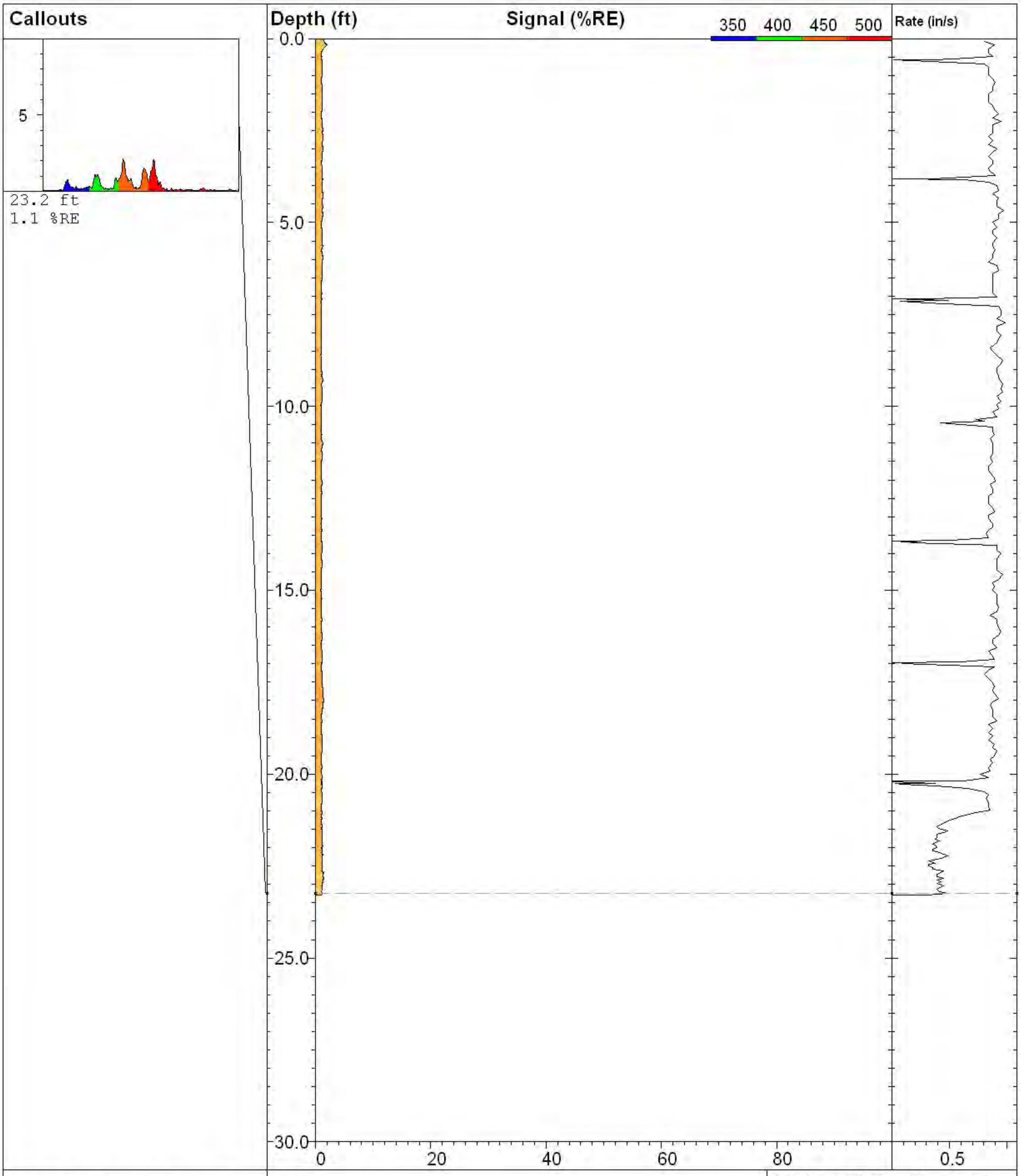
B6

UVOST By Dakota
www.DakotaTechnologies.com

Site: **2 Fourth St. & 34 Sixth St.**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **20.20 ft**
Client: **Antea**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **4.1 % @ 2.12 ft**
Job: **12-058MA**	*Operator/Unit:* **D. Tidwell/UVOST1009**	*Date & Time:* **2012-04-24 10:45 PDT**



GREGG www.greggdrilling.com	**B7**		**UVOST By Dakota** www.DakotaTechnologies.com
	Site: **2 Fourth St. & 34 Sixth St.**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **22.11 ft**
	Client: **Antea**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **12.1 % @ 11.17 ft**
	Job: **12-058MA**	*Operator/Unit:* **D. Tidwell/UVOST1009**	*Date & Time:* **2012-04-24 13:07 PDT**



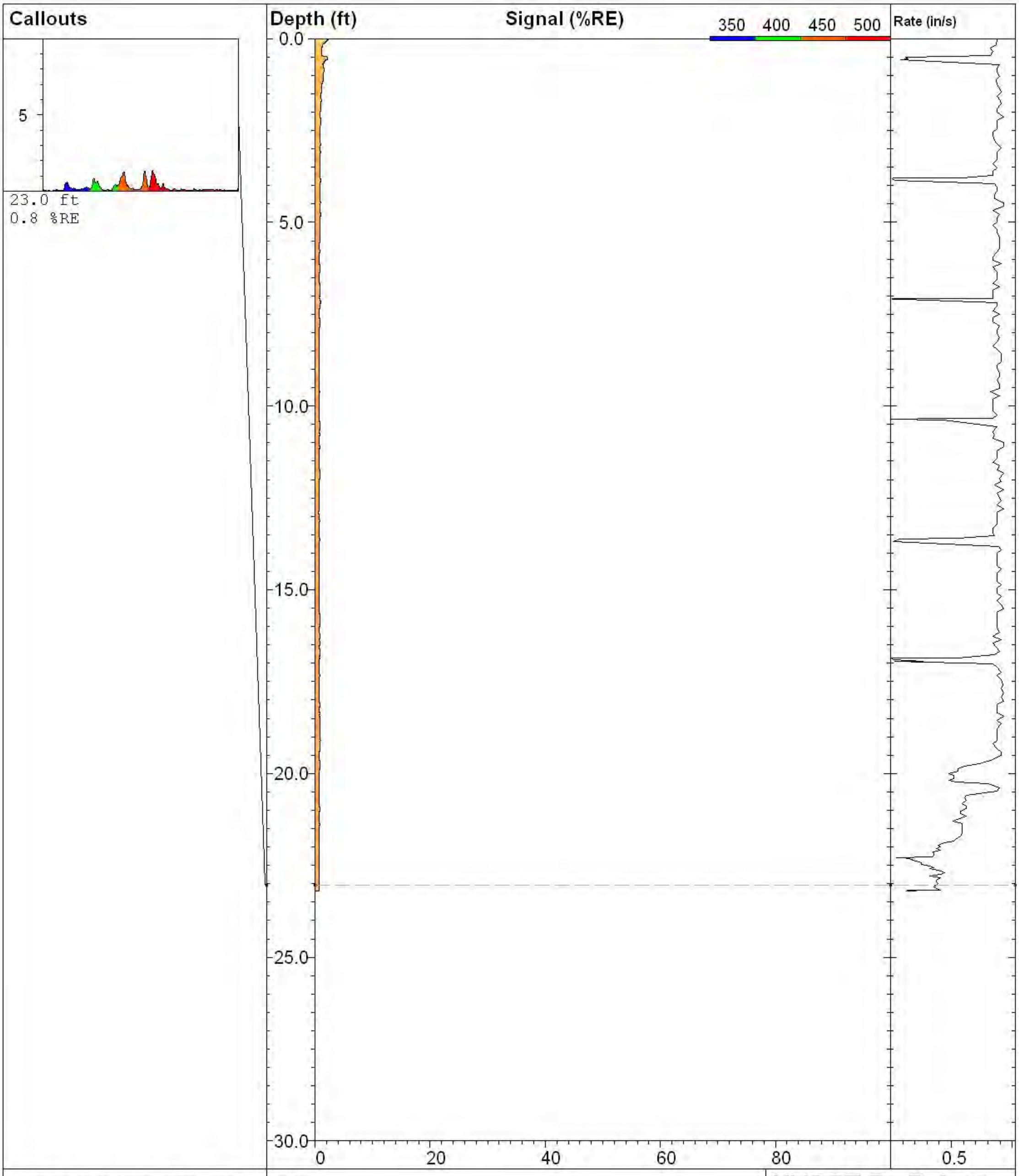
GREGG

www.greggdrilling.com

B8

UVOST By Dakota
www.DakotaTechnologies.com

Site: **2 Fourth St. & 34 Sixth St.**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **23.28 ft**
Client: **Antea**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **2.0 % @ 0.17 ft**
Job: **12-058MA**	*Operator/Unit:* **D. Tidwell/UVOST1009**	*Date & Time:* **2012-04-24 15:06 PDT**



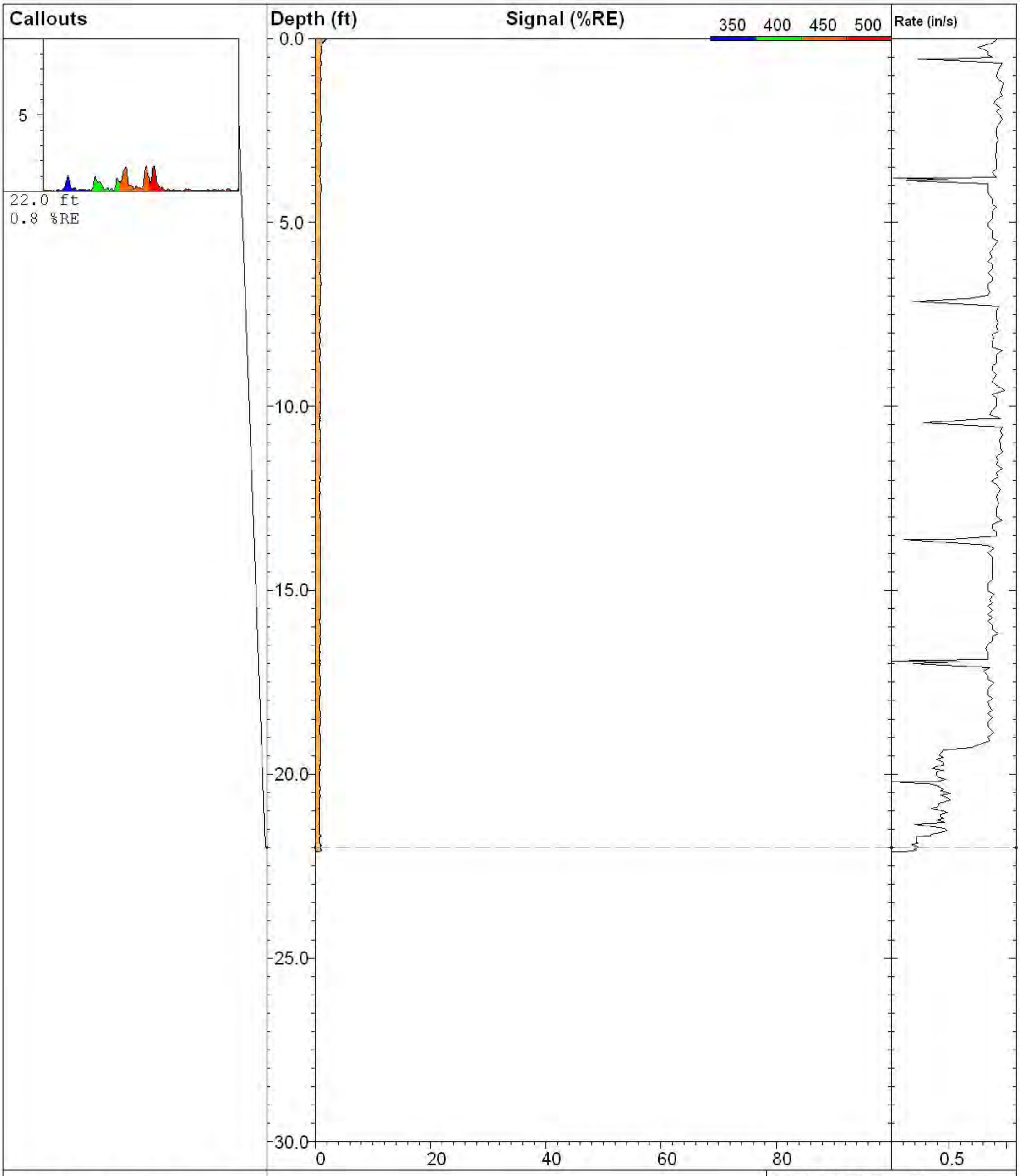
GREGG

www.greggdrilling.com

B9

UVOST By Dakota
www.DakotaTechnologies.com

Site: **2 Fouth St. & 34 Sixth St**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **23.20 ft**
Client: **Antea**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **2.3 % @ 0.04 ft**
Job: **12-058MA**	*Operator/Unit:* **D. Tidwell/UVOST1009**	*Date & Time:* **2012-04-25 07:53 PDT**



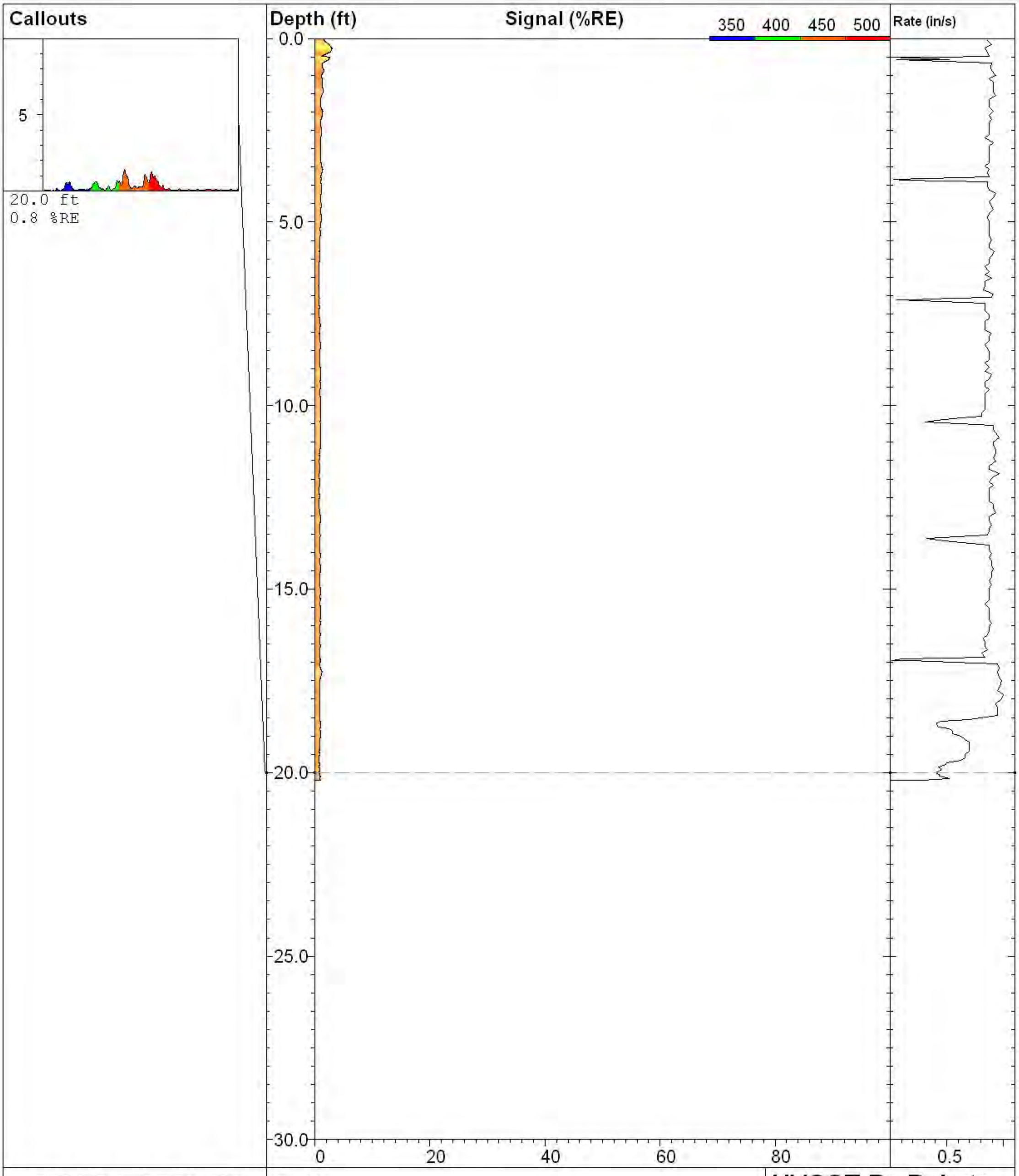
GREGG

www.greggdrilling.com

B10

UVOST By Dakota
www.DakotaTechnologies.com

Site: **2 Fouth St. & 34 Sixth St**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **22.11 ft**
Client: **Antea**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **1.9 % @ 0.03 ft**
Job: **12-058MA**	*Operator/Unit:* **D. Tidwell/UVOST1009**	*Date & Time:* **2012-04-25 09:38 PDT**



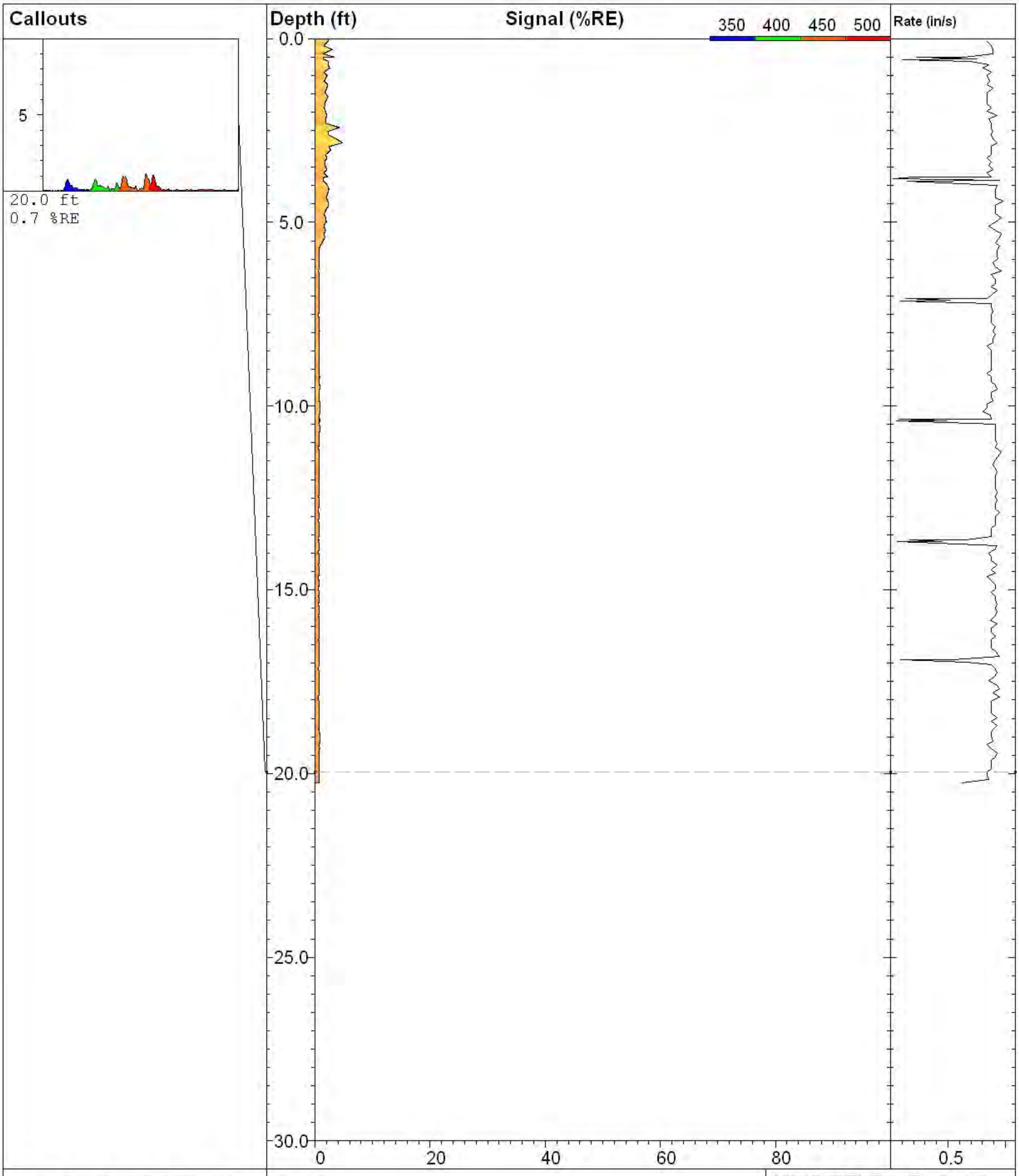
GREGG

www.greggdrilling.com

B11

UVOST By Dakota
www.DakotaTechnologies.com

Site: **2 Fouth St. & 34 Sixth St**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **20.21 ft**
Client: **Antea**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **3.0 % @ 0.27 ft**
Job: **12-058MA**	*Operator/Unit:* **D. Tidwell/UVOST1009**	*Date & Time:* **2012-04-25 12:30 PDT**



GREGG

www.greggdrilling.com

B12

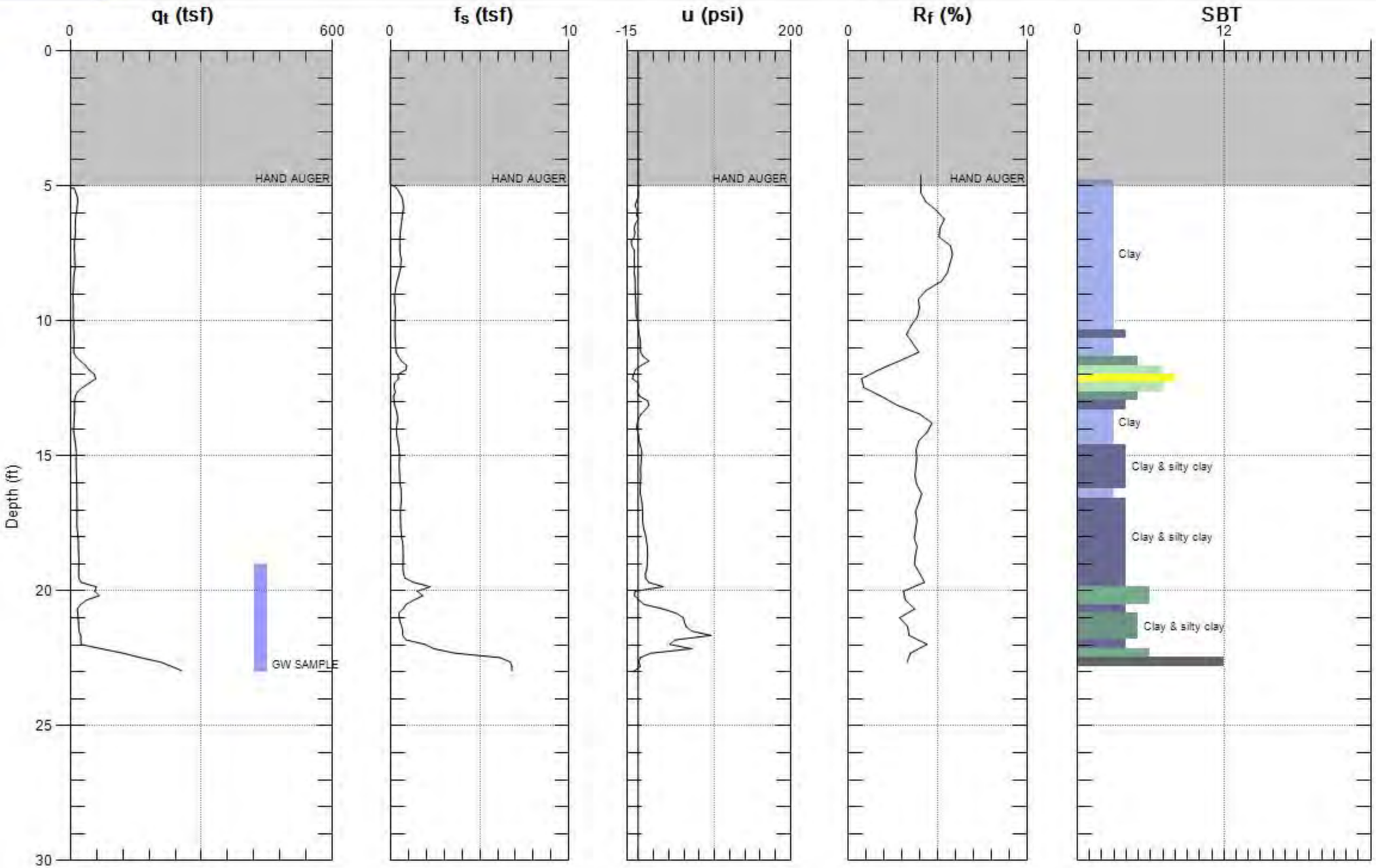
UVOST By Dakota
www.DakotaTechnologies.com

Site: **2 Fouth St. & 34 Sixth St**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **20.26 ft**
Client: **Antea**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **4.8 % @ 2.84 ft**
Job: **12-058MA**	*Operator/Unit:* **D. Tidwell/UVOST1009**	*Date & Time:* **2012-04-25 14:31 PDT**

ANTEA GROUP

Site: VPR8248
Sounding: B6

Engineer: L.HOLDEN
Date: 4/24/2012 10:40



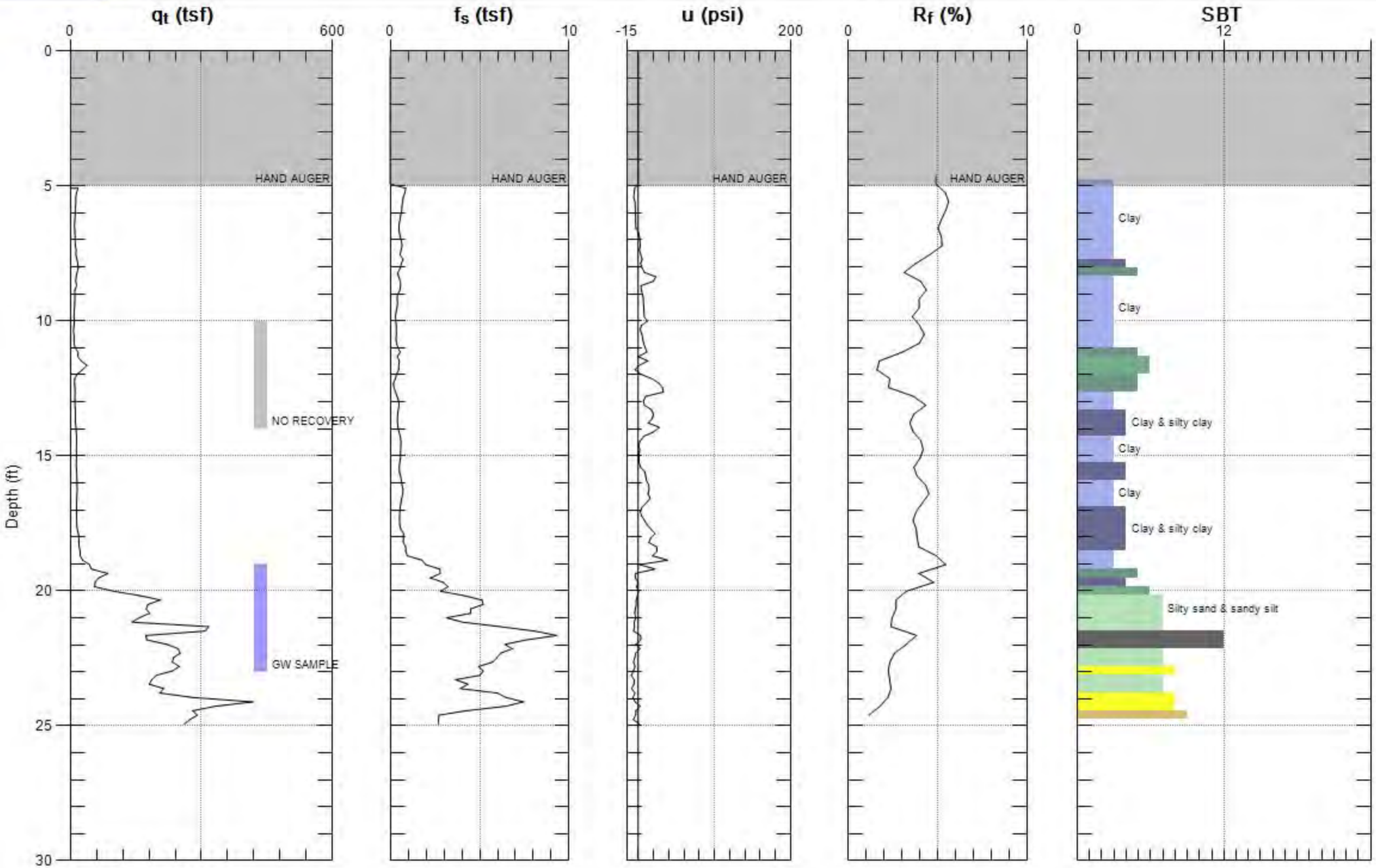
Max. Depth: 22.966 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

ANTEA GROUP

Site: VPR8248
Sounding: B7

Engineer: L.HOLDEN
Date: 4/24/2012 01:03



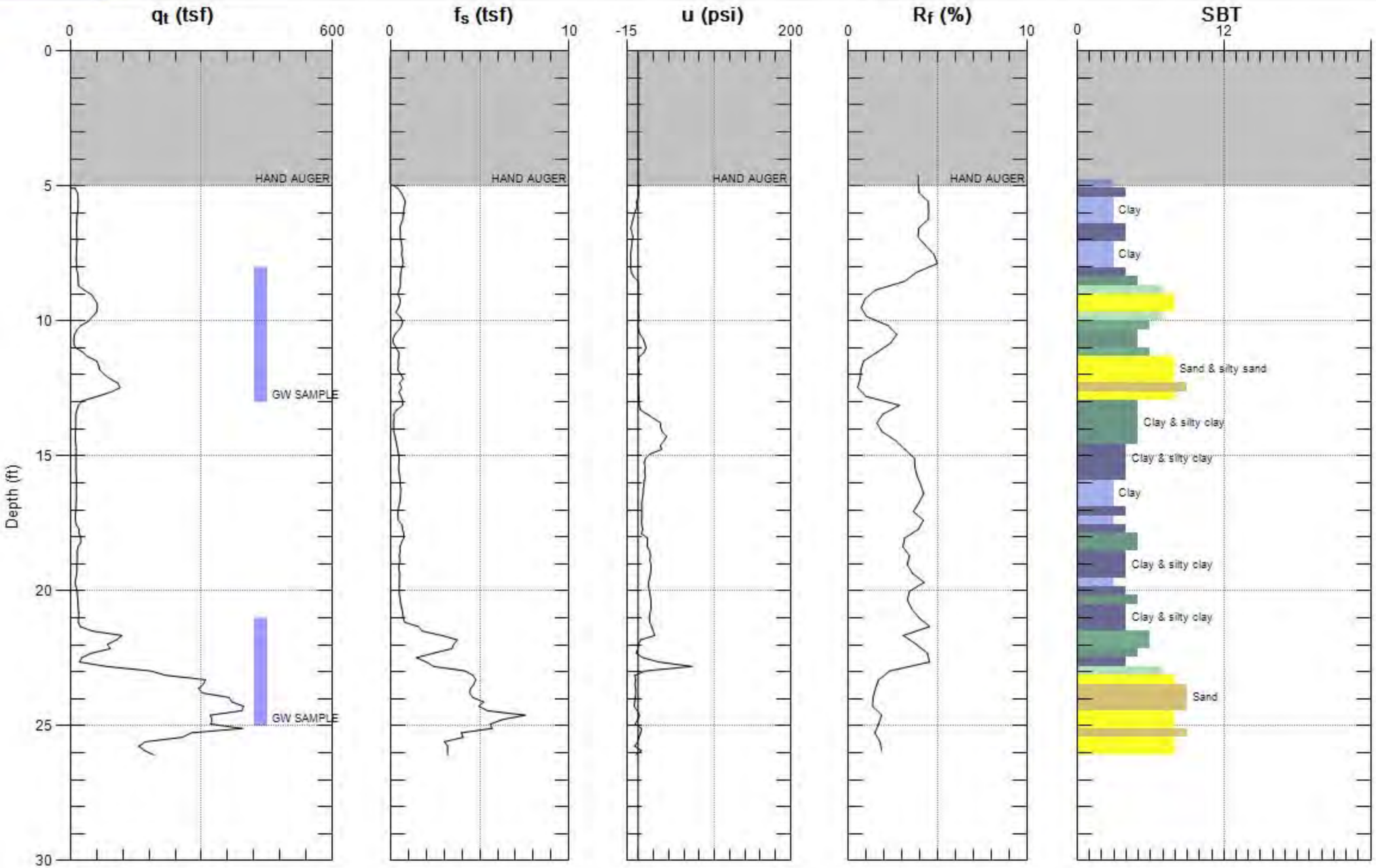
Max. Depth: 24.934 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

ANTEA GROUP

Site: VPR8248
Sounding: B8

Engineer: L.HOLDEN
Date: 4/24/2012 02:54



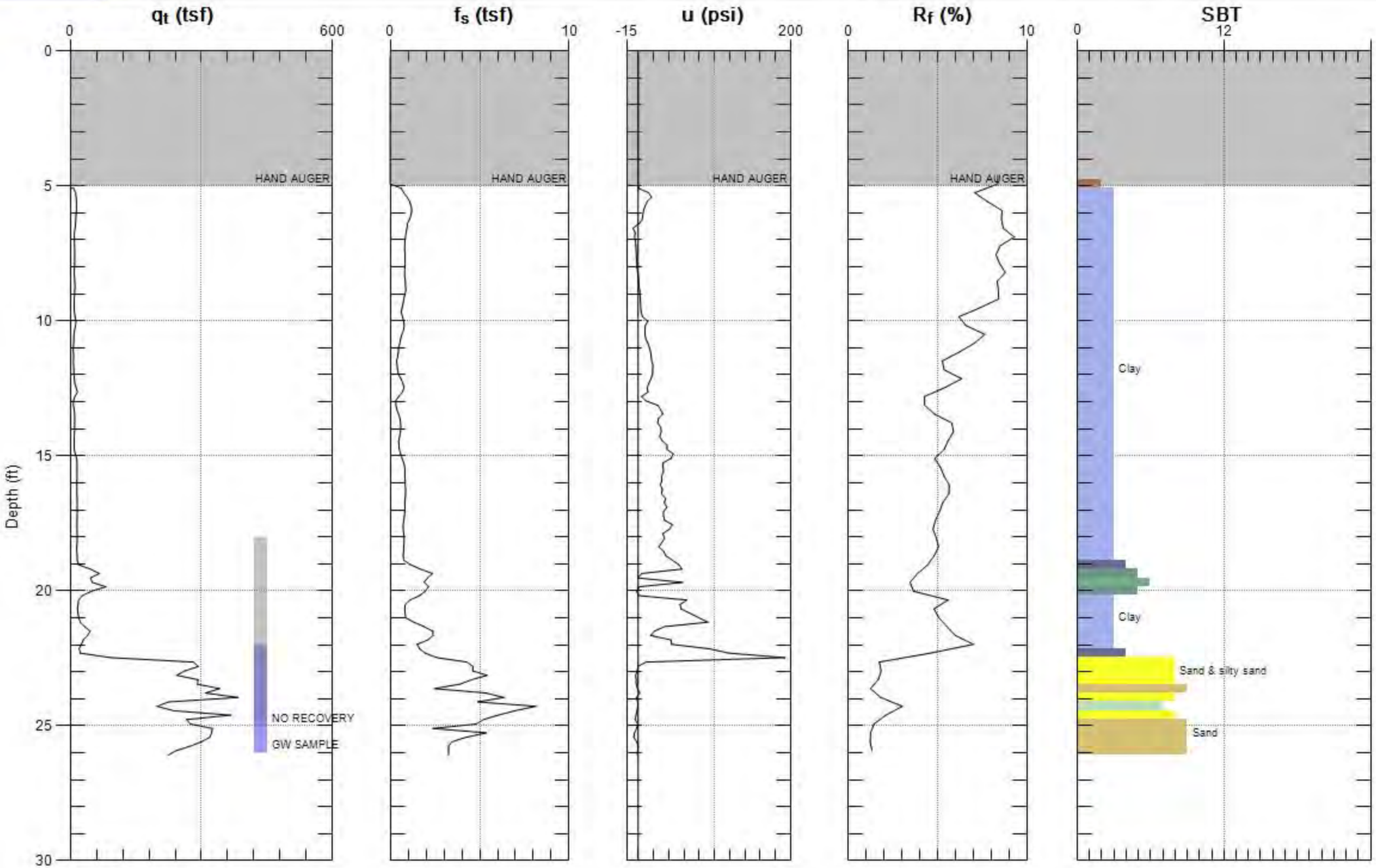
Max. Depth: 26.083 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

ANTEA GROUP

Site: VPR8248
Sounding: B9

Engineer: L.HOLDEN
Date: 4/25/2012 07:35



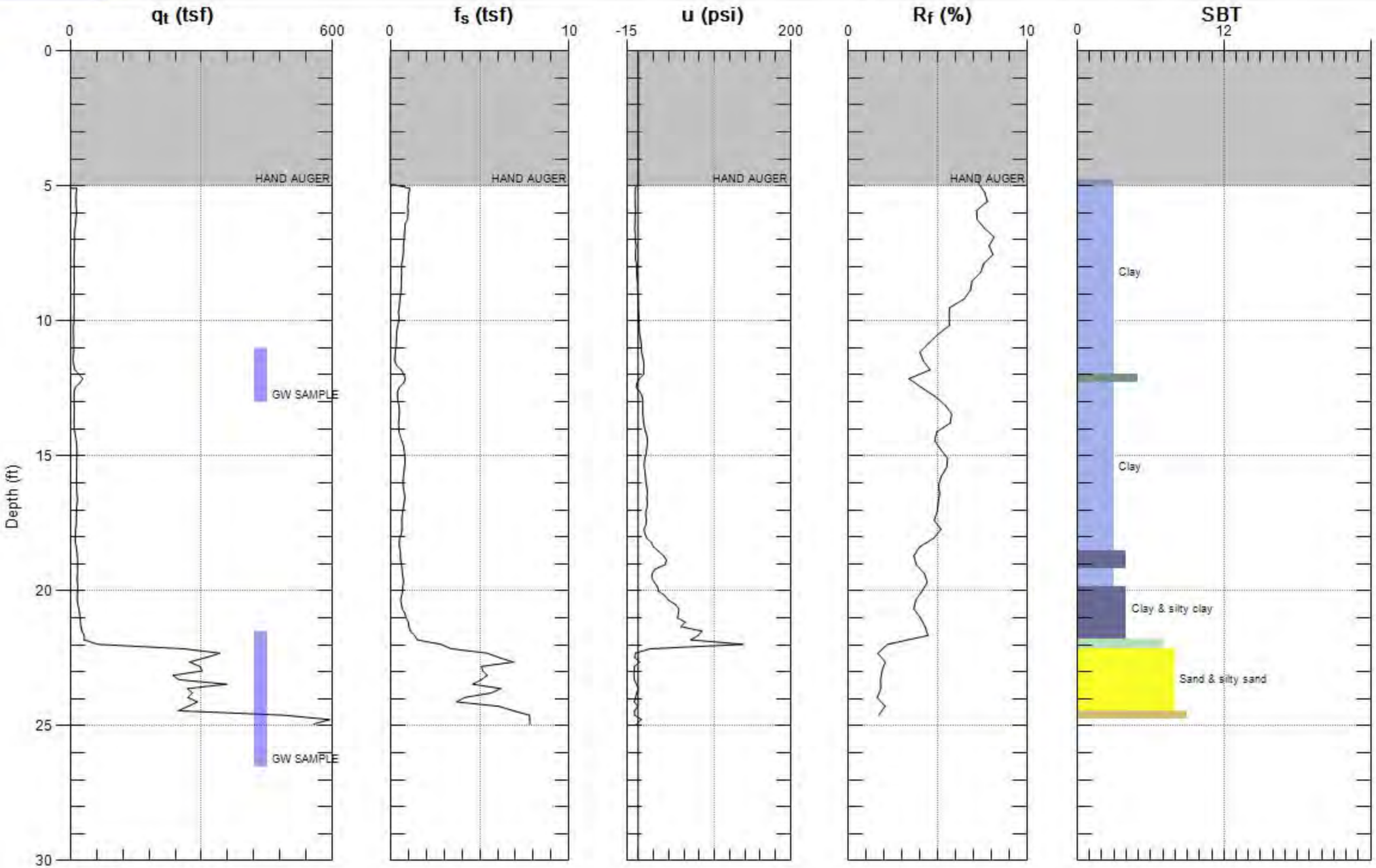
Max. Depth: 26.083 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

ANTEA GROUP

Site: VPR8248
Sounding: B10

Engineer: L.HOLDEN
Date: 4/25/2012 09:31



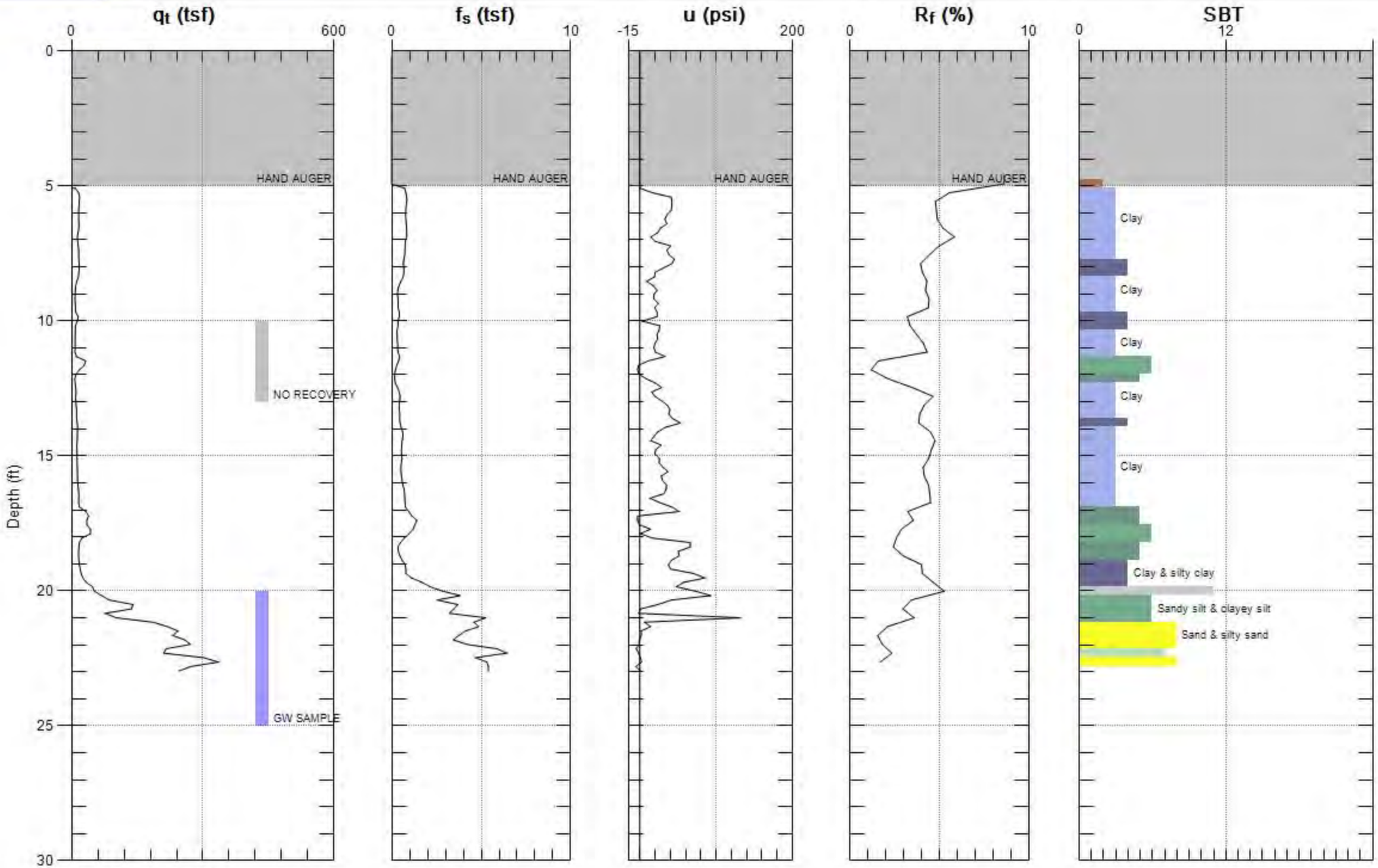
Max. Depth: 24.934 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

ANTEA GROUP

Site: VPR8248
Sounding: B11

Engineer: L.HOLDEN
Date: 4/25/2012 12:19



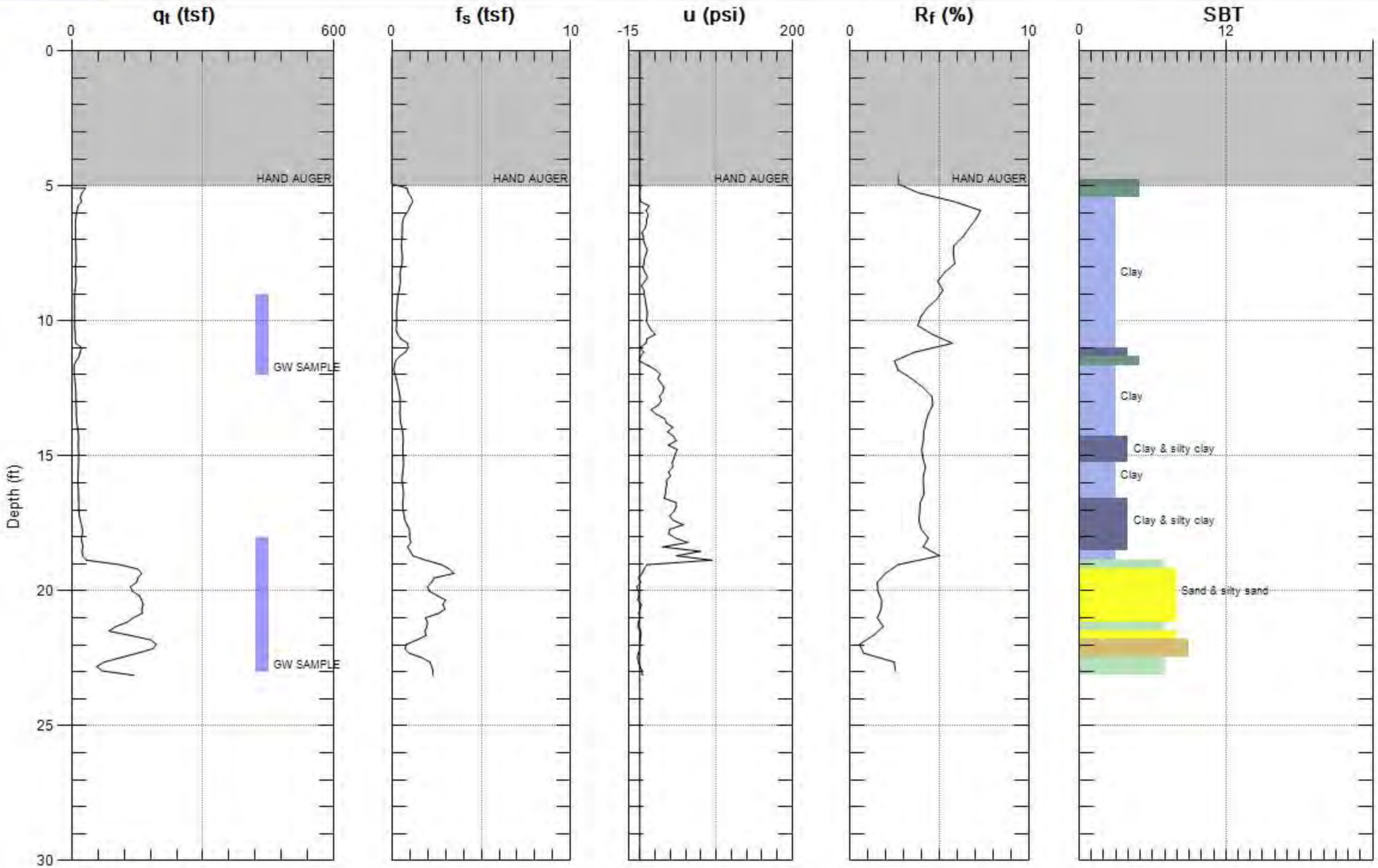
Max. Depth: 22.966 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

ANTEA GROUP

Site: VPR8248
Sounding: B12

Engineer: L.HOLDEN
Date: 4/25/2012 02:27



Max. Depth: 23.130 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

Appendix E

Certified Laboratory Analytical Reports – Soil Borings and Excavation

CONESTOGA-ROVERS & ASSOCIATES

20818 44th Avenue West, Suite 190
Lynnwood, WA 98036
Telephone: (425) 563-6515 Fax: (425) 563-6599
www.CRAworld.com

MEMORANDUM

TO: Lia Holden

REF. NO.: 058324-2344

FROM: Jeffrey Cloud/bjw/302-NF

DATE: September 7, 2012

C.C.: Renee Ransom, Jesse Orth, Julie Lidstone

E-Mail and Hard Copy if Requested

RE: **Data Quality Assessment and Validation of Reports J43205, J43207, J43229, J43231, J43270 & J43300**
Site Assessment
2 Fourth Street and 34 Sixth Street
Santa Rosa, California
July 2012

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the July 2012, collection of soil and water samples in Santa Rosa, California. Samples were submitted to Test America Laboratories (TA), in Pleasanton, California, and analyzed for the following:

Parameter	*Methodology*
Volatile Organic Compounds (VOCs)	SW846 8260B
Gasoline Range Organics (GRO)	CA LUFT GC/MS
Semi-Volatile Organic Compounds (SVOCs)	SW846 8270C SIM
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	SW846 8015B
Metals	SW846 6010B

The analytical results are summarized in Tables 1A and 1B. The QC criteria used to assess the data were established by the methods and with the following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", USEPA 540/R-99/008, October 1999

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", USEPA 540/R-94/013, February 1994

These guidelines are collectively referred to as "Guidelines" in this memorandum.

SAMPLE QUANTITATION

The laboratory did not report any detected concentrations below the laboratory's practical quantitation limit (PQL)/report limit (RL).

SAMPLE PRESERVATION AND HOLDING TIMES

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times.

All samples were properly preserved and cooled after collection.

METHOD BLANK SAMPLES

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency and all results were non-detect for the compounds of interest.

SURROGATE COMPOUNDS – ORGANIC ANALYSES

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

All surrogate recoveries met the method criteria, demonstrating acceptable analytical efficiency for these analyses with a few exceptions. Several sample results were qualified as estimated (See Table 2).

LABORATORY CONTROL SAMPLE (LCS)

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

Laboratory control samples (LCS) were analyzed in duplicate for all parameters. All recoveries were within required control limits showing adequate analytical accuracy and precision.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and relative percent differences (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods and the "Guidelines", which require recoveries between 75 to 125 percent with RPDs less than 20 percent for water samples and 30 percent for soil samples.

Matrix spikes (MS) were prepared and analyzed in duplicate for DRO/ORO and metals. All recoveries were within required control limits showing adequate analytical accuracy and precision. Precision, for VOCs, GRO and SVOCs, was determined to be acceptable based on LCS/LCSD recoveries.

FIELD QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

No field QA/QC samples were submitted to the laboratory for analysis.

OVERALL ASSESSMENT

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Base 1*	*Base 2*	*Base 4*	*Composite*
	Sample ID:	*SO-2344-BASE1-100712*	*SO-2344-BASE2-100712*	*SO-2344-BASE4-110712*	*SO-2344-COMP1-100712*
	Sample Date:	*7/10/2012*	*7/10/2012*	*7/11/2012*	*7/10/2012*
Parameters	***Units***				
Volatile Organic Compounds					
Benzene	µg/kg	-	-	-	<4.6
Ethylbenzene	µg/kg	-	-	-	<4.6
Methyl tert butyl ether (MTBE)	µg/kg	-	-	-	<4.6
Tetrachloroethene	µg/kg	-	-	-	<4.6
Toluene	µg/kg	-	-	-	<4.6
Trichloroethene	µg/kg	-	-	-	<4.6
Xylenes (total)	µg/kg	-	-	-	<9.1
Semi-volatile Organic Compounds - SIM					
Acenaphthene	µg/kg	<5.0	<4.9	<5.0	<49
Acenaphthylene	µg/kg	<5.0	<4.9	<5.0	<49
Anthracene	µg/kg	<5.0	<4.9	<5.0	<49
Benzo(a)anthracene	µg/kg	<5.0	<4.9	<5.0	<49
Benzo(a)pyrene	µg/kg	<5.0	<4.9	<5.0	<49
Benzo(b)fluoranthene	µg/kg	<5.0	<4.9	<5.0	<49
Benzo(g,h,i)perylene	µg/kg	<5.0	<4.9	<5.0	<49
Benzo(k)fluoranthene	µg/kg	<5.0	<4.9	<5.0	<49
Chrysene	µg/kg	<5.0	<4.9	<5.0	<49
Dibenz(a,h)anthracene	µg/kg	<5.0	<4.9	<5.0	<49
Fluoranthene	µg/kg	<5.0	<4.9	<5.0	<49
Fluorene	µg/kg	<5.0	<4.9	<5.0	<49
Indeno(1,2,3-cd)pyrene	µg/kg	<5.0	<4.9	<5.0	<49
Naphthalene	µg/kg	<5.0	<4.9	<5.0	<49
Phenanthrene	µg/kg	<5.0	<4.9	<5.0	<49
Pyrene	µg/kg	<5.0	8.2	<5.0	<49

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Base 1*	*Base 2*	*Base 4*	*Composite*
	Sample ID:	*SO-2344-BASE1-100712*	*SO-2344-BASE2-100712*	*SO-2344-BASE4-110712*	*SO-2344-COMP1-100712*
	Sample Date:	*7/10/2012*	*7/10/2012*	*7/11/2012*	*7/10/2012*
Parameters	***Units***				
Metals					
Cadmium	mg/kg	-	-	-	<0.50
Chromium	mg/kg	-	-	-	120
Lead	mg/kg	-	-	-	8.0
Nickel	mg/kg	-	-	-	140
Zinc	mg/kg	-	-	-	56
Metals - STLC					
Cadmium	mg/L	-	-	-	<0.050
Chromium	mg/L	-	-	-	0.29
Lead	mg/L	-	-	-	<0.13
Nickel	mg/L	-	-	-	2.3
Zinc	mg/L	-	-	-	<0.50
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	-	-	-	<230
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	40	170	<0.99	44
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	63	180	<50	84

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Composite*	*Composite*	*ESW1*	*ESW2*
	Sample ID:	*SO-2344-COMP2-100712*	*SO-2344-COMP3-110712*	*SO-2344-ESW1-110712*	*SO-2344-ESW2-110712*
	Sample Date:	*7/10/2012*	*7/11/2012*	*7/11/2012*	*7/11/2012*
Parameters	***Units***				
Volatile Organic Compounds					
Benzene	µg/kg	<4.8	<5.1	-	-
Ethylbenzene	µg/kg	<4.8	<5.1	-	-
Methyl tert butyl ether (MTBE)	µg/kg	<4.8	-	-	-
Tetrachloroethene	µg/kg	<4.8	<5.1	-	-
Toluene	µg/kg	<4.8	<5.1	-	-
Trichloroethene	µg/kg	<4.8	<5.1	-	-
Xylenes (total)	µg/kg	<9.5	<10	-	-
Semi-volatile Organic Compounds - SIM					
Acenaphthene	µg/kg	180	<25	<4.9	<4.9
Acenaphthylene	µg/kg	53	<25	<4.9	<4.9
Anthracene	µg/kg	<49	<25	<4.9	<4.9
Benzo(a)anthracene	µg/kg	<49	<25	<4.9	<4.9
Benzo(a)pyrene	µg/kg	<49	<25	<4.9	<4.9
Benzo(b)fluoranthene	µg/kg	<49	<25	<4.9	<4.9
Benzo(g,h,i)perylene	µg/kg	<49	38	<4.9	<4.9
Benzo(k)fluoranthene	µg/kg	<49	<25	<4.9	<4.9
Chrysene	µg/kg	<49	<25	<4.9	<4.9
Dibenz(a,h)anthracene	µg/kg	<49	<25	<4.9	<4.9
Fluoranthene	µg/kg	<49	<25	<4.9	<4.9
Fluorene	µg/kg	57	<25	<4.9	<4.9
Indeno(1,2,3-cd)pyrene	µg/kg	<49	<25	<4.9	<4.9
Naphthalene	µg/kg	<49	<25	<4.9	<4.9
Phenanthrene	µg/kg	<49	<25	<4.9	<4.9
Pyrene	µg/kg	85	<25	<4.9	<4.9

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Composite*	*Composite*	*ESW1*	*ESW2*
	Sample ID:	*SO-2344-COMP2-100712*	*SO-2344-COMP3-110712*	*SO-2344-ESW1-110712*	*SO-2344-ESW2-110712*
	Sample Date:	*7/10/2012*	*7/11/2012*	*7/11/2012*	*7/11/2012*
Parameters	***Units***				
Metals					
Cadmium	mg/kg	0.51	<0.47	-	-
Chromium	mg/kg	90	81	-	-
Lead	mg/kg	6.9	4.7	-	-
Nickel	mg/kg	140	140	-	-
Zinc	mg/kg	56	42	-	-
Metals - STLC					
Cadmium	mg/L	<0.050	<0.050	-	-
Chromium	mg/L	0.61	0.31	-	-
Lead	mg/L	<0.13	<0.13	-	-
Nickel	mg/L	2.3	3.6	-	-
Zinc	mg/L	<0.50	<0.50	-	-
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	800	<260	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	4200	160 J	20	<1.0
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	4600	310 J	<49	<50

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*NSW1*	*NSW2*	*NSW3*	*NSW4*
	Sample ID:	*SO-2344-NSW1-100712*	*SO-2344-NSW2-100712*	*SO-2344-NSW3-110712*	*SO-2344-NSW4-110712*
	Sample Date:	*7/10/2012*	*7/10/2012*	*7/11/2012*	*7/11/2012*
Parameters	***Units***				
Volatile Organic Compounds					
Benzene	µg/kg	-	-	-	-
Ethylbenzene	µg/kg	-	-	-	-
Methyl tert butyl ether (MTBE)	µg/kg	-	-	-	-
Tetrachloroethene	µg/kg	-	-	-	-
Toluene	µg/kg	-	-	-	-
Trichloroethene	µg/kg	-	-	-	-
Xylenes (total)	µg/kg	-	-	-	-
Semi-volatile Organic Compounds - SIM					
Acenaphthene	µg/kg	<5.0	<4.9	<5.0	<5.0
Acenaphthylene	µg/kg	<5.0	<4.9	<5.0	<5.0
Anthracene	µg/kg	<5.0	<4.9	<5.0	<5.0
Benzo(a)anthracene	µg/kg	<5.0	<4.9	<5.0	<5.0
Benzo(a)pyrene	µg/kg	<5.0	<4.9	<5.0	<5.0
Benzo(b)fluoranthene	µg/kg	<5.0	<4.9	<5.0	<5.0
Benzo(g,h,i)perylene	µg/kg	<5.0	<4.9	<5.0	<5.0
Benzo(k)fluoranthene	µg/kg	<5.0	<4.9	<5.0	<5.0
Chrysene	µg/kg	<5.0	<4.9	<5.0	<5.0
Dibenz(a,h)anthracene	µg/kg	<5.0	<4.9	<5.0	<5.0
Fluoranthene	µg/kg	<5.0	<4.9	<5.0	<5.0
Fluorene	µg/kg	<5.0	<4.9	<5.0	<5.0
Indeno(1,2,3-cd)pyrene	µg/kg	<5.0	<4.9	<5.0	<5.0
Naphthalene	µg/kg	<5.0	<4.9	<5.0	<5.0
Phenanthrene	µg/kg	<5.0	<4.9	<5.0	<5.0
Pyrene	µg/kg	<5.0	<4.9	<5.0	<5.0

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*NSW1*	*NSW2*	*NSW3*	*NSW4*
	Sample ID:	*SO-2344-NSW1-100712*	*SO-2344-NSW2-100712*	*SO-2344-NSW3-110712*	*SO-2344-NSW4-110712*
	Sample Date:	*7/10/2012*	*7/10/2012*	*7/11/2012*	*7/11/2012*
Parameters	***Units***				
Metals					
Cadmium	mg/kg	-	-	-	-
Chromium	mg/kg	-	-	-	-
Lead	mg/kg	-	-	-	-
Nickel	mg/kg	-	-	-	-
Zinc	mg/kg	-	-	-	-
Metals - STLC					
Cadmium	mg/L	-	-	-	-
Chromium	mg/L	-	-	-	-
Lead	mg/L	-	-	-	-
Nickel	mg/L	-	-	-	-
Zinc	mg/L	-	-	-	-
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	-	-	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	18	<1.0	<1.0	<0.99
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<50	<50	<50	<49

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*NSW5*	*NSW6*	*SSW1*
	Sample ID:	*SO-2344-NSW5-110712*	*SO-2344-NSW6-110712*	*SO-2344-SSW1-100712*
	Sample Date:	*7/11/2012*	*7/11/2012*	*7/10/2012*
Parameters	***Units***			
Volatile Organic Compounds				
Benzene	µg/kg	-	-	-
Ethylbenzene	µg/kg	-	-	-
Methyl tert butyl ether (MTBE)	µg/kg	-	-	-
Tetrachloroethene	µg/kg	-	-	-
Toluene	µg/kg	-	-	-
Trichloroethene	µg/kg	-	-	-
Xylenes (total)	µg/kg	-	-	-
Semi-volatile Organic Compounds - SIM				
Acenaphthene	µg/kg	<49	<5.0	<25
Acenaphthylene	µg/kg	<49	<5.0	<25
Anthracene	µg/kg	<49	<5.0	<25
Benzo(a)anthracene	µg/kg	<49	<5.0	<25
Benzo(a)pyrene	µg/kg	67	<5.0	<25
Benzo(b)fluoranthene	µg/kg	110	<5.0	<25
Benzo(g,h,i)perylene	µg/kg	54	<5.0	<25
Benzo(k)fluoranthene	µg/kg	<49	<5.0	<25
Chrysene	µg/kg	53	<5.0	<25
Dibenz(a,h)anthracene	µg/kg	<49	<5.0	<25
Fluoranthene	µg/kg	74	5.6	<25
Fluorene	µg/kg	<49	<5.0	<25
Indeno(1,2,3-cd)pyrene	µg/kg	<49	<5.0	<25
Naphthalene	µg/kg	<49	<5.0	<25
Phenanthrene	µg/kg	60	7.7	<25
Pyrene	µg/kg	120	25	<25

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*NSW5*	*NSW6*	*SSW1*
	Sample ID:	*SO-2344-NSW5-110712*	*SO-2344-NSW6-110712*	*SO-2344-SSW1-100712*
	Sample Date:	*7/11/2012*	*7/11/2012*	*7/10/2012*
Parameters	***Units***			
Metals				
Cadmium	mg/kg	-	-	-
Chromium	mg/kg	-	-	-
Lead	mg/kg	-	-	-
Nickel	mg/kg	-	-	-
Zinc	mg/kg	-	-	-
Metals - STLC				
Cadmium	mg/L	-	-	-
Chromium	mg/L	-	-	-
Lead	mg/L	-	-	-
Nickel	mg/L	-	-	-
Zinc	mg/L	-	-	-
Petroleum Products				
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	-	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	28	<0.98	320
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	55	<49	500

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*SSW2*	*SSW3*	*SSW4*
	Sample ID:	*SO-2344-SSW2-100712*	*SO-2344-SSW3-110712*	*SO-2344-SSW4-110712*
	Sample Date:	*7/10/2012*	*7/11/2012*	*7/11/2012*
Parameters	***Units***			
Volatile Organic Compounds				
Benzene	µg/kg	-	-	-
Ethylbenzene	µg/kg	-	-	-
Methyl tert butyl ether (MTBE)	µg/kg	-	-	-
Tetrachloroethene	µg/kg	-	-	-
Toluene	µg/kg	-	-	-
Trichloroethene	µg/kg	-	-	-
Xylenes (total)	µg/kg	-	-	-
Semi-volatile Organic Compounds - SIM				
Acenaphthene	µg/kg	<50	<25	<5.0
Acenaphthylene	µg/kg	<50	<25	<5.0
Anthracene	µg/kg	<50	<25	<5.0
Benzo(a)anthracene	µg/kg	56	<25	<5.0
Benzo(a)pyrene	µg/kg	<50	<25	<5.0
Benzo(b)fluoranthene	µg/kg	<50	<25	<5.0
Benzo(g,h,i)perylene	µg/kg	<50	<25	<5.0
Benzo(k)fluoranthene	µg/kg	<50	<25	<5.0
Chrysene	µg/kg	72	<25	<5.0
Dibenz(a,h)anthracene	µg/kg	<50	<25	<5.0
Fluoranthene	µg/kg	<50	<25	<5.0
Fluorene	µg/kg	<50	<25	<5.0
Indeno(1,2,3-cd)pyrene	µg/kg	<50	<25	<5.0
Naphthalene	µg/kg	<50	<25	<5.0
Phenanthrene	µg/kg	<50	<25	<5.0
Pyrene	µg/kg	62	<25	<5.0

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

		Sample Location:	*SSW2*	*SSW3*	*SSW4*
		Sample ID:	*SO-2344-SSW2-100712*	*SO-2344-SSW3-110712*	*SO-2344-SSW4-110712*
		Sample Date:	*7/10/2012*	*7/11/2012*	*7/11/2012*
Parameters	*Units*				
Metals					
Cadmium	mg/kg		-	-	-
Chromium	mg/kg		-	-	-
Lead	mg/kg		-	-	-
Nickel	mg/kg		-	-	-
Zinc	mg/kg		-	-	-
Metals - STLC					
Cadmium	mg/L		-	-	-
Chromium	mg/L		-	-	-
Lead	mg/L		-	-	-
Nickel	mg/L		-	-	-
Zinc	mg/L		-	-	-
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg		-	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg		1800	39	<0.99
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg		2000	93	<50

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*SSW6*	*WSW1*	*WSW2*
	Sample ID:	*SO-2344-SSW6-110712*	*SO-2344-WSW1-100712*	*SO-2344-WSW2-110712*
	Sample Date:	*7/11/2012*	*7/10/2012*	*7/11/2012*
Parameters	***Units***			
Volatile Organic Compounds				
Benzene	µg/kg	-	-	-
Ethylbenzene	µg/kg	-	-	-
Methyl tert butyl ether (MTBE)	µg/kg	-	-	-
Tetrachloroethene	µg/kg	-	-	-
Toluene	µg/kg	-	-	-
Trichloroethene	µg/kg	-	-	-
Xylenes (total)	µg/kg	-	-	-
Semi-volatile Organic Compounds - SIM				
Acenaphthene	µg/kg	<5.0	<5.0	<9.9
Acenaphthylene	µg/kg	<5.0	<5.0	<9.9
Anthracene	µg/kg	<5.0	<5.0	<9.9
Benzo(a)anthracene	µg/kg	<5.0	<5.0	<9.9
Benzo(a)pyrene	µg/kg	<5.0	<5.0	<9.9
Benzo(b)fluoranthene	µg/kg	<5.0	<5.0	<9.9
Benzo(g,h,i)perylene	µg/kg	<5.0	<5.0	<9.9
Benzo(k)fluoranthene	µg/kg	<5.0	<5.0	<9.9
Chrysene	µg/kg	<5.0	<5.0	<9.9
Dibenz(a,h)anthracene	µg/kg	<5.0	<5.0	<9.9
Fluoranthene	µg/kg	<5.0	<5.0	<9.9
Fluorene	µg/kg	<5.0	<5.0	<9.9
Indeno(1,2,3-cd)pyrene	µg/kg	<5.0	<5.0	<9.9
Naphthalene	µg/kg	<5.0	<5.0	<9.9
Phenanthrene	µg/kg	<5.0	<5.0	20
Pyrene	µg/kg	<5.0	<5.0	<9.9

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

		Sample Location:	*SSW6*	*WSW1*	*WSW2*
		Sample ID:	*SO-2344-SSW6-110712*	*SO-2344-WSW1-100712*	*SO-2344-WSW2-110712*
		Sample Date:	*7/11/2012*	*7/10/2012*	*7/11/2012*
Parameters	*Units*				
Metals					
Cadmium	mg/kg		-	-	-
Chromium	mg/kg		-	-	-
Lead	mg/kg		-	-	-
Nickel	mg/kg		-	-	-
Zinc	mg/kg		-	-	-
Metals - STLC					
Cadmium	mg/L		-	-	-
Chromium	mg/L		-	-	-
Lead	mg/L		-	-	-
Nickel	mg/L		-	-	-
Zinc	mg/L		-	-	-
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg		-	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg		2.7	1.0	37 J
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg		<50	<50	<50

Notes:

- Not analyzed.
J - Estimated.
SIM - Selective Ion Monitoring
GRO - Gasoline Range Organics
DRO - Diesel Range Organics

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Composite*
	Sample ID:	*W-2344-COMP-120712*
	Sample Date:	*7/12/2012*
Parameters	***Units***	
Volatile Organic Compounds		
1,1,1,2-Tetrachloroethane	µg/L	<0.50
1,1,1-Trichloroethane	µg/L	<0.50
1,1,2,2-Tetrachloroethane	µg/L	<0.50
1,1,2-Trichloroethane	µg/L	<0.50
1,1-Dichloroethane	µg/L	<0.50
1,1-Dichloroethene	µg/L	<0.50
1,1-Dichloropropene	µg/L	<0.50
1,2,3-Trichlorobenzene	µg/L	<1.0
1,2,3-Trichloropropane	µg/L	<0.50
1,2,4-Trichlorobenzene	µg/L	<1.0
1,2,4-Trimethylbenzene	µg/L	<0.50
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1.0
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<0.50
1,2-Dichlorobenzene	µg/L	<0.50
1,2-Dichloroethane	µg/L	<0.50
1,2-Dichloropropane	µg/L	<0.50
1,3,5-Trimethylbenzene	µg/L	<0.50
1,3-Dichlorobenzene	µg/L	<0.50
1,3-Dichloropropane	µg/L	<1.0
1,4-Dichlorobenzene	µg/L	<0.50
2,2-Dichloropropane	µg/L	<0.50
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<50
2-Chlorotoluene	µg/L	<0.50
2-Hexanone	µg/L	<50
2-Phenylbutane (sec-Butylbenzene)	µg/L	<1.0
4-Chlorotoluene	µg/L	<0.50
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<50
Acetone	µg/L	<50
Benzene	µg/L	<0.50
Bromobenzene	µg/L	<1.0
Bromodichloromethane	µg/L	<0.50
Bromoform	µg/L	<1.0
Bromomethane (Methyl bromide)	µg/L	<1.0
Carbon disulfide	µg/L	<5.0
Carbon tetrachloride	µg/L	<0.50
Chlorobenzene	µg/L	<0.50
Chlorobromomethane	µg/L	<1.0
Chloroethane	µg/L	<1.0
Chloroform (Trichloromethane)	µg/L	<1.0
Chloromethane (Methyl chloride)	µg/L	<1.0
cis-1,2-Dichloroethene	µg/L	<0.50

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Composite*
	Sample ID:	*W-2344-COMP-120712*
	Sample Date:	*7/12/2012*
Parameters	***Units***	
Volatile Organic Compounds (Cont'd.)		
cis-1,3-Dichloropropene	µg/L	<0.50
Cymene (p-Isopropyltoluene)	µg/L	<1.0
Dibromochloromethane	µg/L	<0.50
Dibromomethane	µg/L	<0.50
Dichlorodifluoromethane (CFC-12)	µg/L	<0.50
Diisopropyl ether	µg/L	<0.50
Ethylbenzene	µg/L	<0.50
Hexachlorobutadiene	µg/L	<1.0
Isopropyl benzene	µg/L	<0.50
Methyl tert butyl ether (MTBE)	µg/L	<0.50
Methylene chloride	µg/L	<5.0
Naphthalene	µg/L	<1.0
N-Butylbenzene	µg/L	<1.0
N-Propylbenzene	µg/L	<1.0
Styrene	µg/L	<0.50
tert-Amyl methyl ether	µg/L	<0.50
tert-Butyl alcohol	µg/L	<4.0
tert-Butyl ethyl ether	µg/L	<0.50
tert-Butylbenzene	µg/L	<1.0
Tetrachloroethene	µg/L	<0.50
Toluene	µg/L	<0.50
trans-1,2-Dichloroethene	µg/L	<0.50
trans-1,3-Dichloropropene	µg/L	<0.50
Trichloroethene	µg/L	<0.50
Trichlorofluoromethane (CFC-11)	µg/L	<1.0
Trifluorotrichloroethane (Freon 113)	µg/L	<0.50
Vinyl acetate	µg/L	<10
Vinyl chloride	µg/L	<0.50
Xylenes (total)	µg/L	<1.0
Semi-volatile Organic Compounds		
1,2,4-Trichlorobenzene	µg/L	<2.1
1,2-Dichlorobenzene	µg/L	<2.1
1,3-Dichlorobenzene	µg/L	<2.1
1,4-Dichlorobenzene	µg/L	<2.1
2,4,5-Trichlorophenol	µg/L	<4.1
2,4,6-Trichlorophenol	µg/L	<2.1
2,4-Dichlorophenol	µg/L	<5.2
2,4-Dimethylphenol	µg/L	<3.1
2,4-Dinitrophenol	µg/L	<10
2,4-Dinitrotoluene	µg/L	<4.1

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Composite*
	Sample ID:	*W-2344-COMP-120712*
	Sample Date:	*7/12/2012*
Parameters	***Units***	
Semi-volatile Organic Compounds (Cont'd.)		
2,6-Dinitrotoluene	µg/L	<5.2
2-Chloronaphthalene	µg/L	<4.1
2-Chlorophenol	µg/L	<4.1
2-Methylnaphthalene	µg/L	<2.1
2-Methylphenol	µg/L	<4.1
2-Nitroaniline	µg/L	<10
2-Nitrophenol	µg/L	<2.1
3,3'-Dichlorobenzidine	µg/L	<5.2
3-Nitroaniline	µg/L	<5.2
4,6-Dinitro-2-methylphenol	µg/L	<10
4-Bromophenyl phenyl ether	µg/L	<5.2
4-Chloro-3-methylphenol	µg/L	<5.2
4-Chloroaniline	µg/L	<2.1
4-Chlorophenyl phenyl ether	µg/L	<5.2
4-Methylphenol	µg/L	<8.2
4-Nitroaniline	µg/L	<10
4-Nitrophenol	µg/L	<10
Acenaphthene	µg/L	<2.1
Acenaphthylene	µg/L	<4.1
Anthracene	µg/L	<2.1
Azobenzene	µg/L	<2.1
Benzo(a)anthracene	µg/L	<5.2
Benzo(a)pyrene	µg/L	<2.1
Benzo(b)fluoranthene	µg/L	<2.1
Benzo(g,h,i)perylene	µg/L	<2.1
Benzo(k)fluoranthene	µg/L	<2.1
Benzoic acid	µg/L	<10
Benzyl alcohol	µg/L	<5.2
bis(2-Chloroethoxy)methane	µg/L	<5.2
bis(2-Chloroethyl)ether	µg/L	<2.1
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	<10
Butyl benzylphthalate (BBP)	µg/L	<5.2
Chrysene	µg/L	<2.1
Dibenz(a,h)anthracene	µg/L	<2.1
Dibenzofuran	µg/L	<4.1
Diethyl phthalate	µg/L	<5.2
Dimethyl phthalate	µg/L	<5.2
Di-n-butylphthalate (DBP)	µg/L	<5.2
Di-n-octyl phthalate (DnOP)	µg/L	<5.2
Fluoranthene	µg/L	<2.1
Fluorene	µg/L	<4.1

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Composite*
	Sample ID:	*W-2344-COMP-120712*
	Sample Date:	*7/12/2012*
Parameters	*Units*	
Semi-volatile Organic Compounds (Cont'd.)		
Hexachlorobenzene	µg/L	<2.1
Hexachlorobutadiene	µg/L	<2.1
Hexachlorocyclopentadiene	µg/L	<5.2
Hexachloroethane	µg/L	<2.1
Indeno(1,2,3-cd)pyrene	µg/L	<2.1
Isophorone	µg/L	<4.1
Naphthalene	µg/L	<2.1
Nitrobenzene	µg/L	<2.1
N-Nitrosodi-n-propylamine	µg/L	<2.1
N-Nitrosodiphenylamine	µg/L	<2.1
Pentachlorophenol	µg/L	<10
Phenanthrene	µg/L	<2.1
Phenol	µg/L	<2.1
Pyrene	µg/L	<2.1
Semi-volatile Organic Compounds - SIM		
Acenaphthene	µg/L	<0.10
Acenaphthylene	µg/L	<0.10
Anthracene	µg/L	<0.10
Benzo(a)anthracene	µg/L	<0.10
Benzo(a)pyrene	µg/L	<0.10
Benzo(b)fluoranthene	µg/L	<0.10
Benzo(g,h,i)perylene	µg/L	<0.10
Benzo(k)fluoranthene	µg/L	<0.10
Chrysene	µg/L	<0.10
Dibenz(a,h)anthracene	µg/L	<0.10
Fluoranthene	µg/L	<0.10
Fluorene	µg/L	<0.10
Indeno(1,2,3-cd)pyrene	µg/L	<0.10
Naphthalene	µg/L	<0.10
Phenanthrene	µg/L	<0.10
Pyrene	µg/L	<0.10
Metals		
Cadmium	mg/L	<0.0025
Cadmium (dissolved)	mg/L	<0.0020
Chromium	mg/L	<0.010
Chromium (dissolved)	mg/L	<0.010
Lead	mg/L	<0.0050
Lead (dissolved)	mg/L	0.0060

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

	Sample Location:	*Composite*
	Sample ID:	*W-2344-COMP-120712*
	Sample Date:	*7/12/2012*
Parameters	***Units***	
Metals (Cont'd.)		
Nickel	mg/L	<0.010
Nickel (dissolved)	mg/L	<0.010
Zinc	mg/L	<0.020
Zinc (dissolved)	mg/L	0.023
Petroleum Products		
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/L	<50
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	1900
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L	6100

Notes:
SIM - Selective Ion Monitoring
GRO - Gasoline Range Organics
DRO - Diesel Range Organics

TABLE 2

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
JULY 2012

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Qualified Sample Results*		*Units*
SW8015D	p-Terphenyl	24	38-148	SO-2344-COMP3-110712	Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	160	J	mg/kg
SW8015D	p-Terphenyl	24	38-148	SO-2344-COMP3-110712	Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	310	J	mg/kg
SW8015D	Capric Acid	2	0-1	SO-2344-WSW2-110712	Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	37	J	mg/kg

Notes:

DRO Diesel Range Organics

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MEMORANDUM

TO: Lia Holden

REF. NO.: 058324-2344

FROM: Jeffrey Cloud/bjw/268-NF

DATE: June 6, 2012

C.C.: Jesse Orth, Julie Lidstone

E-Mail and Hard Copy if Requested

RE: Data Quality Assessment and Validation of Reports J41839 & J41840
Site Assessment
2 Fourth Street and 34 Sixth Street
Santa Rosa, California
April 2012

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the April 2012, collection of soil and groundwater samples in Santa Rosa, California. Samples were submitted to Test America Laboratories (TA), in Pleasanton, California, and analyzed for the following:

Parameter	*Methodology*
Volatile Organic Compounds (VOCs)	SW846 8260B
Semi-Volatile Organic Compounds (SVOCs)	SW846 8270C
Gasoline Range Organics (GRO)	CA LUFT GC/MS
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	SW846 8015B
Metals	SW846 6010B

The analytical results are summarized in Tables 1A and 1B. The QC criteria used to assess the data were established by the methods and with the following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", USEPA 540/R-99/008, October 1999

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", USEPA 540/R-94/013, February 1994

These guidelines are collectively referred to as "Guidelines" in this memorandum.

SAMPLE QUANTITATION

The laboratory did not report any detected concentrations below the laboratory's practical quantitation limit (PQL)/report limit (RL).

SAMPLE PRESERVATION AND HOLDING TIMES

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times.

All samples were properly preserved and cooled after collection.

METHOD BLANK SAMPLES

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency and all results were non-detect for the compounds of interest.

SURROGATE COMPOUNDS – ORGANIC ANALYSES

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

All surrogate recoveries met the method criteria, demonstrating acceptable analytical efficiency for these analyses with a few exceptions. Two sample results were qualified as estimated (See Table 2).

LABORATORY CONTROL SAMPLE (LCS)

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

Laboratory control samples (LCS) were analyzed in duplicate for all parameters. All recoveries were within required control limits showing adequate analytical accuracy and precision.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and relative percent differences (RPD) of the concentrations were determined. The organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods and the "Guidelines", which require recoveries between 75 to 125 percent with RPDs less than 20 percent for water samples and 30 percent for soil samples.

Matrix spikes (MS) were prepared and analyzed in duplicate for SVOCs, DRO/ORO and metals. All recoveries were within required control limits showing adequate analytical accuracy and precision with a few exceptions. One sample result was qualified as estimated (See Table 3). Precision, for VOCs and GRO, was determined to be acceptable based on LCS/LCSD recoveries.

FIELD QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

No field QA/QC samples were submitted to the laboratory for analysis.

OVERALL ASSESSMENT

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	B1	B1	B1	B2	B2	B2
	Sample ID:	SO-2344-B1-5-042312	SO-2344-B1-10-042312	SO-2344-B1-16-042312	SO-2344-B2-5-042312	SO-2344-B2-11-042312	SO-2344-B2-14-042312
	Sample Date:	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Sample Depth:	5 ft BGS	10 ft BGS	16 ft BGS	5 ft BGS	11 ft BGS	14 ft BGS
Parameters	*Units*						
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	-	-	-	-	-	-
1,1-Dichloropropene	mg/kg	-	-	-	-	-	-
1,2,3-Trichlorobenzene	mg/kg	-	-	-	-	-	-
1,2,3-Trichloropropane	mg/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-
1,2,4-Trimethylbenzene	mg/kg	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/kg	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-
1,3-Dichloropropane	mg/kg	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-
2,2-Dichloropropane	mg/kg	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	-	-
2-Chlorotoluene	mg/kg	-	-	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	mg/kg	-	-	-	-	-	-
4-Chlorotoluene	mg/kg	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	-	-
Acetone	mg/kg	-	-	-	-	-	-
Benzene	mg/kg	-	-	-	-	-	-
Bromobenzene	mg/kg	-	-	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-	-	-
Bromoform	mg/kg	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	B1	B1	B1	B2	B2	B2
	Sample ID:	SO-2344-B1-5-042312	SO-2344-B1-10-042312	SO-2344-B1-16-042312	SO-2344-B2-5-042312	SO-2344-B2-11-042312	SO-2344-B2-14-042312
	Sample Date:	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Sample Depth:	5 ft BGS	10 ft BGS	16 ft BGS	5 ft BGS	11 ft BGS	14 ft BGS
Parameters	*Units*						
Volatile Organic Compounds (Cont'd.)							
Carbon disulfide	mg/kg	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-	-	-
Chlorobromomethane	mg/kg	-	-	-	-	-	-
Chloroethane	mg/kg	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	mg/kg	-	-	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-	-	-
Dibromomethane	mg/kg	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-
N-Butylbenzene	mg/kg	-	-	-	-	-	-
N-Propylbenzene	mg/kg	-	-	-	-	-	-
Styrene	mg/kg	-	-	-	-	-	-
tert-Butylbenzene	mg/kg	-	-	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-	-	-
Toluene	mg/kg	-	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	mg/kg	-	-	-	-	-	-
Vinyl acetate	mg/kg	-	-	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	-	-	-
Xylenes (total)	mg/kg	-	-	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	B1	B1	B1	B2	B2	B2
	Sample ID:	SO-2344-B1-5-042312	SO-2344-B1-10-042312	SO-2344-B1-16-042312	SO-2344-B2-5-042312	SO-2344-B2-11-042312	SO-2344-B2-14-042312
	Sample Date:	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Sample Depth:	5 ft BGS	10 ft BGS	16 ft BGS	5 ft BGS	11 ft BGS	14 ft BGS
Parameters	*Units*						
Semi-volatile Organic Compounds							
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-	-
Azobenzene	mg/kg	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	B1	B1	B1	B2	B2	B2
	Sample ID:	SO-2344-B1-5-042312	SO-2344-B1-10-042312	SO-2344-B1-16-042312	SO-2344-B2-5-042312	SO-2344-B2-11-042312	SO-2344-B2-14-042312
	Sample Date:	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Sample Depth:	5 ft BGS	10 ft BGS	16 ft BGS	5 ft BGS	11 ft BGS	14 ft BGS
Parameters	*Units*						
Semi-volatile Organic Compounds (Cont'd.)							
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-
Benzoic acid	mg/kg	-	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-
Nitrobenzene	mg/kg	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	B1	B1	B1	B2	B2	B2
	Sample ID:	SO-2344-B1-5-042312	SO-2344-B1-10-042312	SO-2344-B1-16-042312	SO-2344-B2-5-042312	SO-2344-B2-11-042312	SO-2344-B2-14-042312
	Sample Date:	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012	4/23/2012
	Sample Depth:	5 ft BGS	10 ft BGS	16 ft BGS	5 ft BGS	11 ft BGS	14 ft BGS
Parameters	***Units***						
Semi-volatile Organic Compounds-SIM							
Acenaphthene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Acenaphthylene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Anthracene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Benzo(a)anthracene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Benzo(a)pyrene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Benzo(b)fluoranthene	mg/kg	0.035	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Benzo(g,h,i)perylene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Benzo(k)fluoranthene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Chrysene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Dibenz(a,h)anthracene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Fluoranthene	mg/kg	0.027	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Fluorene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Indeno(1,2,3-cd)pyrene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Naphthalene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Phenanthrene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Pyrene	mg/kg	<0.025	<0.025	<0.0050	<0.0050	<0.025	<0.0050
Metals							
Cadmium	mg/kg	-	-	-	-	-	-
Chromium	mg/kg	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-
Petroleum Products							
Total Petroleum Hydrocarbons (C5-C12) GRO	mg/kg	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	15	25	49	<1.0	240	<0.98
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	51	87	<50	<50	610	<49

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B3*	*B3*	*B3*	*B4*	*B4*	*B4*
	Sample ID:	*SO-2344-B3-5-042312*	*SO-2344-B3-12-042312*	*SO-2344-B3-15.5-042312*	*SO-2344-B4-5-042312*	*SO-2344-B4-12-042312*	*SO-2344-B4-16-042312*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*
	Sample Depth:	*5 ft BGS*	*12 ft BGS*	*15.5 ft BGS*	*5 ft BGS*	*12 ft BGS*	*16 ft BGS*
Parameters	*Units*						
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-
1,1,1-Trichloroethane	mg/kg	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	-	-	-
1,1,2-Trichloroethane	mg/kg	-	-	-	-	-	-
1,1-Dichloroethane	mg/kg	-	-	-	-	-	-
1,1-Dichloroethene	mg/kg	-	-	-	-	-	-
1,1-Dichloropropene	mg/kg	-	-	-	-	-	-
1,2,3-Trichlorobenzene	mg/kg	-	-	-	-	-	-
1,2,3-Trichloropropane	mg/kg	-	-	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-
1,2,4-Trimethylbenzene	mg/kg	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-
1,2-Dichloroethane	mg/kg	-	-	-	-	-	-
1,2-Dichloropropane	mg/kg	-	-	-	-	-	-
1,3,5-Trimethylbenzene	mg/kg	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-
1,3-Dichloropropane	mg/kg	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-
2,2-Dichloropropane	mg/kg	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	-	-	-
2-Chlorotoluene	mg/kg	-	-	-	-	-	-
2-Hexanone	mg/kg	-	-	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	mg/kg	-	-	-	-	-	-
4-Chlorotoluene	mg/kg	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	-	-	-
Acetone	mg/kg	-	-	-	-	-	-
Benzene	mg/kg	-	-	-	-	-	-
Bromobenzene	mg/kg	-	-	-	-	-	-
Bromodichloromethane	mg/kg	-	-	-	-	-	-
Bromoform	mg/kg	-	-	-	-	-	-
Bromomethane (Methyl bromide)	mg/kg	-	-	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B3*	*B3*	*B3*	*B4*	*B4*	*B4*
	Sample ID:	*SO-2344-B3-5-042312*	*SO-2344-B3-12-042312*	*SO-2344-B3-15.5-042312*	*SO-2344-B4-5-042312*	*SO-2344-B4-12-042312*	*SO-2344-B4-16-042312*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*
	Sample Depth:	*5 ft BGS*	*12 ft BGS*	*15.5 ft BGS*	*5 ft BGS*	*12 ft BGS*	*16 ft BGS*
Parameters	*Units*						
Volatile Organic Compounds (Cont'd.)							
Carbon disulfide	mg/kg	-	-	-	-	-	-
Carbon tetrachloride	mg/kg	-	-	-	-	-	-
Chlorobenzene	mg/kg	-	-	-	-	-	-
Chlorobromomethane	mg/kg	-	-	-	-	-	-
Chloroethane	mg/kg	-	-	-	-	-	-
Chloroform (Trichloromethane)	mg/kg	-	-	-	-	-	-
Chloromethane (Methyl chloride)	mg/kg	-	-	-	-	-	-
cis-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-
cis-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	mg/kg	-	-	-	-	-	-
Dibromochloromethane	mg/kg	-	-	-	-	-	-
Dibromomethane	mg/kg	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	-	-	-
Ethylbenzene	mg/kg	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-
Isopropyl benzene	mg/kg	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	-	-	-
Methylene chloride	mg/kg	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-
N-Butylbenzene	mg/kg	-	-	-	-	-	-
N-Propylbenzene	mg/kg	-	-	-	-	-	-
Styrene	mg/kg	-	-	-	-	-	-
tert-Butylbenzene	mg/kg	-	-	-	-	-	-
Tetrachloroethene	mg/kg	-	-	-	-	-	-
Toluene	mg/kg	-	-	-	-	-	-
trans-1,2-Dichloroethene	mg/kg	-	-	-	-	-	-
trans-1,3-Dichloropropene	mg/kg	-	-	-	-	-	-
Trichloroethene	mg/kg	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	mg/kg	-	-	-	-	-	-
Vinyl acetate	mg/kg	-	-	-	-	-	-
Vinyl chloride	mg/kg	-	-	-	-	-	-
Xylenes (total)	mg/kg	-	-	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B3*	*B3*	*B3*	*B4*	*B4*	*B4*
	Sample ID:	*SO-2344-B3-5-042312*	*SO-2344-B3-12-042312*	*SO-2344-B3-15.5-042312*	*SO-2344-B4-5-042312*	*SO-2344-B4-12-042312*	*SO-2344-B4-16-042312*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*
	Sample Depth:	*5 ft BGS*	*12 ft BGS*	*15.5 ft BGS*	*5 ft BGS*	*12 ft BGS*	*16 ft BGS*
Parameters	*Units*						
Semi-volatile Organic Compounds							
1,2,4-Trichlorobenzene	mg/kg	-	-	-	-	-	-
1,2-Dichlorobenzene	mg/kg	-	-	-	-	-	-
1,3-Dichlorobenzene	mg/kg	-	-	-	-	-	-
1,4-Dichlorobenzene	mg/kg	-	-	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	-	-	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	-	-	-	-	-	-
2,4-Dichlorophenol	mg/kg	-	-	-	-	-	-
2,4-Dimethylphenol	mg/kg	-	-	-	-	-	-
2,4-Dinitrophenol	mg/kg	-	-	-	-	-	-
2,4-Dinitrotoluene	mg/kg	-	-	-	-	-	-
2,6-Dinitrotoluene	mg/kg	-	-	-	-	-	-
2-Chloronaphthalene	mg/kg	-	-	-	-	-	-
2-Chlorophenol	mg/kg	-	-	-	-	-	-
2-Methylnaphthalene	mg/kg	-	-	-	-	-	-
2-Methylphenol	mg/kg	-	-	-	-	-	-
2-Nitroaniline	mg/kg	-	-	-	-	-	-
2-Nitrophenol	mg/kg	-	-	-	-	-	-
3&4-Methylphenol	mg/kg	-	-	-	-	-	-
3,3'-Dichlorobenzidine	mg/kg	-	-	-	-	-	-
3-Nitroaniline	mg/kg	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	-	-	-
4-Bromophenyl phenyl ether	mg/kg	-	-	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	-	-	-	-	-	-
4-Chloroaniline	mg/kg	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	-	-	-
4-Nitroaniline	mg/kg	-	-	-	-	-	-
4-Nitrophenol	mg/kg	-	-	-	-	-	-
Acenaphthene	mg/kg	-	-	-	-	-	-
Acenaphthylene	mg/kg	-	-	-	-	-	-
Anthracene	mg/kg	-	-	-	-	-	-
Azobenzene	mg/kg	-	-	-	-	-	-
Benzo(a)anthracene	mg/kg	-	-	-	-	-	-
Benzo(a)pyrene	mg/kg	-	-	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B3*	*B3*	*B3*	*B4*	*B4*	*B4*
	Sample ID:	*SO-2344-B3-5-042312*	*SO-2344-B3-12-042312*	*SO-2344-B3-15.5-042312*	*SO-2344-B4-5-042312*	*SO-2344-B4-12-042312*	*SO-2344-B4-16-042312*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*
	Sample Depth:	*5 ft BGS*	*12 ft BGS*	*15.5 ft BGS*	*5 ft BGS*	*12 ft BGS*	*16 ft BGS*
Parameters	*Units*						
Semi-volatile Organic Compounds (Cont'd.)							
Benzo(b)fluoranthene	mg/kg	-	-	-	-	-	-
Benzo(g,h,i)perylene	mg/kg	-	-	-	-	-	-
Benzo(k)fluoranthene	mg/kg	-	-	-	-	-	-
Benzoic acid	mg/kg	-	-	-	-	-	-
Benzyl alcohol	mg/kg	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	-	-	-
bis(2-Chloroethyl)ether	mg/kg	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	-	-	-
Chrysene	mg/kg	-	-	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	-	-	-	-	-	-
Dibenzofuran	mg/kg	-	-	-	-	-	-
Diethyl phthalate	mg/kg	-	-	-	-	-	-
Dimethyl phthalate	mg/kg	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	-	-	-
Fluoranthene	mg/kg	-	-	-	-	-	-
Fluorene	mg/kg	-	-	-	-	-	-
Hexachlorobenzene	mg/kg	-	-	-	-	-	-
Hexachlorobutadiene	mg/kg	-	-	-	-	-	-
Hexachlorocyclopentadiene	mg/kg	-	-	-	-	-	-
Hexachloroethane	mg/kg	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	-	-	-
Isophorone	mg/kg	-	-	-	-	-	-
Naphthalene	mg/kg	-	-	-	-	-	-
Nitrobenzene	mg/kg	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	-	-	-
N-Nitrosodiphenylamine	mg/kg	-	-	-	-	-	-
Pentachlorophenol	mg/kg	-	-	-	-	-	-
Phenanthrene	mg/kg	-	-	-	-	-	-
Phenol	mg/kg	-	-	-	-	-	-
Pyrene	mg/kg	-	-	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B3*	*B3*	*B3*	*B4*	*B4*	*B4*
	Sample ID:	*SO-2344-B3-5-042312*	*SO-2344-B3-12-042312*	*SO-2344-B3-15.5-042312*	*SO-2344-B4-5-042312*	*SO-2344-B4-12-042312*	*SO-2344-B4-16-042312*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*
	Sample Depth:	*5 ft BGS*	*12 ft BGS*	*15.5 ft BGS*	*5 ft BGS*	*12 ft BGS*	*16 ft BGS*
Parameters	*Units*						
Semi-volatile Organic Compounds-SIM							
Acenaphthene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Acenaphthylene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Anthracene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Benzo(a)anthracene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Benzo(a)pyrene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Benzo(b)fluoranthene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Benzo(g,h,i)perylene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Benzo(k)fluoranthene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Chrysene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Dibenz(a,h)anthracene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Fluoranthene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Fluorene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Indeno(1,2,3-cd)pyrene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Naphthalene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	0.020	<0.0050
Phenanthrene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	<0.0099	<0.0050
Pyrene	mg/kg	<0.0049	<0.0050	<0.0049	<0.025	0.017	<0.0050
Metals							
Cadmium	mg/kg	-	-	-	-	-	-
Chromium	mg/kg	-	-	-	-	-	-
Lead	mg/kg	-	-	-	-	-	-
Nickel	mg/kg	-	-	-	-	-	-
Zinc	mg/kg	-	-	-	-	-	-
Petroleum Products							
Total Petroleum Hydrocarbons (C5-C12) GRO	mg/kg	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	<1.0	<1.0	<1.0	77	810	<0.99
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<50	<50	<50	220	<500	<50

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B5*	*B5*	*B5*	*Composite*
	Sample ID:	*SO-2344-B5-5-042312*	*SO-2344-B5-10-042312*	*SO-2344-B5-16-042312*	*SO-2344-COMPOSITE-042512*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/25/2012*
	Sample Depth:	*5 ft BGS*	*10 ft BGS*	*16 ft BGS*	*-*
Parameters	*Units*				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	mg/kg	-	-	-	<0.0049
1,1,1-Trichloroethane	mg/kg	-	-	-	<0.0049
1,1,2,2-Tetrachloroethane	mg/kg	-	-	-	<0.0049
1,1,2-Trichloroethane	mg/kg	-	-	-	<0.0049
1,1-Dichloroethane	mg/kg	-	-	-	<0.0049
1,1-Dichloroethene	mg/kg	-	-	-	<0.0049
1,1-Dichloropropene	mg/kg	-	-	-	<0.0049
1,2,3-Trichlorobenzene	mg/kg	-	-	-	<0.0049
1,2,3-Trichloropropane	mg/kg	-	-	-	<0.0049
1,2,4-Trichlorobenzene	mg/kg	-	-	-	<0.0049
1,2,4-Trimethylbenzene	mg/kg	-	-	-	<0.0049
1,2-Dibromo-3-chloropropane (DBCP)	mg/kg	-	-	-	<0.0049
1,2-Dibromoethane (Ethylene dibromide)	mg/kg	-	-	-	<0.0049
1,2-Dichlorobenzene	mg/kg	-	-	-	<0.0049
1,2-Dichloroethane	mg/kg	-	-	-	<0.0049
1,2-Dichloropropane	mg/kg	-	-	-	<0.0049
1,3,5-Trimethylbenzene	mg/kg	-	-	-	<0.0049
1,3-Dichlorobenzene	mg/kg	-	-	-	<0.0049
1,3-Dichloropropane	mg/kg	-	-	-	<0.0049
1,4-Dichlorobenzene	mg/kg	-	-	-	<0.0049
2,2-Dichloropropane	mg/kg	-	-	-	<0.0049
2-Butanone (Methyl ethyl ketone) (MEK)	mg/kg	-	-	-	<0.049
2-Chlorotoluene	mg/kg	-	-	-	<0.0049
2-Hexanone	mg/kg	-	-	-	<0.049
2-Phenylbutane (sec-Butylbenzene)	mg/kg	-	-	-	<0.0049
4-Chlorotoluene	mg/kg	-	-	-	<0.0049
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	mg/kg	-	-	-	<0.049
Acetone	mg/kg	-	-	-	<0.049
Benzene	mg/kg	-	-	-	<0.0049
Bromobenzene	mg/kg	-	-	-	<0.0049
Bromodichloromethane	mg/kg	-	-	-	<0.0049
Bromoform	mg/kg	-	-	-	<0.0049
Bromomethane (Methyl bromide)	mg/kg	-	-	-	<0.0099

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B5*	*B5*	*B5*	*Composite*
	Sample ID:	*SO-2344-B5-5-042312*	*SO-2344-B5-10-042312*	*SO-2344-B5-16-042312*	*SO-2344-COMPOSITE-042512*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/25/2012*
	Sample Depth:	*5 ft BGS*	*10 ft BGS*	*16 ft BGS*	*-*
Parameters	***Units***				
Volatile Organic Compounds (Cont'd.)					
Carbon disulfide	mg/kg	-	-	-	<0.0049
Carbon tetrachloride	mg/kg	-	-	-	<0.0049
Chlorobenzene	mg/kg	-	-	-	<0.0049
Chlorobromomethane	mg/kg	-	-	-	<0.020
Chloroethane	mg/kg	-	-	-	<0.0099
Chloroform (Trichloromethane)	mg/kg	-	-	-	<0.0049
Chloromethane (Methyl chloride)	mg/kg	-	-	-	<0.0099
cis-1,2-Dichloroethene	mg/kg	-	-	-	<0.0049
cis-1,3-Dichloropropene	mg/kg	-	-	-	<0.0049
Cymene (p-Isopropyltoluene)	mg/kg	-	-	-	<0.0049
Dibromochloromethane	mg/kg	-	-	-	<0.0049
Dibromomethane	mg/kg	-	-	-	<0.0099
Dichlorodifluoromethane (CFC-12)	mg/kg	-	-	-	<0.0099
Ethylbenzene	mg/kg	-	-	-	<0.0049
Hexachlorobutadiene	mg/kg	-	-	-	<0.0049
Isopropyl benzene	mg/kg	-	-	-	<0.0049
Methyl tert butyl ether (MTBE)	mg/kg	-	-	-	<0.0049
Methylene chloride	mg/kg	-	-	-	<0.0099
Naphthalene	mg/kg	-	-	-	<0.0099
N-Butylbenzene	mg/kg	-	-	-	<0.0049
N-Propylbenzene	mg/kg	-	-	-	<0.0049
Styrene	mg/kg	-	-	-	<0.0049
tert-Butylbenzene	mg/kg	-	-	-	<0.0049
Tetrachloroethene	mg/kg	-	-	-	<0.0049
Toluene	mg/kg	-	-	-	<0.0049
trans-1,2-Dichloroethene	mg/kg	-	-	-	<0.0049
trans-1,3-Dichloropropene	mg/kg	-	-	-	<0.0049
Trichloroethene	mg/kg	-	-	-	<0.0049
Trichlorofluoromethane (CFC-11)	mg/kg	-	-	-	<0.0049
Trifluorotrichloroethane (Freon 113)	mg/kg	-	-	-	<0.0049
Vinyl acetate	mg/kg	-	-	-	<0.049
Vinyl chloride	mg/kg	-	-	-	<0.0049
Xylenes (total)	mg/kg	-	-	-	<0.0099

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B5*	*B5*	*B5*	*Composite*
	Sample ID:	*SO-2344-B5-5-042312*	*SO-2344-B5-10-042312*	*SO-2344-B5-16-042312*	*SO-2344-COMPOSITE-042512*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/25/2012*
	Sample Depth:	*5 ft BGS*	*10 ft BGS*	*16 ft BGS*	*-*
Parameters	*Units*				
Semi-volatile Organic Compounds					
1,2,4-Trichlorobenzene	mg/kg	-	-	-	<0.066
1,2-Dichlorobenzene	mg/kg	-	-	-	<0.066
1,3-Dichlorobenzene	mg/kg	-	-	-	<0.066
1,4-Dichlorobenzene	mg/kg	-	-	-	<0.066
2,4,5-Trichlorophenol	mg/kg	-	-	-	<0.066
2,4,6-Trichlorophenol	mg/kg	-	-	-	<0.17
2,4-Dichlorophenol	mg/kg	-	-	-	<0.33
2,4-Dimethylphenol	mg/kg	-	-	-	<0.066
2,4-Dinitrophenol	mg/kg	-	-	-	<0.33
2,4-Dinitrotoluene	mg/kg	-	-	-	<0.066
2,6-Dinitrotoluene	mg/kg	-	-	-	<0.066
2-Chloronaphthalene	mg/kg	-	-	-	<0.066
2-Chlorophenol	mg/kg	-	-	-	<0.066
2-Methylnaphthalene	mg/kg	-	-	-	<0.066
2-Methylphenol	mg/kg	-	-	-	<0.066
2-Nitroaniline	mg/kg	-	-	-	<0.33
2-Nitrophenol	mg/kg	-	-	-	<0.066
3&4-Methylphenol	mg/kg	-	-	-	<0.066
3,3'-Dichlorobenzidine	mg/kg	-	-	-	<0.17
3-Nitroaniline	mg/kg	-	-	-	<0.17
4,6-Dinitro-2-methylphenol	mg/kg	-	-	-	<0.33
4-Bromophenyl phenyl ether	mg/kg	-	-	-	<0.17
4-Chloro-3-methylphenol	mg/kg	-	-	-	<0.17
4-Chloroaniline	mg/kg	-	-	-	<0.17
4-Chlorophenyl phenyl ether	mg/kg	-	-	-	<0.17
4-Nitroaniline	mg/kg	-	-	-	<0.33
4-Nitrophenol	mg/kg	-	-	-	<0.33
Acenaphthene	mg/kg	-	-	-	<0.066
Acenaphthylene	mg/kg	-	-	-	<0.066
Anthracene	mg/kg	-	-	-	<0.066
Azobenzene	mg/kg	-	-	-	<0.066
Benzo(a)anthracene	mg/kg	-	-	-	<0.33
Benzo(a)pyrene	mg/kg	-	-	-	<0.066

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B5*	*B5*	*B5*	*Composite*
	Sample ID:	*SO-2344-B5-5-042312*	*SO-2344-B5-10-042312*	*SO-2344-B5-16-042312*	*SO-2344-COMPOSITE-042512*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/25/2012*
	Sample Depth:	*5 ft BGS*	*10 ft BGS*	*16 ft BGS*	*-*
Parameters	*Units*				
Semi-volatile Organic Compounds (Cont'd.)					
Benzo(b)fluoranthene	mg/kg	-	-	-	<0.066
Benzo(g,h,i)perylene	mg/kg	-	-	-	<0.066
Benzo(k)fluoranthene	mg/kg	-	-	-	<0.066
Benzoic acid	mg/kg	-	-	-	<0.33
Benzyl alcohol	mg/kg	-	-	-	<0.17
bis(2-Chloroethoxy)methane	mg/kg	-	-	-	<0.17
bis(2-Chloroethyl)ether	mg/kg	-	-	-	<0.066
bis(2-Ethylhexyl)phthalate (DEHP)	mg/kg	-	-	-	<0.33
Butyl benzylphthalate (BBP)	mg/kg	-	-	-	<0.17
Chrysene	mg/kg	-	-	-	<0.066
Dibenz(a,h)anthracene	mg/kg	-	-	-	<0.066
Dibenzofuran	mg/kg	-	-	-	<0.066
Diethyl phthalate	mg/kg	-	-	-	<0.17
Dimethyl phthalate	mg/kg	-	-	-	<0.17
Di-n-butylphthalate (DBP)	mg/kg	-	-	-	<0.17
Di-n-octyl phthalate (DnOP)	mg/kg	-	-	-	<0.17
Fluoranthene	mg/kg	-	-	-	<0.066
Fluorene	mg/kg	-	-	-	<0.066
Hexachlorobenzene	mg/kg	-	-	-	<0.066
Hexachlorobutadiene	mg/kg	-	-	-	<0.066
Hexachlorocyclopentadiene	mg/kg	-	-	-	<0.17
Hexachloroethane	mg/kg	-	-	-	<0.066
Indeno(1,2,3-cd)pyrene	mg/kg	-	-	-	<0.066
Isophorone	mg/kg	-	-	-	<0.066
Naphthalene	mg/kg	-	-	-	<0.066
Nitrobenzene	mg/kg	-	-	-	<0.066
N-Nitrosodi-n-propylamine	mg/kg	-	-	-	<0.066
N-Nitrosodiphenylamine	mg/kg	-	-	-	<0.066
Pentachlorophenol	mg/kg	-	-	-	<0.33
Phenanthrene	mg/kg	-	-	-	<0.066
Phenol	mg/kg	-	-	-	<0.066
Pyrene	mg/kg	-	-	-	<0.066

TABLE 1A

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B5*	*B5*	*B5*	*Composite*
	Sample ID:	*SO-2344-B5-5-042312*	*SO-2344-B5-10-042312*	*SO-2344-B5-16-042312*	*SO-2344-COMPOSITE-042512*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/25/2012*
	Sample Depth:	*5 ft BGS*	*10 ft BGS*	*16 ft BGS*	*-*
Parameters	*Units*				
Semi-volatile Organic Compounds-SIM					
Acenaphthene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Acenaphthylene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Anthracene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Benzo(a)anthracene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Benzo(a)pyrene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Benzo(b)fluoranthene	mg/kg	<0.0050	0.0052	<0.0050	<0.0099
Benzo(g,h,i)perylene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Benzo(k)fluoranthene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Chrysene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Dibenz(a,h)anthracene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Fluoranthene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Fluorene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Indeno(1,2,3-cd)pyrene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Naphthalene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Phenanthrene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Pyrene	mg/kg	<0.0050	<0.0049	<0.0050	<0.0099
Metals					
Cadmium	mg/kg	-	-	-	<0.46
Chromium	mg/kg	-	-	-	82
Lead	mg/kg	-	-	-	38
Nickel	mg/kg	-	-	-	120
Zinc	mg/kg	-	-	-	75
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	mg/kg	-	-	-	<0.25
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	<0.99	<1.0	<1.0	120 J
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<49	<50	<50	<100 UJ

Notes:

- Not analyzed.
J - Estimated.
UJ - Not detected, estimated reporting limit.

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B1*	*B2*	*B3*	*B4*	*B5*	*B6B*	*B7B*
	Sample ID:	*W-2344-B1-042312*	*W-2344-B2-042312*	*W-2344-B3-042312*	*W-2344-B4-042312*	*W-2344-B5-042312*	*W-2344-B6B-042412*	*W-2344-B7B-042412*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/24/2012*	*4/24/2012*
Parameters	*Units*							
Volatile Organic Compounds								
1,1,1,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	-	-	-	-	-	-	-
1,1-Dichloropropene	µg/L	-	-	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/L	-	-	-	-	-	-	-
1,2,3-Trichloropropane	µg/L	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/L	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/L	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	-	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	µg/L	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/L	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-	-
1,3-Dichloropropane	µg/L	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-	-
2,2-Dichloropropane	µg/L	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	-	-	-	-	-	-	-
2-Chlorotoluene	µg/L	-	-	-	-	-	-	-
2-Hexanone	µg/L	-	-	-	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	µg/L	-	-	-	-	-	-	-
4-Chlorotoluene	µg/L	-	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	-	-	-	-	-	-	-
Acetone	µg/L	-	-	-	-	-	-	-
Benzene	µg/L	-	-	-	-	-	-	-
Bromobenzene	µg/L	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-
Bromoform	µg/L	-	-	-	-	-	-	-
Bromomethane (Methyl bromide)	µg/L	-	-	-	-	-	-	-

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B1*	*B2*	*B3*	*B4*	*B5*	*B6B*	*B7B*
	Sample ID:	*W-2344-B1-042312*	*W-2344-B2-042312*	*W-2344-B3-042312*	*W-2344-B4-042312*	*W-2344-B5-042312*	*W-2344-B6B-042412*	*W-2344-B7B-042412*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/24/2012*	*4/24/2012*
Parameters	*Units*							
Volatile Organic Compounds (Cont'd.)								
Carbon disulfide	µg/L	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	-	-	-	-
Chlorobromomethane	µg/L	-	-	-	-	-	-	-
Chloroethane	µg/L	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	-	-	-	-	-	-	-
Chloromethane (Methyl chloride)	µg/L	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	µg/L	-	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	µg/L	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	µg/L	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-
Hexachlorobutadiene	µg/L	-	-	-	-	-	-	-
Isopropyl benzene	µg/L	-	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	µg/L	-	-	-	-	-	-	-
Methylene chloride	µg/L	-	-	-	-	-	-	-
Naphthalene	µg/L	-	-	-	-	-	-	-
N-Butylbenzene	µg/L	-	-	-	-	-	-	-
N-Propylbenzene	µg/L	-	-	-	-	-	-	-
Styrene	µg/L	-	-	-	-	-	-	-
tert-Butylbenzene	µg/L	-	-	-	-	-	-	-
Tetrachloroethene	µg/L	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	µg/L	-	-	-	-	-	-	-
Trichloroethene	µg/L	-	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	µg/L	-	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	µg/L	-	-	-	-	-	-	-
Vinyl acetate	µg/L	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B1*	*B2*	*B3*	*B4*	*B5*	*B6B*	*B7B*
	Sample ID:	*W-2344-B1-042312*	*W-2344-B2-042312*	*W-2344-B3-042312*	*W-2344-B4-042312*	*W-2344-B5-042312*	*W-2344-B6B-042412*	*W-2344-B7B-042412*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/24/2012*	*4/24/2012*
Parameters	*Units*							
Semi-volatile Organic Compounds								
1,2,4-Trichlorobenzene	µg/L	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	µg/L	-	-	-	-	-	-	-
2,4-Dichlorophenol	µg/L	-	-	-	-	-	-	-
2,4-Dimethylphenol	µg/L	-	-	-	-	-	-	-
2,4-Dinitrophenol	µg/L	-	-	-	-	-	-	-
2,4-Dinitrotoluene	µg/L	-	-	-	-	-	-	-
2,6-Dinitrotoluene	µg/L	-	-	-	-	-	-	-
2-Chloronaphthalene	µg/L	-	-	-	-	-	-	-
2-Chlorophenol	µg/L	-	-	-	-	-	-	-
2-Methylnaphthalene	µg/L	-	-	-	-	-	-	-
2-Methylphenol	µg/L	-	-	-	-	-	-	-
2-Nitroaniline	µg/L	-	-	-	-	-	-	-
2-Nitrophenol	µg/L	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	µg/L	-	-	-	-	-	-	-
3-Nitroaniline	µg/L	-	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	µg/L	-	-	-	-	-	-	-
4-Bromophenyl phenyl ether	µg/L	-	-	-	-	-	-	-
4-Chloro-3-methylphenol	µg/L	-	-	-	-	-	-	-
4-Chloroaniline	µg/L	-	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	µg/L	-	-	-	-	-	-	-
4-Methylphenol	µg/L	-	-	-	-	-	-	-
4-Nitroaniline	µg/L	-	-	-	-	-	-	-
4-Nitrophenol	µg/L	-	-	-	-	-	-	-
Acenaphthene	µg/L	-	-	-	-	-	-	-
Acenaphthylene	µg/L	-	-	-	-	-	-	-
Anthracene	µg/L	-	-	-	-	-	-	-
Azobenzene	µg/L	-	-	-	-	-	-	-
Benzo(a)anthracene	µg/L	-	-	-	-	-	-	-
Benzo(a)pyrene	µg/L	-	-	-	-	-	-	-

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B1*	*B2*	*B3*	*B4*	*B5*	*B6B*	*B7B*
	Sample ID:	*W-2344-B1-042312*	*W-2344-B2-042312*	*W-2344-B3-042312*	*W-2344-B4-042312*	*W-2344-B5-042312*	*W-2344-B6B-042412*	*W-2344-B7B-042412*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/24/2012*	*4/24/2012*
Parameters	*Units*							
Semi-volatile Organic Compounds (Cont'd.)								
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L	-	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L	-	-	-	-	-	-	-
Benzoic acid	µg/L	-	-	-	-	-	-	-
Benzyl alcohol	µg/L	-	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	µg/L	-	-	-	-	-	-	-
bis(2-Chloroethyl)ether	µg/L	-	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	-	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	-	-	-	-	-	-	-
Chrysene	µg/L	-	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L	-	-	-	-	-	-	-
Dibenzofuran	µg/L	-	-	-	-	-	-	-
Diethyl phthalate	µg/L	-	-	-	-	-	-	-
Dimethyl phthalate	µg/L	-	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	µg/L	-	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	µg/L	-	-	-	-	-	-	-
Fluoranthene	µg/L	-	-	-	-	-	-	-
Fluorene	µg/L	-	-	-	-	-	-	-
Hexachlorobenzene	µg/L	-	-	-	-	-	-	-
Hexachlorobutadiene	µg/L	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	µg/L	-	-	-	-	-	-	-
Hexachloroethane	µg/L	-	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	-	-	-	-	-	-	-
Isophorone	µg/L	-	-	-	-	-	-	-
Naphthalene	µg/L	-	-	-	-	-	-	-
Nitrobenzene	µg/L	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	µg/L	-	-	-	-	-	-	-
N-Nitrosodiphenylamine	µg/L	-	-	-	-	-	-	-
Pentachlorophenol	µg/L	-	-	-	-	-	-	-
Phenanthrene	µg/L	-	-	-	-	-	-	-
Phenol	µg/L	-	-	-	-	-	-	-
Pyrene	µg/L	-	-	-	-	-	-	-

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B1*	*B2*	*B3*	*B4*	*B5*	*B6B*	*B7B*
	Sample ID:	*W-2344-B1-042312*	*W-2344-B2-042312*	*W-2344-B3-042312*	*W-2344-B4-042312*	*W-2344-B5-042312*	*W-2344-B6B-042412*	*W-2344-B7B-042412*
	Sample Date:	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/23/2012*	*4/24/2012*	*4/24/2012*
Parameters	***Units***							
Semi-volatile Organic Compounds-SIM								
Acenaphthene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Acenaphthylene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Anthracene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Benzo(a)anthracene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Benzo(a)pyrene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Benzo(b)fluoranthene	µg/L	1.2	1.0	<0.11	<0.12	<0.12	<0.13	<0.13
Benzo(g,h,i)perylene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Benzo(k)fluoranthene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Chrysene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Dibenz(a,h)anthracene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Fluoranthene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Fluorene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Indeno(1,2,3-cd)pyrene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Naphthalene	µg/L	1.7	1.4	<0.11	0.36	<0.12	<0.13	<0.13
Phenanthrene	µg/L	<0.60	<0.62	<0.11	<0.12	<0.12	<0.13	<0.13
Pyrene	µg/L	2.7	2.5	<0.11	0.38	<0.12	<0.13	<0.13
Metals								
Cadmium	µg/L	-	-	-	-	-	-	-
Chromium	µg/L	-	-	-	-	-	-	-
Lead	µg/L	-	-	-	-	-	-	-
Nickel	µg/L	-	-	-	-	-	-	-
Zinc	µg/L	-	-	-	-	-	-	-
Petroleum Products								
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/L	-	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	5600	110000	2000	32000	<56	<59	<62
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L	4700	94000	1900	<1100	<110	<120	<120

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B8A*	*B8B*	*B9B*	*B10A*	*B10B*	*B11B*
	Sample ID:	*W-2344-B8A-042512*	*W-2344-B8B-042412*	*W-2344-B9B-042512*	*W-2344-B10A-042512*	*W-2344-B10B-042512*	*W-2344-B11B-042512*
	Sample Date:	*4/25/2012*	*4/24/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	*Units*						
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	µg/L	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-
1,1-Dichloroethane	µg/L	-	-	-	-	-	-
1,1-Dichloroethene	µg/L	-	-	-	-	-	-
1,1-Dichloropropene	µg/L	-	-	-	-	-	-
1,2,3-Trichlorobenzene	µg/L	-	-	-	-	-	-
1,2,3-Trichloropropane	µg/L	-	-	-	-	-	-
1,2,4-Trichlorobenzene	µg/L	-	-	-	-	-	-
1,2,4-Trimethylbenzene	µg/L	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	-	-	-	-	-	-
1,2-Dibromoethane (Ethylene dibromide)	µg/L	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-
1,3,5-Trimethylbenzene	µg/L	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-
1,3-Dichloropropane	µg/L	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-
2,2-Dichloropropane	µg/L	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	-	-	-	-	-	-
2-Chlorotoluene	µg/L	-	-	-	-	-	-
2-Hexanone	µg/L	-	-	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	µg/L	-	-	-	-	-	-
4-Chlorotoluene	µg/L	-	-	-	-	-	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	-	-	-	-	-	-
Acetone	µg/L	-	-	-	-	-	-
Benzene	µg/L	-	-	-	-	-	-
Bromobenzene	µg/L	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	-	-	-	-	-
Bromoform	µg/L	-	-	-	-	-	-
Bromomethane (Methyl bromide)	µg/L	-	-	-	-	-	-

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B8A*	*B8B*	*B9B*	*B10A*	*B10B*	*B11B*
	Sample ID:	*W-2344-B8A-042512*	*W-2344-B8B-042412*	*W-2344-B9B-042512*	*W-2344-B10A-042512*	*W-2344-B10B-042512*	*W-2344-B11B-042512*
	Sample Date:	*4/25/2012*	*4/24/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	*Units*						
Volatile Organic Compounds (Cont'd.)							
Carbon disulfide	µg/L	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	-	-	-
Chlorobromomethane	µg/L	-	-	-	-	-	-
Chloroethane	µg/L	-	-	-	-	-	-
Chloroform (Trichloromethane)	µg/L	-	-	-	-	-	-
Chloromethane (Methyl chloride)	µg/L	-	-	-	-	-	-
cis-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
cis-1,3-Dichloropropene	µg/L	-	-	-	-	-	-
Cymene (p-Isopropyltoluene)	µg/L	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	µg/L	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-
Hexachlorobutadiene	µg/L	-	-	-	-	-	-
Isopropyl benzene	µg/L	-	-	-	-	-	-
Methyl tert butyl ether (MTBE)	µg/L	-	-	-	-	-	-
Methylene chloride	µg/L	-	-	-	-	-	-
Naphthalene	µg/L	-	-	-	-	-	-
N-Butylbenzene	µg/L	-	-	-	-	-	-
N-Propylbenzene	µg/L	-	-	-	-	-	-
Styrene	µg/L	-	-	-	-	-	-
tert-Butylbenzene	µg/L	-	-	-	-	-	-
Tetrachloroethene	µg/L	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-
trans-1,2-Dichloroethene	µg/L	-	-	-	-	-	-
trans-1,3-Dichloropropene	µg/L	-	-	-	-	-	-
Trichloroethene	µg/L	-	-	-	-	-	-
Trichlorofluoromethane (CFC-11)	µg/L	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	µg/L	-	-	-	-	-	-
Vinyl acetate	µg/L	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B8A*	*B8B*	*B9B*	*B10A*	*B10B*	*B11B*
	Sample ID:	*W-2344-B8A-042512*	*W-2344-B8B-042412*	*W-2344-B9B-042512*	*W-2344-B10A-042512*	*W-2344-B10B-042512*	*W-2344-B11B-042512*
	Sample Date:	*4/25/2012*	*4/24/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	*Units*						
Semi-volatile Organic Compounds							
1,2,4-Trichlorobenzene	µg/L	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-
2,4,5-Trichlorophenol	µg/L	-	-	-	-	-	-
2,4,6-Trichlorophenol	µg/L	-	-	-	-	-	-
2,4-Dichlorophenol	µg/L	-	-	-	-	-	-
2,4-Dimethylphenol	µg/L	-	-	-	-	-	-
2,4-Dinitrophenol	µg/L	-	-	-	-	-	-
2,4-Dinitrotoluene	µg/L	-	-	-	-	-	-
2,6-Dinitrotoluene	µg/L	-	-	-	-	-	-
2-Chloronaphthalene	µg/L	-	-	-	-	-	-
2-Chlorophenol	µg/L	-	-	-	-	-	-
2-Methylnaphthalene	µg/L	-	-	-	-	-	-
2-Methylphenol	µg/L	-	-	-	-	-	-
2-Nitroaniline	µg/L	-	-	-	-	-	-
2-Nitrophenol	µg/L	-	-	-	-	-	-
3,3'-Dichlorobenzidine	µg/L	-	-	-	-	-	-
3-Nitroaniline	µg/L	-	-	-	-	-	-
4,6-Dinitro-2-methylphenol	µg/L	-	-	-	-	-	-
4-Bromophenyl phenyl ether	µg/L	-	-	-	-	-	-
4-Chloro-3-methylphenol	µg/L	-	-	-	-	-	-
4-Chloroaniline	µg/L	-	-	-	-	-	-
4-Chlorophenyl phenyl ether	µg/L	-	-	-	-	-	-
4-Methylphenol	µg/L	-	-	-	-	-	-
4-Nitroaniline	µg/L	-	-	-	-	-	-
4-Nitrophenol	µg/L	-	-	-	-	-	-
Acenaphthene	µg/L	-	-	-	-	-	-
Acenaphthylene	µg/L	-	-	-	-	-	-
Anthracene	µg/L	-	-	-	-	-	-
Azobenzene	µg/L	-	-	-	-	-	-
Benzo(a)anthracene	µg/L	-	-	-	-	-	-
Benzo(a)pyrene	µg/L	-	-	-	-	-	-

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B8A*	*B8B*	*B9B*	*B10A*	*B10B*	*B11B*
	Sample ID:	*W-2344-B8A-042512*	*W-2344-B8B-042412*	*W-2344-B9B-042512*	*W-2344-B10A-042512*	*W-2344-B10B-042512*	*W-2344-B11B-042512*
	Sample Date:	*4/25/2012*	*4/24/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	*Units*						
Semi-volatile Organic Compounds (Cont'd.)							
Benzo(b)fluoranthene	µg/L	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/L	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/L	-	-	-	-	-	-
Benzoic acid	µg/L	-	-	-	-	-	-
Benzyl alcohol	µg/L	-	-	-	-	-	-
bis(2-Chloroethoxy)methane	µg/L	-	-	-	-	-	-
bis(2-Chloroethyl)ether	µg/L	-	-	-	-	-	-
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	-	-	-	-	-	-
Butyl benzylphthalate (BBP)	µg/L	-	-	-	-	-	-
Chrysene	µg/L	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/L	-	-	-	-	-	-
Dibenzofuran	µg/L	-	-	-	-	-	-
Diethyl phthalate	µg/L	-	-	-	-	-	-
Dimethyl phthalate	µg/L	-	-	-	-	-	-
Di-n-butylphthalate (DBP)	µg/L	-	-	-	-	-	-
Di-n-octyl phthalate (DnOP)	µg/L	-	-	-	-	-	-
Fluoranthene	µg/L	-	-	-	-	-	-
Fluorene	µg/L	-	-	-	-	-	-
Hexachlorobenzene	µg/L	-	-	-	-	-	-
Hexachlorobutadiene	µg/L	-	-	-	-	-	-
Hexachlorocyclopentadiene	µg/L	-	-	-	-	-	-
Hexachloroethane	µg/L	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L	-	-	-	-	-	-
Isophorone	µg/L	-	-	-	-	-	-
Naphthalene	µg/L	-	-	-	-	-	-
Nitrobenzene	µg/L	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	µg/L	-	-	-	-	-	-
N-Nitrosodiphenylamine	µg/L	-	-	-	-	-	-
Pentachlorophenol	µg/L	-	-	-	-	-	-
Phenanthrene	µg/L	-	-	-	-	-	-
Phenol	µg/L	-	-	-	-	-	-
Pyrene	µg/L	-	-	-	-	-	-

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B8A*	*B8B*	*B9B*	*B10A*	*B10B*	*B11B*
	Sample ID:	*W-2344-B8A-042512*	*W-2344-B8B-042412*	*W-2344-B9B-042512*	*W-2344-B10A-042512*	*W-2344-B10B-042512*	*W-2344-B11B-042512*
	Sample Date:	*4/25/2012*	*4/24/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	*Units*						
Semi-volatile Organic Compounds-SIM							
Acenaphthene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Acenaphthylene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Anthracene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Benzo(a)anthracene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Benzo(a)pyrene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Benzo(b)fluoranthene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Benzo(g,h,i)perylene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Benzo(k)fluoranthene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Chrysene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Dibenz(a,h)anthracene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Fluoranthene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Fluorene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Indeno(1,2,3-cd)pyrene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Naphthalene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Phenanthrene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Pyrene	µg/L	<0.13	<0.13	<0.12	<0.11	<0.13	<0.13
Metals							
Cadmium	µg/L	-	-	-	-	-	-
Chromium	µg/L	-	-	-	-	-	-
Lead	µg/L	-	-	-	-	-	-
Nickel	µg/L	-	-	-	-	-	-
Zinc	µg/L	-	-	-	-	-	-
Petroleum Products							
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/L	-	-	-	-	-	-
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	<62	<62	<61	<58	<62	<62
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L	<120	<120	<120	<120	<120	<120

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B12A*	*B12B*	*Composite*
	Sample ID:	*W-2344-B12A-042512*	*W-2344-B12B-042512*	*W-2344-COMPOSITE-042512*
	Sample Date:	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	***Units***			
Volatile Organic Compounds				
1,1,1,2-Tetrachloroethane	µg/L	-	-	<0.50
1,1,1-Trichloroethane	µg/L	-	-	<0.50
1,1,2,2-Tetrachloroethane	µg/L	-	-	<0.50
1,1,2-Trichloroethane	µg/L	-	-	<0.50
1,1-Dichloroethane	µg/L	-	-	<0.50
1,1-Dichloroethene	µg/L	-	-	<0.50
1,1-Dichloropropene	µg/L	-	-	<0.50
1,2,3-Trichlorobenzene	µg/L	-	-	<1.0
1,2,3-Trichloropropane	µg/L	-	-	<0.50
1,2,4-Trichlorobenzene	µg/L	-	-	<1.0
1,2,4-Trimethylbenzene	µg/L	-	-	<0.50
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	-	-	<1.0
1,2-Dibromoethane (Ethylene dibromide)	µg/L	-	-	<0.50
1,2-Dichlorobenzene	µg/L	-	-	<0.50
1,2-Dichloroethane	µg/L	-	-	<0.50
1,2-Dichloropropane	µg/L	-	-	<0.50
1,3,5-Trimethylbenzene	µg/L	-	-	<0.50
1,3-Dichlorobenzene	µg/L	-	-	<0.50
1,3-Dichloropropane	µg/L	-	-	<1.0
1,4-Dichlorobenzene	µg/L	-	-	<0.50
2,2-Dichloropropane	µg/L	-	-	<0.50
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	-	-	<50
2-Chlorotoluene	µg/L	-	-	<0.50
2-Hexanone	µg/L	-	-	<50
2-Phenylbutane (sec-Butylbenzene)	µg/L	-	-	<1.0
4-Chlorotoluene	µg/L	-	-	<0.50
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	-	-	<50
Acetone	µg/L	-	-	<50
Benzene	µg/L	-	-	<0.50
Bromobenzene	µg/L	-	-	<1.0
Bromodichloromethane	µg/L	-	-	<0.50
Bromoform	µg/L	-	-	<1.0
Bromomethane (Methyl bromide)	µg/L	-	-	<1.0

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B12A*	*B12B*	*Composite*
	Sample ID:	*W-2344-B12A-042512*	*W-2344-B12B-042512*	*W-2344-COMPOSITE-042512*
	Sample Date:	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	***Units***			
Volatile Organic Compounds (Cont'd.)				
Carbon disulfide	µg/L	-	-	<5.0
Carbon tetrachloride	µg/L	-	-	<0.50
Chlorobenzene	µg/L	-	-	<0.50
Chlorobromomethane	µg/L	-	-	<1.0
Chloroethane	µg/L	-	-	<1.0
Chloroform (Trichloromethane)	µg/L	-	-	<1.0
Chloromethane (Methyl chloride)	µg/L	-	-	<1.0
cis-1,2-Dichloroethene	µg/L	-	-	<0.50
cis-1,3-Dichloropropene	µg/L	-	-	<0.50
Cymene (p-Isopropyltoluene)	µg/L	-	-	<1.0
Dibromochloromethane	µg/L	-	-	<0.50
Dibromomethane	µg/L	-	-	<0.50
Dichlorodifluoromethane (CFC-12)	µg/L	-	-	<0.50
Ethylbenzene	µg/L	-	-	<0.50
Hexachlorobutadiene	µg/L	-	-	<1.0
Isopropyl benzene	µg/L	-	-	<0.50
Methyl tert butyl ether (MTBE)	µg/L	-	-	<0.50
Methylene chloride	µg/L	-	-	<5.0
Naphthalene	µg/L	-	-	1.4
N-Butylbenzene	µg/L	-	-	<1.0
N-Propylbenzene	µg/L	-	-	<1.0
Styrene	µg/L	-	-	<0.50
tert-Butylbenzene	µg/L	-	-	<1.0
Tetrachloroethene	µg/L	-	-	<0.50
Toluene	µg/L	-	-	<0.50
trans-1,2-Dichloroethene	µg/L	-	-	<0.50
trans-1,3-Dichloropropene	µg/L	-	-	<0.50
Trichloroethene	µg/L	-	-	<0.50
Trichlorofluoromethane (CFC-11)	µg/L	-	-	<1.0
Trifluorotrichloroethane (Freon 113)	µg/L	-	-	<0.50
Vinyl acetate	µg/L	-	-	<10
Vinyl chloride	µg/L	-	-	<0.50
Xylenes (total)	µg/L	-	-	<1.0

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B12A*	*B12B*	*Composite*
	Sample ID:	*W-2344-B12A-042512*	*W-2344-B12B-042512*	*W-2344-COMPOSITE-042512*
	Sample Date:	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	***Units***			
Semi-volatile Organic Compounds				
1,2,4-Trichlorobenzene	µg/L	-	-	<2.2
1,2-Dichlorobenzene	µg/L	-	-	<2.2
1,3-Dichlorobenzene	µg/L	-	-	<2.2
1,4-Dichlorobenzene	µg/L	-	-	<2.2
2,4,5-Trichlorophenol	µg/L	-	-	<4.4
2,4,6-Trichlorophenol	µg/L	-	-	<2.2
2,4-Dichlorophenol	µg/L	-	-	<5.5
2,4-Dimethylphenol	µg/L	-	-	<3.3
2,4-Dinitrophenol	µg/L	-	-	<11
2,4-Dinitrotoluene	µg/L	-	-	<4.4
2,6-Dinitrotoluene	µg/L	-	-	<5.5
2-Chloronaphthalene	µg/L	-	-	<4.4
2-Chlorophenol	µg/L	-	-	<4.4
2-Methylnaphthalene	µg/L	-	-	<2.2
2-Methylphenol	µg/L	-	-	<4.4
2-Nitroaniline	µg/L	-	-	<11
2-Nitrophenol	µg/L	-	-	<2.2
3,3'-Dichlorobenzidine	µg/L	-	-	<5.5
3-Nitroaniline	µg/L	-	-	<5.5
4,6-Dinitro-2-methylphenol	µg/L	-	-	<11
4-Bromophenyl phenyl ether	µg/L	-	-	<5.5
4-Chloro-3-methylphenol	µg/L	-	-	<5.5
4-Chloroaniline	µg/L	-	-	<2.2
4-Chlorophenyl phenyl ether	µg/L	-	-	<5.5
4-Methylphenol	µg/L	-	-	<8.8
4-Nitroaniline	µg/L	-	-	<11
4-Nitrophenol	µg/L	-	-	<11
Acenaphthene	µg/L	-	-	<2.2
Acenaphthylene	µg/L	-	-	<4.4
Anthracene	µg/L	-	-	<2.2
Azobenzene	µg/L	-	-	<2.2
Benzo(a)anthracene	µg/L	-	-	<5.5
Benzo(a)pyrene	µg/L	-	-	<2.2

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B12A*	*B12B*	*Composite*
	Sample ID:	*W-2344-B12A-042512*	*W-2344-B12B-042512*	*W-2344-COMPOSITE-042512*
	Sample Date:	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	***Units***			
Semi-volatile Organic Compounds (Cont'd.)				
Benzo(b)fluoranthene	µg/L	-	-	<2.2
Benzo(g,h,i)perylene	µg/L	-	-	<2.2
Benzo(k)fluoranthene	µg/L	-	-	<2.2
Benzoic acid	µg/L	-	-	<11
Benzyl alcohol	µg/L	-	-	<5.5
bis(2-Chloroethoxy)methane	µg/L	-	-	<5.5
bis(2-Chloroethyl)ether	µg/L	-	-	<2.2
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	-	-	<11
Butyl benzylphthalate (BBP)	µg/L	-	-	<5.5
Chrysene	µg/L	-	-	<2.2
Dibenz(a,h)anthracene	µg/L	-	-	<2.2
Dibenzofuran	µg/L	-	-	<4.4
Diethyl phthalate	µg/L	-	-	<5.5
Dimethyl phthalate	µg/L	-	-	<5.5
Di-n-butylphthalate (DBP)	µg/L	-	-	<5.5
Di-n-octyl phthalate (DnOP)	µg/L	-	-	<5.5
Fluoranthene	µg/L	-	-	2.4
Fluorene	µg/L	-	-	<4.4
Hexachlorobenzene	µg/L	-	-	<2.2
Hexachlorobutadiene	µg/L	-	-	<2.2
Hexachlorocyclopentadiene	µg/L	-	-	<5.5
Hexachloroethane	µg/L	-	-	<2.2
Indeno(1,2,3-cd)pyrene	µg/L	-	-	<2.2
Isophorone	µg/L	-	-	<4.4
Naphthalene	µg/L	-	-	<2.2
Nitrobenzene	µg/L	-	-	<2.2
N-Nitrosodi-n-propylamine	µg/L	-	-	<2.2
N-Nitrosodiphenylamine	µg/L	-	-	<2.2
Pentachlorophenol	µg/L	-	-	<11
Phenanthrene	µg/L	-	-	6.5
Phenol	µg/L	-	-	<2.2
Pyrene	µg/L	-	-	<2.2

TABLE 1B

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

	Sample Location:	*B12A*	*B12B*	*Composite*
	Sample ID:	*W-2344-B12A-042512*	*W-2344-B12B-042512*	*W-2344-COMPOSITE-042512*
	Sample Date:	*4/25/2012*	*4/25/2012*	*4/25/2012*
Parameters	***Units***			
Semi-volatile Organic Compounds-SIM				
Acenaphthene	µg/L	<0.12	<0.13	0.81
Acenaphthylene	µg/L	<0.12	<0.13	0.74
Anthracene	µg/L	<0.12	<0.13	1.1
Benzo(a)anthracene	µg/L	<0.12	<0.13	0.11
Benzo(a)pyrene	µg/L	<0.12	<0.13	<0.11
Benzo(b)fluoranthene	µg/L	<0.12	<0.13	<0.11
Benzo(g,h,i)perylene	µg/L	<0.12	<0.13	<0.11
Benzo(k)fluoranthene	µg/L	<0.12	<0.13	<0.11
Chrysene	µg/L	<0.12	<0.13	<0.11
Dibenz(a,h)anthracene	µg/L	<0.12	<0.13	<0.11
Fluoranthene	µg/L	<0.12	<0.13	1.6
Fluorene	µg/L	<0.12	<0.13	1.3
Indeno(1,2,3-cd)pyrene	µg/L	<0.12	<0.13	<0.11
Naphthalene	µg/L	<0.12	<0.13	1.1
Phenanthrene	µg/L	<0.12	<0.13	7.3
Pyrene	µg/L	<0.12	<0.13	1.2
Metals				
Cadmium	µg/L	-	-	<2.5
Chromium	µg/L	-	-	38
Lead	µg/L	-	-	5.1
Nickel	µg/L	-	-	<10
Zinc	µg/L	-	-	25
Petroleum Products				
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/L	-	-	180
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	<57	<61	<57
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L	<110	<120	<110

Notes:

- Not analyzed.

TABLE 2

QUALIFIED SAMPLE DATA DUE TO OUTLYING SURROGATE RECOVERIES
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

Parameter	*Surrogate*	*Surrogate Recovery (percent)*	*Control Limits (percent)*	*Sample ID*	*Analytes*	*Qualified Sample Results*		*Units*
SW8015D	p-Terphenyl	36	38-148	SO-2344-COMPOSITE-042512	Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	120	J	mg/kg
SW8015D	p-Terphenyl	36	38-148	SO-2344-COMPOSITE-042512	Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	100	UJ	mg/kg

Notes:

J Estimated.
UJ Not detected, estimated reporting limit.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
SITE ASSESSMENT
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
APRIL 2012

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*MSD Recovery (percent)*	*RPD*	*Control Limits*		*Qualified Sample Result*		*Units*
						Recovery (percent)	*RPD (percent)*			
SW8015D	SO-2344-COMPOSITE-042512	Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	42	139	41	50-150	35	120	J	mg/kg

Notes:

MS Matrix Spike.
MSD Matrix Spike Duplicate.
RPD Relative Percent Difference.
J Estimated.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

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TestAmerica Job ID: 720-41840-1
Client Project/Site: UPRR- Santa Rosa
Revision: 1

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
5/10/2012 4:41:53 PM

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Project Manager I
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LINKS

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Job ID: 720-41840-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-41840-1

Comments
The report is revised to change units to mg/Kg.

Receipt
The samples were received on 4/26/2012 6:20 PM; the samples arrived in good conditions, properly preserved and on ice. The temperatures of the 7 coolers at receipt time were 0.60 C, 1.40 C, 1.60 C, 2.20 C, 2.90 C, 3.10 C and 3.90 C.

Except:

No project name on the COC. Sample times not specified with AM or PM, logged all samples collected after 12:00 as PM.
Received one of four amber 1L's for W-2344-B4-042312 @ 4:45 half full.

The container label for the following sample(s) did not match the information listed on the Chain-of-Custody (COC): #17. The container labels list W-2344-B3-042312 @ 4:00. The COC lists W-2344-B2-042312 @ 4:00. Logged using sample ID because there is a B2 @ 3:45 water #16.
Received (#22) 2 of 4 1L's for B6B @ 11:45 water were labeled B6, logged by COC all 4 1L's as B6B.
Received (#23) 3 of 4 1L's for B7B @ 1:21 water were labeled B7, logged by COC all 4 1L's as B7B.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: W-2344-B1-042312 (720-41840-15), W-2344-B2-042312 (720-41840-16). Elevated reporting limits (RLs) are provided.

Method 8270C SIM: Surrogate recovery for the following sample was outside control limits: W-2344-B1-042312 (720-41840-15), W-2344-B2-042312 (720-41840-16). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-B4-12'-042312 (720-41840-13). Elevated reporting limits (RLs) are provided.

Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-B1-10'-042312 (720-41840-5), SO-2344-B1-5'-042312 (720-41840-1), SO-2344-B2-11'-042312 (720-41840-7), SO-2344-B4-5'-042312 (720-41840-9), SO-2344-COMPOSITE-042512 (720-41839-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC Semi VOA
Method 8015B: The continuing calibration verification (CCV) associated with batch 112671 recovered above the upper control limit for MO c24-c36. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: W-2344-B12B-042512 (720-41840-30), W-2344-B8A-042512 (720-41840-31).

Method 8015B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: W-2344-B2-042312 (720-41840-16), W-2344-B4-042312 (720-41840-20).

Method 8015B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: SO-2344-B2-11'-042312 (720-41840-7), SO-2344-B4-12'-042312 (720-41840-13).

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B1-5'-042312 — Lab Sample ID: 720-41840-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.035		0.025		mg/Kg	5		8270C SIM	Total/NA
Fluoranthene	0.027		0.025		mg/Kg	5		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	15		1.0		mg/Kg	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	51		50		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-B2-5'-042312 — Lab Sample ID: 720-41840-2

No Detections

Client Sample ID: SO-2344-B1-16'-042312 — Lab Sample ID: 720-41840-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	49		1.0		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-B1-10'-042312 — Lab Sample ID: 720-41840-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	25		1.0		mg/Kg	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	87		50		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-B3-5'-042312 — Lab Sample ID: 720-41840-6

No Detections

Client Sample ID: SO-2344-B2-11'-042312 — Lab Sample ID: 720-41840-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	240		4.9		mg/Kg	5		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	610		250		mg/Kg	5		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-B4-5'-042312 — Lab Sample ID: 720-41840-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	77		3.0		mg/Kg	3		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	220		150		mg/Kg	3		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-B3-15.5'-042312 — Lab Sample ID: 720-41840-10

No Detections

Client Sample ID: SO-2344-B3-12'-042312 — Lab Sample ID: 720-41840-11

No Detections

Client Sample ID: SO-2344-B5-5'-042312 — Lab Sample ID: 720-41840-12

No Detections

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B4-12'-042312 — Lab Sample ID: 720-41840-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.020		0.0099		mg/Kg	2		8270C SIM	Total/NA
Pyrene	0.017		0.0099		mg/Kg	2		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	810		9.9		mg/Kg	10		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-B4-16'-042312 — Lab Sample ID: 720-41840-14

No Detections

Client Sample ID: W-2344-B1-042312 — Lab Sample ID: 720-41840-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.7		0.60		ug/L	5		8270C SIM	Total/NA
Benzo[b]fluoranthene	1.2		0.60		ug/L	5		8270C SIM	Total/NA
Pyrene	2.7		0.60		ug/L	5		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	5600		54		ug/L	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	4700		110		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: W-2344-B2-042312 — Lab Sample ID: 720-41840-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	1.4		0.62		ug/L	5		8270C SIM	Total/NA
Benzo[b]fluoranthene	1.0		0.62		ug/L	5		8270C SIM	Total/NA
Pyrene	2.5		0.62		ug/L	5		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	110000		1200		ug/L	20		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	94000		2500		ug/L	20		8015B	Silica Gel Cleanup

Client Sample ID: W-2344-B3-042312 — Lab Sample ID: 720-41840-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	2000		62		ug/L	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	1900		120		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-B5-16'-042312 — Lab Sample ID: 720-41840-18

No Detections

Client Sample ID: SO-2344-B5-10'-042312 — Lab Sample ID: 720-41840-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.0052		0.0049		mg/Kg	1		8270C SIM	Total/NA

Client Sample ID: W-2344-B4-042312 — Lab Sample ID: 720-41840-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	0.36		0.12		ug/L	1		8270C SIM	Total/NA
Pyrene	0.38		0.12		ug/L	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	32000		540		ug/L	10		8015B	Silica Gel Cleanup

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B5-042312 — **Lab Sample ID: 720-41840-21**

No Detections

Client Sample ID: W-2344-B6B-042412 — **Lab Sample ID: 720-41840-22**

No Detections

Client Sample ID: W-2344-B7B-042412 — **Lab Sample ID: 720-41840-23**

No Detections

Client Sample ID: W-2344-B8B-042412 — **Lab Sample ID: 720-41840-24**

No Detections

Client Sample ID: W-2344-B9B-042512 — **Lab Sample ID: 720-41840-25**

No Detections

Client Sample ID: W-2344-B10A-042512 — **Lab Sample ID: 720-41840-26**

No Detections

Client Sample ID: W-2344-B10B-042512 — **Lab Sample ID: 720-41840-27**

No Detections

Client Sample ID: W-2344-B11B-042512 — **Lab Sample ID: 720-41840-28**

No Detections

Client Sample ID: W-2344-B12A-042512 — **Lab Sample ID: 720-41840-29**

No Detections

Client Sample ID: W-2344-B12B-042512 — **Lab Sample ID: 720-41840-30**

No Detections

Client Sample ID: W-2344-B8A-042512 — **Lab Sample ID: 720-41840-31**

No Detections

Client Sample ID: SO-2344-B2-14'-042312 — **Lab Sample ID: 720-41840-32**

No Detections

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B1-5'-042312
Date Collected: 04/23/12 10:50
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-1
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Acenaphthylene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Benzo[a]anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Benzo[a]pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Benzo[b]fluoranthene	**0.035**		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Benzo[g,h,i]perylene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Benzo[k]fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Chrysene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Dibenz(a,h)anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Fluoranthene	**0.027**		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Fluorene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Indeno[1,2,3-cd]pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Naphthalene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Phenanthrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5
Pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:29	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*33 - 120*	*04/30/12 13:01*	*05/07/12 16:29*	*5*
Terphenyl-d14	*75*		*35 - 146*	*04/30/12 13:01*	*05/07/12 16:29*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**15**		1.0		mg/Kg		05/03/12 10:30	05/04/12 17:19	1
Motor Oil Range Organics [C24-C36]	**51**		50		mg/Kg		05/03/12 10:30	05/04/12 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 1*	*05/03/12 10:30*	*05/04/12 17:19*	*1*
p-Terphenyl	*61*		*38 - 148*	*05/03/12 10:30*	*05/04/12 17:19*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B2-5'-042312
Date Collected: 04/23/12 11:39
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-2
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Acenaphthylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Chrysene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Fluorene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Naphthalene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Phenanthrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1
Pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*33 - 120*	*04/30/12 13:01*	*05/05/12 23:23*	*1*
Terphenyl-d14	*80*		*35 - 146*	*04/30/12 13:01*	*05/05/12 23:23*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/03/12 10:30	05/04/12 17:43	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/03/12 10:30	05/04/12 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 1*	*05/03/12 10:30*	*05/04/12 17:43*	*1*
p-Terphenyl	*81*		*38 - 148*	*05/03/12 10:30*	*05/04/12 17:43*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B1-16'-042312
Date Collected: 04/23/12 11:54
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-4
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Acenaphthylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Chrysene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Fluorene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Naphthalene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Phenanthrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1
Pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/05/12 23:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*72*		*33 - 120*	*04/30/12 13:01*	*05/05/12 23:46*	*1*
Terphenyl-d14	*84*		*35 - 146*	*04/30/12 13:01*	*05/05/12 23:46*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**49**		1.0		mg/Kg		05/03/12 10:30	05/04/12 14:35	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/03/12 10:30	05/04/12 14:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/03/12 10:30*	*05/04/12 14:35*	*1*
p-Terphenyl	*82*		*38 - 148*	*05/03/12 10:30*	*05/04/12 14:35*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B1-10'-042312
Date Collected: 04/23/12 12:04
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-5
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Acenaphthylene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Benzo[a]anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Benzo[a]pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Benzo[b]fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Benzo[g,h,i]perylene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Benzo[k]fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Chrysene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Dibenz(a,h)anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Fluorene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Indeno[1,2,3-cd]pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Naphthalene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Phenanthrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5
Pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 16:52	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*33 - 120*	*04/30/12 13:01*	*05/07/12 16:52*	*5*
Terphenyl-d14	*66*		*35 - 146*	*04/30/12 13:01*	*05/07/12 16:52*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**25**		1.0		mg/Kg		05/03/12 10:30	05/04/12 14:58	1
Motor Oil Range Organics [C24-C36]	**87**		50		mg/Kg		05/03/12 10:30	05/04/12 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.2*		*0 - 1*	*05/03/12 10:30*	*05/04/12 14:58*	*1*
p-Terphenyl	*66*		*38 - 148*	*05/03/12 10:30*	*05/04/12 14:58*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B3-5'-042312
Date Collected: 04/23/12 12:13
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-6
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Acenaphthylene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Benzo[b]fluoranthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Chrysene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Fluoranthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Fluorene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Naphthalene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Phenanthrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1
Pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*84*		*33 - 120*	*04/30/12 13:01*	*05/06/12 00:10*	*1*
Terphenyl-d14	*81*		*35 - 146*	*04/30/12 13:01*	*05/06/12 00:10*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/03/12 10:30	05/04/12 15:22	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/03/12 10:30	05/04/12 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 1*	*05/03/12 10:30*	*05/04/12 15:22*	*1*
p-Terphenyl	*96*		*38 - 148*	*05/03/12 10:30*	*05/04/12 15:22*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B2-11'-042312
Date Collected: 04/23/12 13:17
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-7
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Acenaphthylene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Benzo[a]anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Benzo[a]pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Benzo[b]fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Benzo[g,h,i]perylene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Benzo[k]fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Chrysene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Dibenz(a,h)anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Fluorene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Indeno[1,2,3-cd]pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Naphthalene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Phenanthrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5
Pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:16	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*75*		*33 - 120*	*04/30/12 13:01*	*05/07/12 17:16*	*5*
Terphenyl-d14	*79*		*35 - 146*	*04/30/12 13:01*	*05/07/12 17:16*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**240**		4.9		mg/Kg		05/03/12 10:30	05/05/12 20:35	5
Motor Oil Range Organics [C24-C36]	**610**		250		mg/Kg		05/03/12 10:30	05/05/12 20:35	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/03/12 10:30*	*05/05/12 20:35*	*5*
p-Terphenyl	*0*	*X D*	*38 - 148*	*05/03/12 10:30*	*05/05/12 20:35*	*5*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B4-5'-042312
Date Collected: 04/23/12 13:41
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-9
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Acenaphthylene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Benzo[a]anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Benzo[a]pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Benzo[b]fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Benzo[g,h,i]perylene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Benzo[k]fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Chrysene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Dibenz(a,h)anthracene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Fluoranthene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Fluorene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Indeno[1,2,3-cd]pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Naphthalene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Phenanthrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5
Pyrene	ND		0.025		mg/Kg		04/30/12 13:01	05/07/12 17:39	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*75*		*33 - 120*	*04/30/12 13:01*	*05/07/12 17:39*	*5*
Terphenyl-d14	*74*		*35 - 146*	*04/30/12 13:01*	*05/07/12 17:39*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**77**		3.0		mg/Kg		05/03/12 10:30	05/05/12 20:59	3
Motor Oil Range Organics [C24-C36]	**220**		150		mg/Kg		05/03/12 10:30	05/05/12 20:59	3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/03/12 10:30*	*05/05/12 20:59*	*3*
p-Terphenyl	*102*		*38 - 148*	*05/03/12 10:30*	*05/05/12 20:59*	*3*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B3-15.5'-042312
Date Collected: 04/23/12 14:16
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-10
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Acenaphthylene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Benzo[b]fluoranthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Chrysene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Fluoranthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Fluorene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Naphthalene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Phenanthrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1
Pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/06/12 00:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*33 - 120*	*04/30/12 13:01*	*05/06/12 00:33*	*1*
Terphenyl-d14	*77*		*35 - 146*	*04/30/12 13:01*	*05/06/12 00:33*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/03/12 10:30	05/04/12 16:32	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/03/12 10:30	05/04/12 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.08*		*0 - 1*	*05/03/12 10:30*	*05/04/12 16:32*	*1*
p-Terphenyl	*89*		*38 - 148*	*05/03/12 10:30*	*05/04/12 16:32*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B3-12'-042312
Date Collected: 04/23/12 14:22
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-11
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Acenaphthylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Chrysene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Fluorene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Naphthalene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Phenanthrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1
Pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*33 - 120*	*04/30/12 13:01*	*05/07/12 13:20*	*1*
Terphenyl-d14	*83*		*35 - 146*	*04/30/12 13:01*	*05/07/12 13:20*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/03/12 10:30	05/04/12 16:56	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/03/12 10:30	05/04/12 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 1*	*05/03/12 10:30*	*05/04/12 16:56*	*1*
p-Terphenyl	*96*		*38 - 148*	*05/03/12 10:30*	*05/04/12 16:56*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B5-5'-042312
Date Collected: 04/23/12 15:06
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-12
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Acenaphthylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Chrysene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Fluorene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Naphthalene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Phenanthrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1
Pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 13:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*70*		*33 - 120*	*04/30/12 13:01*	*05/07/12 13:43*	*1*
Terphenyl-d14	*77*		*35 - 146*	*04/30/12 13:01*	*05/07/12 13:43*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		05/03/12 10:30	05/04/12 17:19	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		05/03/12 10:30	05/04/12 17:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.003*		*0 - 1*	*05/03/12 10:30*	*05/04/12 17:19*	*1*
p-Terphenyl	*88*		*38 - 148*	*05/03/12 10:30*	*05/04/12 17:19*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B4-12'-042312
Date Collected: 04/23/12 15:22
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-13
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Acenaphthylene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Anthracene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Benzo[a]anthracene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Benzo[a]pyrene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Benzo[b]fluoranthene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Benzo[g,h,i]perylene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Benzo[k]fluoranthene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Chrysene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Dibenz(a,h)anthracene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Fluoranthene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Fluorene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Indeno[1,2,3-cd]pyrene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Naphthalene	**0.020**		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Phenanthrene	ND		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2
Pyrene	**0.017**		0.0099		mg/Kg		04/30/12 13:01	05/07/12 14:07	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*33 - 120*	*04/30/12 13:01*	*05/07/12 14:07*	*2*
Terphenyl-d14	*76*		*35 - 146*	*04/30/12 13:01*	*05/07/12 14:07*	*2*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**810**		9.9		mg/Kg		05/03/12 10:30	05/05/12 21:22	10
Motor Oil Range Organics [C24-C36]	ND		500		mg/Kg		05/03/12 10:30	05/05/12 21:22	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/03/12 10:30*	*05/05/12 21:22*	*10*
p-Terphenyl	*0*	*X D*	*38 - 148*	*05/03/12 10:30*	*05/05/12 21:22*	*10*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B4-16'-042312
Date Collected: 04/23/12 15:25
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-14
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Acenaphthylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Chrysene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Fluorene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Naphthalene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Phenanthrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1
Pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*33 - 120*	*04/30/12 13:01*	*05/07/12 14:30*	*1*
Terphenyl-d14	*81*		*35 - 146*	*04/30/12 13:01*	*05/07/12 14:30*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		05/04/12 10:50	05/05/12 16:28	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/04/12 10:50	05/05/12 16:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.05*		*0 - 1*	*05/04/12 10:50*	*05/05/12 16:28*	*1*
p-Terphenyl	*80*		*38 - 148*	*05/04/12 10:50*	*05/05/12 16:28*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B1-042312
Date Collected: 04/23/12 15:30
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-15
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**1.7**		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Acenaphthene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Acenaphthylene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Fluorene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Phenanthrene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Anthracene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Benzo[a]anthracene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Chrysene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Benzo[a]pyrene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Benzo[b]fluoranthene	**1.2**		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Benzo[k]fluoranthene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Benzo[g,h,i]perylene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Indeno[1,2,3-cd]pyrene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Fluoranthene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Pyrene	**2.7**		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5
Dibenz(a,h)anthracene	ND		0.60		ug/L		04/27/12 18:27	05/02/12 20:07	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*15*	*X*	*29 - 120*	*04/27/12 18:27*	*05/02/12 20:07*	*5*
Terphenyl-d14	*13*	*X*	*45 - 120*	*04/27/12 18:27*	*05/02/12 20:07*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**5600**		54		ug/L		04/27/12 14:09	04/30/12 14:49	1
Motor Oil Range Organics [C24-C36]	**4700**		110		ug/L		04/27/12 14:09	04/30/12 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*2*		*0 - 5*	*04/27/12 14:09*	*04/30/12 14:49*	*1*
p-Terphenyl	*45*		*31 - 150*	*04/27/12 14:09*	*04/30/12 14:49*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B2-042312
Date Collected: 04/23/12 15:45
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-16
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**1.4**		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Acenaphthene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Acenaphthylene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Fluorene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Phenanthrene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Anthracene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Benzo[a]anthracene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Chrysene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Benzo[a]pyrene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Benzo[b]fluoranthene	**1.0**		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Benzo[k]fluoranthene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Benzo[g,h,i]perylene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Indeno[1,2,3-cd]pyrene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Fluoranthene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Pyrene	**2.5**		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5
Dibenz(a,h)anthracene	ND		0.62		ug/L		04/27/12 18:27	05/02/12 20:31	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*17*	*X*	*29 - 120*	*04/27/12 18:27*	*05/02/12 20:31*	*5*
Terphenyl-d14	*14*	*X*	*45 - 120*	*04/27/12 18:27*	*05/02/12 20:31*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**110000**		1200		ug/L		04/27/12 14:09	04/30/12 15:12	20
Motor Oil Range Organics [C24-C36]	**94000**		2500		ug/L		04/27/12 14:09	04/30/12 15:12	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*04/27/12 14:09*	*04/30/12 15:12*	*20*
p-Terphenyl	*0*	*X D*	*31 - 150*	*04/27/12 14:09*	*04/30/12 15:12*	*20*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B3-042312
Date Collected: 04/23/12 16:00
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-17
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Acenaphthene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Acenaphthylene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Fluorene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Phenanthrene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Anthracene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Benzo[a]anthracene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Chrysene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Benzo[a]pyrene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Benzo[b]fluoranthene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Benzo[k]fluoranthene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Fluoranthene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Pyrene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 20:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*50*		*29 - 120*	*04/27/12 18:27*	*04/30/12 20:15*	*1*
Terphenyl-d14	*48*		*45 - 120*	*04/27/12 18:27*	*04/30/12 20:15*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**2000**		62		ug/L		04/27/12 14:09	04/30/12 15:36	1
Motor Oil Range Organics [C24-C36]	**1900**		120		ug/L		04/27/12 14:09	04/30/12 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*04/27/12 14:09*	*04/30/12 15:36*	*1*
p-Terphenyl	*102*		*31 - 150*	*04/27/12 14:09*	*04/30/12 15:36*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B5-16'-042312
Date Collected: 04/23/12 16:26
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-18
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Acenaphthylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Chrysene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Fluorene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Naphthalene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Phenanthrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1
Pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*33 - 120*	*04/30/12 13:01*	*05/07/12 14:54*	*1*
Terphenyl-d14	*77*		*35 - 146*	*04/30/12 13:01*	*05/07/12 14:54*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/04/12 10:50	05/05/12 16:53	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/04/12 10:50	05/05/12 16:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/04/12 10:50*	*05/05/12 16:53*	*1*
p-Terphenyl	*86*		*38 - 148*	*05/04/12 10:50*	*05/05/12 16:53*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B5-10'-042312
Date Collected: 04/23/12 16:28
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-19
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Acenaphthylene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Benzo[b]fluoranthene	**0.0052**		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Chrysene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Fluoranthene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Fluorene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Naphthalene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Phenanthrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1
Pyrene	ND		0.0049		mg/Kg		04/30/12 13:01	05/07/12 15:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*33 - 120*	*04/30/12 13:01*	*05/07/12 15:18*	*1*
Terphenyl-d14	*77*		*35 - 146*	*04/30/12 13:01*	*05/07/12 15:18*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/04/12 10:50	05/05/12 16:04	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/04/12 10:50	05/05/12 16:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.05*		*0 - 1*	*05/04/12 10:50*	*05/05/12 16:04*	*1*
p-Terphenyl	*78*		*38 - 148*	*05/04/12 10:50*	*05/05/12 16:04*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B4-042312
Date Collected: 04/23/12 16:45
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-20
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.36**		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Acenaphthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Acenaphthylene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Fluorene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Phenanthrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Benzo[a]anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Chrysene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Benzo[a]pyrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Benzo[b]fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Benzo[k]fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Benzo[g,h,i]perylene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Indeno[1,2,3-cd]pyrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Pyrene	**0.38**		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1
Dibenz(a,h)anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*29 - 120*	*04/27/12 18:27*	*04/30/12 20:39*	*1*
Terphenyl-d14	*63*		*45 - 120*	*04/27/12 18:27*	*04/30/12 20:39*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**32000**		540		ug/L		04/27/12 18:17	04/30/12 12:27	10
Motor Oil Range Organics [C24-C36]	ND		1100		ug/L		04/27/12 18:17	04/30/12 12:27	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*04/27/12 18:17*	*04/30/12 12:27*	*10*
p-Terphenyl	*0*	*X D*	*31 - 150*	*04/27/12 18:17*	*04/30/12 12:27*	*10*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B5-042312
Date Collected: 04/23/12 17:00
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-21
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Acenaphthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Acenaphthylene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Fluorene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Phenanthrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Benzo[a]anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Chrysene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Benzo[a]pyrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Benzo[b]fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Benzo[k]fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Benzo[g,h,i]perylene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Indeno[1,2,3-cd]pyrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Pyrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1
Dibenz(a,h)anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*29 - 120*	*04/27/12 18:27*	*04/30/12 21:02*	*1*
Terphenyl-d14	*58*		*45 - 120*	*04/27/12 18:27*	*04/30/12 21:02*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		56		ug/L		04/27/12 18:17	04/28/12 18:50	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		04/27/12 18:17	04/28/12 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.001*		*0 - 5*	*04/27/12 18:17*	*04/28/12 18:50*	*1*
p-Terphenyl	*70*		*31 - 150*	*04/27/12 18:17*	*04/28/12 18:50*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B6B-042412
Date Collected: 04/24/12 11:45
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-22
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Acenaphthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Acenaphthylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Fluorene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Phenanthrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Benzo[a]anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Chrysene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Benzo[a]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Benzo[b]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Benzo[k]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Benzo[g,h,i]perylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Indeno[1,2,3-cd]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1
Dibenz(a,h)anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*29 - 120*	*04/27/12 18:27*	*04/30/12 21:26*	*1*
Terphenyl-d14	*72*		*45 - 120*	*04/27/12 18:27*	*04/30/12 21:26*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		59		ug/L		04/27/12 18:17	04/28/12 19:14	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/28/12 19:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.001*		*0 - 5*	*04/27/12 18:17*	*04/28/12 19:14*	*1*
p-Terphenyl	*63*		*31 - 150*	*04/27/12 18:17*	*04/28/12 19:14*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B7B-042412
Date Collected: 04/24/12 13:21
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-23
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Acenaphthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Acenaphthylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Fluorene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Phenanthrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Benzo[a]anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Chrysene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Benzo[a]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Benzo[b]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Benzo[k]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Benzo[g,h,i]perylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Indeno[1,2,3-cd]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1
Dibenz(a,h)anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 21:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*29 - 120*	*04/27/12 18:27*	*04/30/12 21:49*	*1*
Terphenyl-d14	*64*		*45 - 120*	*04/27/12 18:27*	*04/30/12 21:49*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		62		ug/L		04/27/12 18:17	04/28/12 19:38	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/28/12 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.0001*		*0 - 5*	*04/27/12 18:17*	*04/28/12 19:38*	*1*
p-Terphenyl	*65*		*31 - 150*	*04/27/12 18:17*	*04/28/12 19:38*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B8B-042412
Date Collected: 04/24/12 15:16
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-24
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Acenaphthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Acenaphthylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Fluorene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Phenanthrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Benzo[a]anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Chrysene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Benzo[a]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Benzo[b]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Benzo[k]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Benzo[g,h,i]perylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Indeno[1,2,3-cd]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1
Dibenz(a,h)anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 22:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*29 - 120*	*04/27/12 18:27*	*04/30/12 22:13*	*1*
Terphenyl-d14	*57*		*45 - 120*	*04/27/12 18:27*	*04/30/12 22:13*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		62		ug/L		04/27/12 18:17	04/28/12 20:03	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/28/12 20:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.005*		*0 - 5*	*04/27/12 18:17*	*04/28/12 20:03*	*1*
p-Terphenyl	*51*		*31 - 150*	*04/27/12 18:17*	*04/28/12 20:03*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B9B-042512
Date Collected: 04/25/12 08:00
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-25
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Acenaphthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Acenaphthylene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Fluorene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Phenanthrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Benzo[a]anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Chrysene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Benzo[a]pyrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Benzo[b]fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Benzo[k]fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Benzo[g,h,i]perylene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Indeno[1,2,3-cd]pyrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Fluoranthene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Pyrene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1
Dibenz(a,h)anthracene	ND		0.12		ug/L		04/27/12 18:27	04/30/12 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*29 - 120*	*04/27/12 18:27*	*04/30/12 22:37*	*1*
Terphenyl-d14	*69*		*45 - 120*	*04/27/12 18:27*	*04/30/12 22:37*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		61		ug/L		04/27/12 18:17	04/28/12 20:27	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/28/12 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.004*		*0 - 5*	*04/27/12 18:17*	*04/28/12 20:27*	*1*
p-Terphenyl	*65*		*31 - 150*	*04/27/12 18:17*	*04/28/12 20:27*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B10A-042512
Date Collected: 04/25/12 10:00
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-26
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Acenaphthene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Acenaphthylene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Fluorene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Phenanthrene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Anthracene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Benzo[a]anthracene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Chrysene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Benzo[a]pyrene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Benzo[b]fluoranthene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Benzo[k]fluoranthene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Fluoranthene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Pyrene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		04/27/12 18:27	04/30/12 23:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*58*		*29 - 120*	*04/27/12 18:27*	*04/30/12 23:00*	*1*
Terphenyl-d14	*62*		*45 - 120*	*04/27/12 18:27*	*04/30/12 23:00*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		58		ug/L		04/27/12 18:17	04/28/12 20:51	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/28/12 20:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 5*	*04/27/12 18:17*	*04/28/12 20:51*	*1*
p-Terphenyl	*73*		*31 - 150*	*04/27/12 18:17*	*04/28/12 20:51*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B10B-042512
Date Collected: 04/25/12 11:00
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-27
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Acenaphthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Acenaphthylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Fluorene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Phenanthrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Benzo[a]anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Chrysene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Benzo[a]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Benzo[b]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Benzo[k]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Benzo[g,h,i]perylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Indeno[1,2,3-cd]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1
Dibenz(a,h)anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*29 - 120*	*04/27/12 18:27*	*04/30/12 23:24*	*1*
Terphenyl-d14	*50*		*45 - 120*	*04/27/12 18:27*	*04/30/12 23:24*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		62		ug/L		04/27/12 18:17	04/28/12 21:16	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/28/12 21:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 5*	*04/27/12 18:17*	*04/28/12 21:16*	*1*
p-Terphenyl	*53*		*31 - 150*	*04/27/12 18:17*	*04/28/12 21:16*	*1*

Client Sample ID: W-2344-B11B-042512
Date Collected: 04/25/12 12:45
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-28
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Acenaphthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Acenaphthylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Fluorene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Phenanthrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Benzo[a]anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Chrysene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Benzo[a]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Benzo[b]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Benzo[k]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Benzo[g,h,i]perylene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Indeno[1,2,3-cd]pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Fluoranthene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Pyrene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1
Dibenz(a,h)anthracene	ND		0.13		ug/L		04/27/12 18:27	04/30/12 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*29 - 120*	*04/27/12 18:27*	*04/30/12 23:47*	*1*
Terphenyl-d14	*71*		*45 - 120*	*04/27/12 18:27*	*04/30/12 23:47*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		62		ug/L		04/27/12 18:17	04/28/12 21:40	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/28/12 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.003*		*0 - 5*	*04/27/12 18:17*	*04/28/12 21:40*	*1*
p-Terphenyl	*58*		*31 - 150*	*04/27/12 18:17*	*04/28/12 21:40*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B12A-042512
Date Collected: 04/25/12 15:15
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-29
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Acenaphthene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Acenaphthylene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Fluorene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Phenanthrene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Anthracene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Benzo[a]anthracene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Chrysene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Benzo[a]pyrene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Benzo[b]fluoranthene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Benzo[k]fluoranthene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Benzo[g,h,i]perylene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Indeno[1,2,3-cd]pyrene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Fluoranthene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Pyrene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1
Dibenz(a,h)anthracene	ND		0.12		ug/L		04/27/12 18:27	05/01/12 00:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*29 - 120*	*04/27/12 18:27*	*05/01/12 00:11*	*1*
Terphenyl-d14	*72*		*45 - 120*	*04/27/12 18:27*	*05/01/12 00:11*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		57		ug/L		04/27/12 18:17	04/28/12 22:04	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		04/27/12 18:17	04/28/12 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 5*	*04/27/12 18:17*	*04/28/12 22:04*	*1*
p-Terphenyl	*74*		*31 - 150*	*04/27/12 18:17*	*04/28/12 22:04*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B12B-042512
Date Collected: 04/25/12 15:45
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-30
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Acenaphthene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Acenaphthylene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Fluorene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Phenanthrene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Anthracene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Benzo[a]anthracene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Chrysene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Benzo[a]pyrene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Benzo[b]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Benzo[k]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Benzo[g,h,i]perylene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Indeno[1,2,3-cd]pyrene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Fluoranthene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Pyrene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1
Dibenz(a,h)anthracene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 21:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*46*		*29 - 120*	*04/27/12 18:27*	*05/01/12 21:55*	*1*
Terphenyl-d14	*58*		*45 - 120*	*04/27/12 18:27*	*05/01/12 21:55*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		61		ug/L		04/27/12 18:17	04/29/12 00:54	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/29/12 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 5*	*04/27/12 18:17*	*04/29/12 00:54*	*1*
p-Terphenyl	*66*		*31 - 150*	*04/27/12 18:17*	*04/29/12 00:54*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: W-2344-B8A-042512
Date Collected: 04/25/12 16:30
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-31
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Acenaphthene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Acenaphthylene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Fluorene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Phenanthrene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Anthracene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Benzo[a]anthracene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Chrysene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Benzo[a]pyrene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Benzo[b]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Benzo[k]fluoranthene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Benzo[g,h,i]perylene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Indeno[1,2,3-cd]pyrene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Fluoranthene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Pyrene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1
Dibenz(a,h)anthracene	ND		0.13		ug/L		04/27/12 18:27	05/01/12 22:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*29 - 120*	*04/27/12 18:27*	*05/01/12 22:18*	*1*
Terphenyl-d14	*74*		*45 - 120*	*04/27/12 18:27*	*05/01/12 22:18*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		62		ug/L		04/27/12 18:17	04/29/12 01:19	1
Motor Oil Range Organics [C24-C36]	ND		120		ug/L		04/27/12 18:17	04/29/12 01:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 5*	*04/27/12 18:17*	*04/29/12 01:19*	*1*
p-Terphenyl	*75*		*31 - 150*	*04/27/12 18:17*	*04/29/12 01:19*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Client Sample ID: SO-2344-B2-14'-042312
Date Collected: 04/23/12 13:22
Date Received: 04/26/12 18:20

Lab Sample ID: 720-41840-32
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Acenaphthylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Chrysene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Fluorene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Naphthalene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Phenanthrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1
Pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/07/12 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*84*		*33 - 120*	*04/30/12 13:01*	*05/07/12 15:41*	*1*
Terphenyl-d14	*95*		*35 - 146*	*04/30/12 13:01*	*05/07/12 15:41*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.98		mg/Kg		05/04/12 10:50	05/05/12 17:17	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		05/04/12 10:50	05/05/12 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/04/12 10:50*	*05/05/12 17:17*	*1*
p-Terphenyl	*82*		*38 - 148*	*05/04/12 10:50*	*05/05/12 17:17*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-112613/1-A
Matrix: Water
Analysis Batch: 112715

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 112613

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Acenaphthylene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Anthracene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Benzo[a]anthracene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Benzo[a]pyrene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Chrysene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Benzo[b]fluoranthene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Benzo[k]fluoranthene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Fluorene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Fluoranthene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Naphthalene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Phenanthrene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Pyrene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		04/27/12 14:12	04/30/12 16:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*29 - 120*	*04/27/12 14:12*	*04/30/12 16:21*	*1*
Terphenyl-d14	*86*		*45 - 120*	*04/27/12 14:12*	*04/30/12 16:21*	*1*

Lab Sample ID: LCS 720-112613/2-A
Matrix: Water
Analysis Batch: 112715

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 112613

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	10.0	6.88		ug/L		69	37 - 120
Acenaphthylene	10.0	6.77		ug/L		68	36 - 120
Anthracene	10.0	8.22		ug/L		82	45 - 120
Benzo[a]anthracene	10.0	8.32		ug/L		83	48 - 120
Benzo[a]pyrene	10.0	7.49		ug/L		75	50 - 120
Chrysene	10.0	7.66		ug/L		77	40 - 94
Benzo[b]fluoranthene	10.0	8.97		ug/L		90	48 - 120
Benzo[k]fluoranthene	10.0	6.98		ug/L		70	50 - 120
Benzo[g,h,i]perylene	10.0	4.28		ug/L		43	39 - 121
Fluorene	10.0	7.20		ug/L		72	22 - 120
Indeno[1,2,3-cd]pyrene	10.0	4.87		ug/L		49	40 - 126
Fluoranthene	10.0	8.68		ug/L		87	46 - 120
Naphthalene	10.0	6.09		ug/L		61	33 - 120
Phenanthrene	10.0	7.50		ug/L		75	44 - 120
Pyrene	10.0	8.48		ug/L		85	50 - 120
Dibenz(a,h)anthracene	10.0	5.05		ug/L		51	37 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*74*		*29 - 120*
Terphenyl-d14	*90*		*45 - 120*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-112613/3-A
Matrix: Water
Analysis Batch: 112715

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112613

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			10.0	7.20		ug/L		72	37 - 120	5	35
Acenaphthylene			10.0	7.06		ug/L		71	36 - 120	4	35
Anthracene			10.0	8.48		ug/L		85	45 - 120	3	35
Benzo[a]anthracene			10.0	8.42		ug/L		84	48 - 120	1	35
Benzo[a]pyrene			10.0	8.07		ug/L		81	50 - 120	7	35
Chrysene			10.0	7.71		ug/L		77	40 - 94	1	35
Benzo[b]fluoranthene			10.0	9.20		ug/L		92	48 - 120	3	35
Benzo[k]fluoranthene			10.0	7.67		ug/L		77	50 - 120	9	35
Benzo[g,h,i]perylene			10.0	4.51		ug/L		45	39 - 121	5	35
Fluorene			10.0	7.49		ug/L		75	22 - 120	4	35
Indeno[1,2,3-cd]pyrene			10.0	5.19		ug/L		52	40 - 126	6	35
Fluoranthene			10.0	8.78		ug/L		88	46 - 120	1	35
Naphthalene			10.0	6.34		ug/L		63	33 - 120	4	35
Phenanthrene			10.0	7.76		ug/L		78	44 - 120	3	35
Pyrene			10.0	8.15		ug/L		82	50 - 120	4	35
Dibenz(a,h)anthracene			10.0	5.40		ug/L		54	37 - 125	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*78*		*29 - 120*
Terphenyl-d14	*89*		*45 - 120*

Lab Sample ID: MB 720-112717/1-A
Matrix: Solid
Analysis Batch: 112951

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 112717

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Acenaphthylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Chrysene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Fluorene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Fluoranthene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Naphthalene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Phenanthrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Pyrene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		04/30/12 13:01	05/03/12 14:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*85*		*33 - 120*	*04/30/12 13:01*	*05/03/12 14:38*	*1*
Terphenyl-d14	*94*		*35 - 146*	*04/30/12 13:01*	*05/03/12 14:38*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCS 720-112717/2-A
Matrix: Solid
Analysis Batch: 112951

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 112717

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene			0.330	0.247		mg/Kg		75	49 - 120		
Acenaphthylene			0.330	0.237		mg/Kg		72	52 - 120		
Anthracene			0.330	0.288		mg/Kg		87	52 - 120		
Benzo[a]anthracene			0.330	0.280		mg/Kg		85	52 - 120		
Benzo[a]pyrene			0.330	0.298		mg/Kg		90	54 - 120		
Chrysene			0.330	0.265		mg/Kg		80	40 - 120		
Benzo[b]fluoranthene			0.330	0.307		mg/Kg		93	51 - 120		
Benzo[k]fluoranthene			0.330	0.274		mg/Kg		83	56 - 120		
Benzo[g,h,i]perylene			0.330	0.255		mg/Kg		77	48 - 120		
Fluorene			0.330	0.255		mg/Kg		77	52 - 120		
Indeno[1,2,3-cd]pyrene			0.330	0.264		mg/Kg		80	48 - 120		
Fluoranthene			0.330	0.296		mg/Kg		90	57 - 120		
Naphthalene			0.330	0.234		mg/Kg		71	46 - 120		
Phenanthrene			0.330	0.261		mg/Kg		79	48 - 120		
Pyrene			0.330	0.259		mg/Kg		79	53 - 120		
Dibenz(a,h)anthracene			0.330	0.269		mg/Kg		82	50 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*33 - 120*
Terphenyl-d14	*93*		*35 - 146*

Lab Sample ID: LCSD 720-112717/3-A
Matrix: Solid
Analysis Batch: 112951

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 112717

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			0.332	0.280		mg/Kg		84	49 - 120	12	20
Acenaphthylene			0.332	0.263		mg/Kg		79	52 - 120	10	20
Anthracene			0.332	0.311		mg/Kg		94	52 - 120	7	20
Benzo[a]anthracene			0.332	0.292		mg/Kg		88	52 - 120	4	20
Benzo[a]pyrene			0.332	0.311		mg/Kg		94	54 - 120	4	20
Chrysene			0.332	0.280		mg/Kg		84	40 - 120	6	20
Benzo[b]fluoranthene			0.332	0.316		mg/Kg		95	51 - 120	3	20
Benzo[k]fluoranthene			0.332	0.281		mg/Kg		85	56 - 120	2	20
Benzo[g,h,i]perylene			0.332	0.286		mg/Kg		86	48 - 120	12	20
Fluorene			0.332	0.278		mg/Kg		84	52 - 120	8	20
Indeno[1,2,3-cd]pyrene			0.332	0.291		mg/Kg		88	48 - 120	10	20
Fluoranthene			0.332	0.317		mg/Kg		96	57 - 120	7	20
Naphthalene			0.332	0.259		mg/Kg		78	46 - 120	10	20
Phenanthrene			0.332	0.285		mg/Kg		86	48 - 120	9	20
Pyrene			0.332	0.278		mg/Kg		84	53 - 120	7	20
Dibenz(a,h)anthracene			0.332	0.298		mg/Kg		90	50 - 120	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*88*		*33 - 120*
Terphenyl-d14	*97*		*35 - 146*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-112611/1-A
Matrix: Water
Analysis Batch: 112671

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 112611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		04/27/12 14:09	04/29/12 08:35	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		04/27/12 14:09	04/29/12 08:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.001*		*0 - 5*	*04/27/12 14:09*	*04/29/12 08:35*	*1*
p-Terphenyl	*82*		*31 - 150*	*04/27/12 14:09*	*04/29/12 08:35*	*1*

Lab Sample ID: LCS 720-112611/2-A
Matrix: Water
Analysis Batch: 112671

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 112611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2500	1560		ug/L		62	32 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*85*		*31 - 150*

Lab Sample ID: LCSD 720-112611/3-A
Matrix: Water
Analysis Batch: 112671

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 112611

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	2500	1500		ug/L		60	32 - 119	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*80*		*31 - 150*

Lab Sample ID: MB 720-112631/1-A
Matrix: Water
Analysis Batch: 112671

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 112631

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		04/27/12 18:17	04/28/12 23:17	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		04/27/12 18:17	04/28/12 23:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.006*		*0 - 5*	*04/27/12 18:17*	*04/28/12 23:17*	*1*
p-Terphenyl	*82*		*31 - 150*	*04/27/12 18:17*	*04/28/12 23:17*	*1*

Lab Sample ID: LCS 720-112631/2-A
Matrix: Water
Analysis Batch: 112671

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 112631

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2500	1520		ug/L		61	32 - 119

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCS 720-112631/2-A
Matrix: Water
Analysis Batch: 112671

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 112631

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	*87*		*31 - 150*

Lab Sample ID: LCSD 720-112631/3-A
Matrix: Water
Analysis Batch: 112671

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 112631

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1620		ug/L		65	32 - 119	6	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
p-Terphenyl	*84*		*31 - 150*

Lab Sample ID: MB 720-112959/1-A
Matrix: Solid
Analysis Batch: 113010

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 112959

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/03/12 10:30	05/04/12 11:51	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/03/12 10:30	05/04/12 11:51	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0.08*		*0 - 1*	*05/03/12 10:30*	*05/04/12 11:51*	*1*
p-Terphenyl	*100*		*38 - 148*	*05/03/12 10:30*	*05/04/12 11:51*	*1*

Lab Sample ID: LCS 720-112959/2-A
Matrix: Solid
Analysis Batch: 113010

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 112959

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			83.3	53.6		mg/Kg		64	36 - 112		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
p-Terphenyl	*94*		*38 - 148*

Lab Sample ID: LCSD 720-112959/3-A
Matrix: Solid
Analysis Batch: 113010

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 112959

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.8	53.3		mg/Kg		64	36 - 112	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
p-Terphenyl	*90*		*38 - 148*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 720-113018/1-A
Matrix: Solid
Analysis Batch: 113071

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 113018

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/04/12 10:50	05/05/12 22:58	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/04/12 10:50	05/05/12 22:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/04/12 10:50*	*05/05/12 22:58*	*1*
p-Terphenyl	*99*		*38 - 148*	*05/04/12 10:50*	*05/05/12 22:58*	*1*

Lab Sample ID: LCS 720-113018/2-A
Matrix: Solid
Analysis Batch: 113071

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 113018

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			82.9	52.7		mg/Kg		64	36 - 112		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*67*		*38 - 148*

Lab Sample ID: LCSD 720-113018/3-A
Matrix: Solid
Analysis Batch: 113071

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 113018

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			83.3	56.4		mg/Kg		68	36 - 112	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*72*		*38 - 148*

Lab Sample ID: 720-41840-19 MS
Matrix: Solid
Analysis Batch: 113071

Client Sample ID: SO-2344-B5-10'-042312
Prep Type: Silica Gel Cleanup
Prep Batch: 113018

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	ND		82.2	45.9		mg/Kg		55	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
p-Terphenyl	*61*		*38 - 148*

Lab Sample ID: 720-41840-19 MSD
Matrix: Solid
Analysis Batch: 113071

Client Sample ID: SO-2344-B5-10'-042312
Prep Type: Silica Gel Cleanup
Prep Batch: 113018

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		82.5	51.3		mg/Kg		61	50 - 150	11	35

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 720-41840-19 MSD
Matrix: Solid
Analysis Batch: 113071

Client Sample ID: SO-2344-B5-10'-042312
Prep Type: Silica Gel Cleanup
Prep Batch: 113018

Surrogate	MSD %Recovery	MSD Qualifier	Limits
p-Terphenyl	67		38 - 148

GC/MS Semi VOA

Prep Batch: 112613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-15	W-2344-B1-042312	Total/NA	Water	3510C	
720-41840-16	W-2344-B2-042312	Total/NA	Water	3510C	
720-41840-17	W-2344-B3-042312	Total/NA	Water	3510C	
720-41840-20	W-2344-B4-042312	Total/NA	Water	3510C	
720-41840-21	W-2344-B5-042312	Total/NA	Water	3510C	
720-41840-22	W-2344-B6B-042412	Total/NA	Water	3510C	
720-41840-23	W-2344-B7B-042412	Total/NA	Water	3510C	
720-41840-24	W-2344-B8B-042412	Total/NA	Water	3510C	
720-41840-25	W-2344-B9B-042512	Total/NA	Water	3510C	
720-41840-26	W-2344-B10A-042512	Total/NA	Water	3510C	
720-41840-27	W-2344-B10B-042512	Total/NA	Water	3510C	
720-41840-28	W-2344-B11B-042512	Total/NA	Water	3510C	
720-41840-29	W-2344-B12A-042512	Total/NA	Water	3510C	
720-41840-30	W-2344-B12B-042512	Total/NA	Water	3510C	
720-41840-31	W-2344-B8A-042512	Total/NA	Water	3510C	
LCS 720-112613/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-112613/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-112613/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 112715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-17	W-2344-B3-042312	Total/NA	Water	8270C SIM	112613
720-41840-20	W-2344-B4-042312	Total/NA	Water	8270C SIM	112613
720-41840-21	W-2344-B5-042312	Total/NA	Water	8270C SIM	112613
720-41840-22	W-2344-B6B-042412	Total/NA	Water	8270C SIM	112613
720-41840-23	W-2344-B7B-042412	Total/NA	Water	8270C SIM	112613
720-41840-24	W-2344-B8B-042412	Total/NA	Water	8270C SIM	112613
720-41840-25	W-2344-B9B-042512	Total/NA	Water	8270C SIM	112613
720-41840-26	W-2344-B10A-042512	Total/NA	Water	8270C SIM	112613
720-41840-27	W-2344-B10B-042512	Total/NA	Water	8270C SIM	112613
720-41840-28	W-2344-B11B-042512	Total/NA	Water	8270C SIM	112613
720-41840-29	W-2344-B12A-042512	Total/NA	Water	8270C SIM	112613
LCS 720-112613/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	112613
LCSD 720-112613/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	112613
MB 720-112613/1-A	Method Blank	Total/NA	Water	8270C SIM	112613

Prep Batch: 112717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-1	SO-2344-B1-5'-042312	Total/NA	Solid	3546	
720-41840-2	SO-2344-B2-5'-042312	Total/NA	Solid	3546	
720-41840-4	SO-2344-B1-16'-042312	Total/NA	Solid	3546	
720-41840-5	SO-2344-B1-10'-042312	Total/NA	Solid	3546	
720-41840-6	SO-2344-B3-5'-042312	Total/NA	Solid	3546	
720-41840-7	SO-2344-B2-11'-042312	Total/NA	Solid	3546	
720-41840-9	SO-2344-B4-5'-042312	Total/NA	Solid	3546	
720-41840-10	SO-2344-B3-15.5'-042312	Total/NA	Solid	3546	
720-41840-11	SO-2344-B3-12'-042312	Total/NA	Solid	3546	
720-41840-12	SO-2344-B5-5'-042312	Total/NA	Solid	3546	
720-41840-13	SO-2344-B4-12'-042312	Total/NA	Solid	3546	
720-41840-14	SO-2344-B4-16'-042312	Total/NA	Solid	3546	
720-41840-18	SO-2344-B5-16'-042312	Total/NA	Solid	3546	
720-41840-19	SO-2344-B5-10'-042312	Total/NA	Solid	3546	

GC/MS Semi VOA (Continued)

Prep Batch: 112717 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-32	SO-2344-B2-14'-042312	Total/NA	Solid	3546	
LCS 720-112717/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-112717/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-112717/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 112801

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-30	W-2344-B12B-042512	Total/NA	Water	8270C SIM	112613
720-41840-31	W-2344-B8A-042512	Total/NA	Water	8270C SIM	112613

Analysis Batch: 112886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-15	W-2344-B1-042312	Total/NA	Water	8270C SIM	112613
720-41840-16	W-2344-B2-042312	Total/NA	Water	8270C SIM	112613

Analysis Batch: 112951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-112717/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	112717
LCSD 720-112717/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	112717
MB 720-112717/1-A	Method Blank	Total/NA	Solid	8270C SIM	112717

Analysis Batch: 113084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-2	SO-2344-B2-5'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-4	SO-2344-B1-16'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-6	SO-2344-B3-5'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-10	SO-2344-B3-15.5'-042312	Total/NA	Solid	8270C SIM	112717

Analysis Batch: 113121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-1	SO-2344-B1-5'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-5	SO-2344-B1-10'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-7	SO-2344-B2-11'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-9	SO-2344-B4-5'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-11	SO-2344-B3-12'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-12	SO-2344-B5-5'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-13	SO-2344-B4-12'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-14	SO-2344-B4-16'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-18	SO-2344-B5-16'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-19	SO-2344-B5-10'-042312	Total/NA	Solid	8270C SIM	112717
720-41840-32	SO-2344-B2-14'-042312	Total/NA	Solid	8270C SIM	112717

GC Semi VOA

Prep Batch: 112611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-15	W-2344-B1-042312	Silica Gel Cleanup	Water	3510C SGC	
720-41840-16	W-2344-B2-042312	Silica Gel Cleanup	Water	3510C SGC	
720-41840-17	W-2344-B3-042312	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-112611/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-112611/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-112611/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

GC Semi VOA (Continued)

Prep Batch: 112631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-20	W-2344-B4-042312	Silica Gel Cleanup	Water	3510C SGC	
720-41840-21	W-2344-B5-042312	Silica Gel Cleanup	Water	3510C SGC	
720-41840-22	W-2344-B6B-042412	Silica Gel Cleanup	Water	3510C SGC	
720-41840-23	W-2344-B7B-042412	Silica Gel Cleanup	Water	3510C SGC	
720-41840-24	W-2344-B8B-042412	Silica Gel Cleanup	Water	3510C SGC	
720-41840-25	W-2344-B9B-042512	Silica Gel Cleanup	Water	3510C SGC	
720-41840-26	W-2344-B10A-042512	Silica Gel Cleanup	Water	3510C SGC	
720-41840-27	W-2344-B10B-042512	Silica Gel Cleanup	Water	3510C SGC	
720-41840-28	W-2344-B11B-042512	Silica Gel Cleanup	Water	3510C SGC	
720-41840-29	W-2344-B12A-042512	Silica Gel Cleanup	Water	3510C SGC	
720-41840-30	W-2344-B12B-042512	Silica Gel Cleanup	Water	3510C SGC	
720-41840-31	W-2344-B8A-042512	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-112631/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-112631/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-112631/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 112671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-21	W-2344-B5-042312	Silica Gel Cleanup	Water	8015B	112631
720-41840-22	W-2344-B6B-042412	Silica Gel Cleanup	Water	8015B	112631
720-41840-23	W-2344-B7B-042412	Silica Gel Cleanup	Water	8015B	112631
720-41840-24	W-2344-B8B-042412	Silica Gel Cleanup	Water	8015B	112631
720-41840-25	W-2344-B9B-042512	Silica Gel Cleanup	Water	8015B	112631
720-41840-26	W-2344-B10A-042512	Silica Gel Cleanup	Water	8015B	112631
720-41840-27	W-2344-B10B-042512	Silica Gel Cleanup	Water	8015B	112631
720-41840-28	W-2344-B11B-042512	Silica Gel Cleanup	Water	8015B	112631
720-41840-29	W-2344-B12A-042512	Silica Gel Cleanup	Water	8015B	112631
720-41840-30	W-2344-B12B-042512	Silica Gel Cleanup	Water	8015B	112631
720-41840-31	W-2344-B8A-042512	Silica Gel Cleanup	Water	8015B	112631
LCS 720-112611/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	112611
LCS 720-112631/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	112631
LCSD 720-112611/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	112611
LCSD 720-112631/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	112631
MB 720-112611/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	112611
MB 720-112631/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	112631

Analysis Batch: 112693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-15	W-2344-B1-042312	Silica Gel Cleanup	Water	8015B	112611
720-41840-16	W-2344-B2-042312	Silica Gel Cleanup	Water	8015B	112611
720-41840-17	W-2344-B3-042312	Silica Gel Cleanup	Water	8015B	112611
720-41840-20	W-2344-B4-042312	Silica Gel Cleanup	Water	8015B	112631

Prep Batch: 112959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-1	SO-2344-B1-5'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-2	SO-2344-B2-5'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-4	SO-2344-B1-16'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-5	SO-2344-B1-10'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-6	SO-2344-B3-5'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-7	SO-2344-B2-11'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-9	SO-2344-B4-5'-042312	Silica Gel Cleanup	Solid	3546	

GC Semi VOA (Continued)

Prep Batch: 112959 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-10	SO-2344-B3-15.5'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-11	SO-2344-B3-12'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-12	SO-2344-B5-5'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-13	SO-2344-B4-12'-042312	Silica Gel Cleanup	Solid	3546	
LCS 720-112959/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-112959/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-112959/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 113008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-4	SO-2344-B1-16'-042312	Silica Gel Cleanup	Solid	8015B	112959
720-41840-5	SO-2344-B1-10'-042312	Silica Gel Cleanup	Solid	8015B	112959
720-41840-6	SO-2344-B3-5'-042312	Silica Gel Cleanup	Solid	8015B	112959
720-41840-10	SO-2344-B3-15.5'-042312	Silica Gel Cleanup	Solid	8015B	112959
720-41840-11	SO-2344-B3-12'-042312	Silica Gel Cleanup	Solid	8015B	112959
720-41840-12	SO-2344-B5-5'-042312	Silica Gel Cleanup	Solid	8015B	112959

Analysis Batch: 113010

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-1	SO-2344-B1-5'-042312	Silica Gel Cleanup	Solid	8015B	112959
720-41840-2	SO-2344-B2-5'-042312	Silica Gel Cleanup	Solid	8015B	112959
LCS 720-112959/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	112959
LCSD 720-112959/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	112959
MB 720-112959/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	112959

Prep Batch: 113018

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-14	SO-2344-B4-16'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-18	SO-2344-B5-16'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-19	SO-2344-B5-10'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-19 MS	SO-2344-B5-10'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-19 MSD	SO-2344-B5-10'-042312	Silica Gel Cleanup	Solid	3546	
720-41840-32	SO-2344-B2-14'-042312	Silica Gel Cleanup	Solid	3546	
LCS 720-113018/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-113018/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-113018/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 113068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-7	SO-2344-B2-11'-042312	Silica Gel Cleanup	Solid	8015B	112959
720-41840-9	SO-2344-B4-5'-042312	Silica Gel Cleanup	Solid	8015B	112959
720-41840-13	SO-2344-B4-12'-042312	Silica Gel Cleanup	Solid	8015B	112959

Analysis Batch: 113071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-41840-14	SO-2344-B4-16'-042312	Silica Gel Cleanup	Solid	8015B	113018
720-41840-18	SO-2344-B5-16'-042312	Silica Gel Cleanup	Solid	8015B	113018
720-41840-19	SO-2344-B5-10'-042312	Silica Gel Cleanup	Solid	8015B	113018
720-41840-19 MS	SO-2344-B5-10'-042312	Silica Gel Cleanup	Solid	8015B	113018
720-41840-19 MSD	SO-2344-B5-10'-042312	Silica Gel Cleanup	Solid	8015B	113018
720-41840-32	SO-2344-B2-14'-042312	Silica Gel Cleanup	Solid	8015B	113018
LCS 720-113018/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	113018

GC Semi VOA (Continued)

Analysis Batch: 113071 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-113018/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	113018
MB 720-113018/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	113018

Client Sample ID: SO-2344-B1-5'-042312

Lab Sample ID: 720-41840-1

Date Collected: 04/23/12 10:50

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		5	113121	05/07/12 16:29	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113010	05/04/12 17:19	JZ	TAL SF

Client Sample ID: SO-2344-B2-5'-042312

Lab Sample ID: 720-41840-2

Date Collected: 04/23/12 11:39

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113084	05/05/12 23:23	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113010	05/04/12 17:43	JZ	TAL SF

Client Sample ID: SO-2344-B1-16'-042312

Lab Sample ID: 720-41840-4

Date Collected: 04/23/12 11:54

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113084	05/05/12 23:46	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113008	05/04/12 14:35	JZ	TAL SF

Client Sample ID: SO-2344-B1-10'-042312

Lab Sample ID: 720-41840-5

Date Collected: 04/23/12 12:04

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		5	113121	05/07/12 16:52	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113008	05/04/12 14:58	JZ	TAL SF

Client Sample ID: SO-2344-B3-5'-042312

Lab Sample ID: 720-41840-6

Date Collected: 04/23/12 12:13

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113084	05/06/12 00:10	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113008	05/04/12 15:22	JZ	TAL SF

Client Sample ID: SO-2344-B2-11'-042312

Lab Sample ID: 720-41840-7

Date Collected: 04/23/12 13:17

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		5	113121	05/07/12 17:16	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		5	113068	05/05/12 20:35	JZ	TAL SF

Client Sample ID: SO-2344-B4-5'-042312

Lab Sample ID: 720-41840-9

Date Collected: 04/23/12 13:41

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		5	113121	05/07/12 17:39	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		3	113068	05/05/12 20:59	JZ	TAL SF

Client Sample ID: SO-2344-B3-15.5'-042312

Lab Sample ID: 720-41840-10

Date Collected: 04/23/12 14:16

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113084	05/06/12 00:33	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113008	05/04/12 16:32	JZ	TAL SF

Client Sample ID: SO-2344-B3-12'-042312

Lab Sample ID: 720-41840-11

Date Collected: 04/23/12 14:22

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113121	05/07/12 13:20	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113008	05/04/12 16:56	JZ	TAL SF

Client Sample ID: SO-2344-B5-5'-042312

Lab Sample ID: 720-41840-12

Date Collected: 04/23/12 15:06

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113121	05/07/12 13:43	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113008	05/04/12 17:19	JZ	TAL SF

Client Sample ID: SO-2344-B4-12'-042312

Lab Sample ID: 720-41840-13

Date Collected: 04/23/12 15:22

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		2	113121	05/07/12 14:07	ML	TAL SF
Silica Gel Cleanup	Prep	3546			112959	05/03/12 10:30	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		10	113068	05/05/12 21:22	JZ	TAL SF

Client Sample ID: SO-2344-B4-16'-042312

Lab Sample ID: 720-41840-14

Date Collected: 04/23/12 15:25

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113121	05/07/12 14:30	ML	TAL SF
Silica Gel Cleanup	Prep	3546			113018	05/04/12 10:50	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113071	05/05/12 16:28	JZ	TAL SF

Client Sample ID: W-2344-B1-042312

Lab Sample ID: 720-41840-15

Date Collected: 04/23/12 15:30

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		5	112886	05/02/12 20:07	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112611	04/27/12 14:09	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112693	04/30/12 14:49	JZ	TAL SF

Client Sample ID: W-2344-B2-042312

Lab Sample ID: 720-41840-16

Date Collected: 04/23/12 15:45

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		5	112886	05/02/12 20:31	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112611	04/27/12 14:09	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		20	112693	04/30/12 15:12	JZ	TAL SF

Client Sample ID: W-2344-B3-042312

Lab Sample ID: 720-41840-17

Date Collected: 04/23/12 16:00

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 20:15	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112611	04/27/12 14:09	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112693	04/30/12 15:36	JZ	TAL SF

Client Sample ID: SO-2344-B5-16'-042312

Lab Sample ID: 720-41840-18

Date Collected: 04/23/12 16:26

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113121	05/07/12 14:54	ML	TAL SF
Silica Gel Cleanup	Prep	3546			113018	05/04/12 10:50	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113071	05/05/12 16:53	JZ	TAL SF

Client Sample ID: SO-2344-B5-10'-042312

Lab Sample ID: 720-41840-19

Date Collected: 04/23/12 16:28

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113121	05/07/12 15:18	ML	TAL SF
Silica Gel Cleanup	Prep	3546			113018	05/04/12 10:50	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113071	05/05/12 16:04	JZ	TAL SF

Client Sample ID: W-2344-B4-042312

Lab Sample ID: 720-41840-20

Date Collected: 04/23/12 16:45

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 20:39	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		10	112693	04/30/12 12:27	JZ	TAL SF

Client Sample ID: W-2344-B5-042312

Lab Sample ID: 720-41840-21

Date Collected: 04/23/12 17:00

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 21:02	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 18:50	JZ	TAL SF

Client Sample ID: W-2344-B6B-042412

Lab Sample ID: 720-41840-22

Date Collected: 04/24/12 11:45

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 21:26	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 19:14	JZ	TAL SF

Client Sample ID: W-2344-B7B-042412

Lab Sample ID: 720-41840-23

Date Collected: 04/24/12 13:21

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 21:49	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 19:38	JZ	TAL SF

Client Sample ID: W-2344-B8B-042412

Lab Sample ID: 720-41840-24

Date Collected: 04/24/12 15:16

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 22:13	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 20:03	JZ	TAL SF

Client Sample ID: W-2344-B9B-042512

Lab Sample ID: 720-41840-25

Date Collected: 04/25/12 08:00

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 22:37	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 20:27	JZ	TAL SF

Client Sample ID: W-2344-B10A-042512

Lab Sample ID: 720-41840-26

Date Collected: 04/25/12 10:00

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 23:00	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 20:51	JZ	TAL SF

Client Sample ID: W-2344-B10B-042512

Lab Sample ID: 720-41840-27

Date Collected: 04/25/12 11:00

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 23:24	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 21:16	JZ	TAL SF

Client Sample ID: W-2344-B11B-042512

Lab Sample ID: 720-41840-28

Date Collected: 04/25/12 12:45

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	04/30/12 23:47	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 21:40	JZ	TAL SF

Client Sample ID: W-2344-B12A-042512

Lab Sample ID: 720-41840-29

Date Collected: 04/25/12 15:15

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112715	05/01/12 00:11	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/28/12 22:04	JZ	TAL SF

Client Sample ID: W-2344-B12B-042512

Lab Sample ID: 720-41840-30

Date Collected: 04/25/12 15:45

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112801	05/01/12 21:55	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/29/12 00:54	JZ	TAL SF

Client Sample ID: W-2344-B8A-042512

Lab Sample ID: 720-41840-31

Date Collected: 04/25/12 16:30

Matrix: Water

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			112613	04/27/12 18:27	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	112801	05/01/12 22:18	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			112631	04/27/12 18:17	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	112671	04/29/12 01:19	JZ	TAL SF

Client Sample ID: SO-2344-B2-14'-042312

Lab Sample ID: 720-41840-32

Date Collected: 04/23/12 13:22

Matrix: Solid

Date Received: 04/26/12 18:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			112717	04/30/12 13:01	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	113121	05/07/12 15:41	ML	TAL SF
Silica Gel Cleanup	Prep	3546			113018	05/04/12 10:50	MP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	113071	05/05/12 17:17	JZ	TAL SF

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Laboratory	Authority	Program	EPA Region	Certification ID

Accreditation may not be offered or required for all methods and analytes reported in this package . Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-41840-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-41840-1	SO-2344-B1-5'-042312	Solid	04/23/12 10:50	04/26/12 18:20
720-41840-2	SO-2344-B2-5'-042312	Solid	04/23/12 11:39	04/26/12 18:20
720-41840-4	SO-2344-B1-16'-042312	Solid	04/23/12 11:54	04/26/12 18:20
720-41840-5	SO-2344-B1-10'-042312	Solid	04/23/12 12:04	04/26/12 18:20
720-41840-6	SO-2344-B3-5'-042312	Solid	04/23/12 12:13	04/26/12 18:20
720-41840-7	SO-2344-B2-11'-042312	Solid	04/23/12 13:17	04/26/12 18:20
720-41840-9	SO-2344-B4-5'-042312	Solid	04/23/12 13:41	04/26/12 18:20
720-41840-10	SO-2344-B3-15.5'-042312	Solid	04/23/12 14:16	04/26/12 18:20
720-41840-11	SO-2344-B3-12'-042312	Solid	04/23/12 14:22	04/26/12 18:20
720-41840-12	SO-2344-B5-5'-042312	Solid	04/23/12 15:06	04/26/12 18:20
720-41840-13	SO-2344-B4-12'-042312	Solid	04/23/12 15:22	04/26/12 18:20
720-41840-14	SO-2344-B4-16'-042312	Solid	04/23/12 15:25	04/26/12 18:20
720-41840-15	W-2344-B1-042312	Water	04/23/12 15:30	04/26/12 18:20
720-41840-16	W-2344-B2-042312	Water	04/23/12 15:45	04/26/12 18:20
720-41840-17	W-2344-B3-042312	Water	04/23/12 16:00	04/26/12 18:20
720-41840-18	SO-2344-B5-16'-042312	Solid	04/23/12 16:26	04/26/12 18:20
720-41840-19	SO-2344-B5-10'-042312	Solid	04/23/12 16:28	04/26/12 18:20
720-41840-20	W-2344-B4-042312	Water	04/23/12 16:45	04/26/12 18:20
720-41840-21	W-2344-B5-042312	Water	04/23/12 17:00	04/26/12 18:20
720-41840-22	W-2344-B6B-042412	Water	04/24/12 11:45	04/26/12 18:20
720-41840-23	W-2344-B7B-042412	Water	04/24/12 13:21	04/26/12 18:20
720-41840-24	W-2344-B8B-042412	Water	04/24/12 15:16	04/26/12 18:20
720-41840-25	W-2344-B9B-042512	Water	04/25/12 08:00	04/26/12 18:20
720-41840-26	W-2344-B10A-042512	Water	04/25/12 10:00	04/26/12 18:20
720-41840-27	W-2344-B10B-042512	Water	04/25/12 11:00	04/26/12 18:20
720-41840-28	W-2344-B11B-042512	Water	04/25/12 12:45	04/26/12 18:20
720-41840-29	W-2344-B12A-042512	Water	04/25/12 15:15	04/26/12 18:20
720-41840-30	W-2344-B12B-042512	Water	04/25/12 15:45	04/26/12 18:20
720-41840-31	W-2344-B8A-042512	Water	04/25/12 16:30	04/26/12 18:20
720-41840-32	SO-2344-B2-14'-042312	Solid	04/23/12 13:22	04/26/12 18:20

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

720-41840

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 138012

Date _____ Page 1 of 4

5/10/2012

Report To

Attn: Lia Holden
Company: Antea Group
Address:
Email: lia.holden@anteagroup.com
Bill To: UPRR
Sampled By: Renee Ransom
Attn: James DeFel
Phone: 408.826.1871

Analysis Request

Sample ID	Date	Time	Mat rix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☒ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	SemiVolatile Organics GC/MS ☐ EPA 8270C	PNA/PAH's by ☐ 8270C ☒ 8270C SIM	Oil and Grease (EPA 1664/9071) ☐ Petroleum ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Metals: ☐ 6020 ☐ 200.8 (ICP-MS): ___	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex. Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity	HOLD		Number of Containers
1. SO-2344-B1-5'-042312		1050	S	None				X		X															
2. SO-2344-B2-5'-042312		1139	S	None				X		X															
3. SO-2344-B1-14'-042312		1152																				X			
4. SO-2344-B1-16'-042312		1154						X		X															
5. SO-2344-B1-10'-042312		1204						X		X															
6. SO-2344-B3-5'-042312		1213						X		X															
7. SO-2344-B2-11'-042312		117						X		X															
8. SO-2344-B2-12'-042312		119																				X			
9. SO-2344-B4-5'-042312		141						X		X															
10. SO-2344-B3-15.5'-042312		216						X		X															

Project Info

Project Name/ #:
PO#:
Credit Card Y/N: If yes, please call with payment information ASAP

Sample Receipt

of Containers:
Head Space:
Temp: 2.9, 1.4, 3.1 °C
1.6, 10.6, 2.2, 3.9 °C

TAT: 10 Day | 5 Day | 4 Day | 3 Day | 2 Day | 1 Day | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID _____

See Terms and Conditions on reverse

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: Renee Ransom	Signature:	Signature:
Time: 355	Time: 1820	Time:
Printed Name: Renee Ransom	Printed Name: Sara Mathe	Printed Name:
Date: 4/26/12	Date: 04/26/12	Date:
Company: Antea	Company: TBSR	Company:

1) Received by:	2) Received by:	3) Received by:
Signature:	Signature:	Signature:
Time: 1713	Time: 1820	Time:
Printed Name: Sara Mathe	Printed Name: T Bullock	Printed Name:
Date: 04/26/12	Date: 4/26/12	Date:
Company: TBSR	Company: Test America	Company:

Rev.01/2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

720-41840

TESTAMERICA San Francisco Chain of Custody
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 138012
Date _____ Page 2 of 4

5/10/2012

Report To

Attn:
Company:
Address:
Email:
Bill To: | Sampled By:
Attn: | Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	SemiVolatile Organics GC/MS ☐ EPA 8270C	PNA/PAH's by ☐ 8270C ☐ 8270C SIM	Oil and Grease (EPA 1664/9071) ☐ Petroleum ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Metals: ☐ 6020 ☐ 200.8 (ICP-MS): ___	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex. Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity			Number of Containers
11. SO-2344-B3-12'-042312		222	S	None				X		X																
12. SO-2344-B5-5'-042312		306	S	None				X		X																
13. SO-2344-B4-12'-042312		322	S	None				X		X																
14. SO-2344-B4-16'-042312		325	S	None				X		X																
15. W-2344-B1-042312		330	W					X		X																
16. W-2344-B2-042312		345	W					X		X																
17. W-2344-B2-042312		400	W					X		X																
18. SO-2344-B5-16'-042312		426	S					X		X																
19. SO-2344-B5-10'-042312		428	S					X		X																
20. W-2344-B4-042312		445	W	↓				X		X																

Project Info

Project Name/ #:
PO#:
Credit Card Y/N: If yes, please call with payment information ASAP

Sample Receipt

of Containers:
Head Space:
Temp:

TAT: 10 Day | 5 Day | 4 Day | 3 Day | 2 Day | 1 Day | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID _____

See Terms and Conditions on reverse

	1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature	Pam		
Time	355	1820	
Printed Name	Renee Ransom	Sario Motha	
Date	4/26/12	04/26/12	
Company	Amtech	TASP	

	1) Received by:	2) Received by:	3) Received by:
Signature			
Time	1713	1820	
Printed Name	Sario Motha	TBullock	
Date	04/26/12	4/26/12	
Company	TASP	TestAmerica	

Rev.01/2012

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

720-41840

TESTAMERICA San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 138012
Date _____ Page 3 of 4

5/10/2012

Report To

Attn:
Company:
Address:
Email:
Bill To: | Sampled By:
Attn: | Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	SemiVolatile Organics GC/MS ☐ EPA 8270C	PNA/PAHs by ☐ 8270C ☐ 8270C SIM	Oil and Grease (EPA 1664/9071) ☐ Petroleum ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Metals: ☐ 6020 ☐ 200.8 (ICP-MS): ___	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex. Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity			Number of Containers
1 W-2344-BS-042312		500	W	NONE				X		X															1
2 W-2344-B6B-042412		1145	W	None				X		X															1
3 W-2344-B7B-042412		121	W	None				X		X															1
~~W-2344-B7B-042412~~		150																							
4 W-2344-B8B-042412		316	W	None				X		X															1
5 W-2344-B9B-042512		800	W	None				X		X															1
6 W-2344-B10A-042512		1000	W	None				X		X															1
7 W-2344-B10B-042512		1100	W	None				X		X															1
8 W-2344-B11B-042512		1245	W	None				X		X															1

Project Info

Project Name/ #:
PO#:

Sample Receipt

of Containers:
Head Space:
Temp:

Credit Card Y/N: If yes, please call with payment information ASAP

TAT: 10 Day | 5 Day | 4 Day | 3 Day | 2 Day | 1 Day | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID _____

See Terms and Conditions on reverse

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature: [signature] Time: 355	Signature: [signature] Time: 1820	Signature: Time:
Printed Name: Renee Ransom Date: 4/26/12	Printed Name: Savio Motha Date: 04/26/12	Printed Name: Date:
Company: Antea	Company: TASE	Company:

1) Received by:	2) Received by:	3) Received by:
Signature: [signature] Time: 1713	Signature: [signature] Time: 1820	Signature: Time:
Printed Name: Savio Motha Date: 04/26/12	Printed Name: T Bullock Date: 4/26/12	Printed Name: Date:
Company: TASE	Company: Test America	Company:

Rev.01/2012

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA San Francisco Chain of Custody

1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 138012

Date _____ Page 4 of 4

720-41840

5/10/2012

Report To

Attn:
Company:
Address:
Email:
Bill To:
Sampled By:
Attn:
Phone:

Analysis Request

Sample ID	Date	Time	Matrix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	SemiVolatile Organics GC/MS ☐ EPA 8270C	PNA/PAHs by ☐ 8270C ☐ 8270C SIM	Oil and Grease (EPA 1664/9071) ☐ Petroleum ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Metals: ☐ 6020 ☐ 200.8 (ICP-MS): ___	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex. Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions: ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity			Number of Containers
W-2344-B12A-042512		315	W	None				X		X															1
W-2344-B12B-042512		345	W	None				X		X															1
W-2344-B8A-042512		430	W	None				X		X															1
SO-2344-B2-14-042312		122	S	None				X		X															1

no more samples RNR

Project Info

Project Name/ #:
PO#:

Sample Receipt

of Containers:
Head Space:
Temp:

Credit Card Y/N: If yes, please call with payment information ASAP

TAT: 10 Day | 5 Day | 4 Day | 3 Day | 2 Day | 1 Day | Other:

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID _____

See Terms and Conditions on reverse

	1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature	Renee Ransom	Sandy Mathe	
Time	355	1820	
Printed Name	Renee Ransom	Sandy Mathe	
Date	1/26/12	04/26/12	
Company	Uncca	TASF	

	1) Received by:	2) Received by:	3) Received by:
Signature		T Bullock	
Time	1713	1820	
Printed Name	Sandy Mathe	T Bullock	
Date	04/26/12	4/26/12	
Company	TASF	Test America	

Rev.01/2012

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-41840-1

Login Number: 41840

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-43207-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
7/24/2012 12:17:22 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Job ID: 720-43207-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-43207-1

Comments
No additional comments.

Receipt
The samples were received on 7/11/2012 7:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 4.1º C.

Except:

Received 2 containers not listed on coc: SO-2344-SSW-100712 and SO-2344-SSW1-100712 the time on both containers is 9:30.
Logged as 1 sample with 2 containers on hold.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-SSW1-100712 (720-43207-3), SO-2344-SSW2-100712 (720-43207-4). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC Semi VOA
Method 8015B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: SO-2344-SSW1-100712 (720-43207-3), SO-2344-SSW2-100712 (720-43207-4).

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-BASE1-100712 — Lab Sample ID: 720-43207-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	40		0.99		mg/Kg	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	63		49		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-WSW1-100712 — Lab Sample ID: 720-43207-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.0		0.99		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-SSW1-100712 — Lab Sample ID: 720-43207-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	320		5.0		mg/Kg	5		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	500		250		mg/Kg	5		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-SSW2-100712 — Lab Sample ID: 720-43207-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	56		50		ug/Kg	10		8270C SIM	Total/NA
Chrysene	72		50		ug/Kg	10		8270C SIM	Total/NA
Pyrene	62		50		ug/Kg	10		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	1800		20		mg/Kg	20		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	2000		1000		mg/Kg	20		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-BASE2-100712 — Lab Sample ID: 720-43207-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pyrene	8.2		4.9		ug/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	170		1.0		mg/Kg	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	180		50		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-NSW2-100712 — Lab Sample ID: 720-43207-6

No Detections

Client Sample ID: SO-2344-NSW1-100712 — Lab Sample ID: 720-43207-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	18		1.0		mg/Kg	1		8015B	Silica Gel Cleanup

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-BASE1-100712
Date Collected: 07/10/12 08:50
Date Received: 07/11/12 07:20

Lab Sample ID: 720-43207-1
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Acenaphthylene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Chrysene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Fluorene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Naphthalene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Phenanthrene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1
Pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/14/12 07:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*58*		*33 - 120*	*07/11/12 11:59*	*07/14/12 07:47*	*1*
Terphenyl-d14	*69*		*35 - 146*	*07/11/12 11:59*	*07/14/12 07:47*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**40**		0.99		mg/Kg		07/11/12 12:00	07/13/12 22:04	1
Motor Oil Range Organics [C24-C36]	**63**		49		mg/Kg		07/11/12 12:00	07/13/12 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.2*		*0 - 1*	*07/11/12 12:00*	*07/13/12 22:04*	*1*
p-Terphenyl	*71*		*38 - 148*	*07/11/12 12:00*	*07/13/12 22:04*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-WSW1-100712
Date Collected: 07/10/12 09:07
Date Received: 07/11/12 07:20

Lab Sample ID: 720-43207-2
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Acenaphthylene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Chrysene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Fluorene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Naphthalene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Phenanthrene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1
Pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*53*		*33 - 120*	*07/11/12 11:59*	*07/16/12 14:25*	*1*
Terphenyl-d14	*56*		*35 - 146*	*07/11/12 11:59*	*07/16/12 14:25*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.0**		0.99		mg/Kg		07/11/12 12:00	07/12/12 17:03	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/11/12 12:00	07/12/12 17:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 1*	*07/11/12 12:00*	*07/12/12 17:03*	*1*
p-Terphenyl	*66*		*38 - 148*	*07/11/12 12:00*	*07/12/12 17:03*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-SSW1-100712
Date Collected: 07/10/12 09:20
Date Received: 07/11/12 07:20

Lab Sample ID: 720-43207-3
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Acenaphthylene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Anthracene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Benzo[a]anthracene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Benzo[a]pyrene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Benzo[b]fluoranthene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Benzo[g,h,i]perylene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Benzo[k]fluoranthene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Chrysene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Fluoranthene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Fluorene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Indeno[1,2,3-cd]pyrene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Naphthalene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Phenanthrene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5
Pyrene	ND		25		ug/Kg		07/11/12 11:59	07/16/12 18:27	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*42*		*33 - 120*	*07/11/12 11:59*	*07/16/12 18:27*	*5*
Terphenyl-d14	*53*		*35 - 146*	*07/11/12 11:59*	*07/16/12 18:27*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**320**		5.0		mg/Kg		07/11/12 12:00	07/13/12 22:29	5
Motor Oil Range Organics [C24-C36]	**500**		250		mg/Kg		07/11/12 12:00	07/13/12 22:29	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/11/12 12:00*	*07/13/12 22:29*	*5*
p-Terphenyl	*0*	*X D*	*38 - 148*	*07/11/12 12:00*	*07/13/12 22:29*	*5*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-SSW2-100712
Date Collected: 07/10/12 11:55
Date Received: 07/11/12 07:20

Lab Sample ID: 720-43207-4
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Acenaphthylene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Anthracene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Benzo[a]anthracene	**56**		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Benzo[a]pyrene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Benzo[b]fluoranthene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Benzo[g,h,i]perylene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Benzo[k]fluoranthene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Chrysene	**72**		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Dibenz(a,h)anthracene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Fluoranthene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Fluorene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Indeno[1,2,3-cd]pyrene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Naphthalene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Phenanthrene	ND		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10
Pyrene	**62**		50		ug/Kg		07/11/12 11:59	07/16/12 18:51	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*43*		*33 - 120*	*07/11/12 11:59*	*07/16/12 18:51*	*10*
Terphenyl-d14	*60*		*35 - 146*	*07/11/12 11:59*	*07/16/12 18:51*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1800**		20		mg/Kg		07/11/12 12:00	07/13/12 22:53	20
Motor Oil Range Organics [C24-C36]	**2000**		1000		mg/Kg		07/11/12 12:00	07/13/12 22:53	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/11/12 12:00*	*07/13/12 22:53*	*20*
p-Terphenyl	*0*	*X D*	*38 - 148*	*07/11/12 12:00*	*07/13/12 22:53*	*20*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-BASE2-100712
Date Collected: 07/10/12 12:00
Date Received: 07/11/12 07:20

Lab Sample ID: 720-43207-5
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Acenaphthylene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Anthracene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Benzo[a]anthracene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Benzo[a]pyrene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Benzo[b]fluoranthene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Benzo[g,h,i]perylene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Benzo[k]fluoranthene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Chrysene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Dibenz(a,h)anthracene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Fluoranthene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Fluorene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Indeno[1,2,3-cd]pyrene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Naphthalene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Phenanthrene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1
Pyrene	**8.2**		4.9		ug/Kg		07/11/12 11:59	07/16/12 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*33 - 120*	*07/11/12 11:59*	*07/16/12 14:48*	*1*
Terphenyl-d14	*67*		*35 - 146*	*07/11/12 11:59*	*07/16/12 14:48*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**170**		1.0		mg/Kg		07/11/12 12:00	07/13/12 23:18	1
Motor Oil Range Organics [C24-C36]	**180**		50		mg/Kg		07/11/12 12:00	07/13/12 23:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*1*		*0 - 1*	*07/11/12 12:00*	*07/13/12 23:18*	*1*
p-Terphenyl	*72*		*38 - 148*	*07/11/12 12:00*	*07/13/12 23:18*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-NSW2-100712
Date Collected: 07/10/12 12:15
Date Received: 07/11/12 07:20

Lab Sample ID: 720-43207-6
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Acenaphthylene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Anthracene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Benzo[a]anthracene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Benzo[a]pyrene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Benzo[b]fluoranthene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Benzo[g,h,i]perylene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Benzo[k]fluoranthene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Chrysene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Dibenz(a,h)anthracene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Fluoranthene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Fluorene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Indeno[1,2,3-cd]pyrene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Naphthalene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Phenanthrene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1
Pyrene	ND		4.9		ug/Kg		07/11/12 11:59	07/16/12 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*58*		*33 - 120*	*07/11/12 11:59*	*07/16/12 15:12*	*1*
Terphenyl-d14	*63*		*35 - 146*	*07/11/12 11:59*	*07/16/12 15:12*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		07/11/12 12:00	07/12/12 18:41	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/11/12 12:00	07/12/12 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/11/12 12:00*	*07/12/12 18:41*	*1*
p-Terphenyl	*68*		*38 - 148*	*07/11/12 12:00*	*07/12/12 18:41*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-NSW1-100712
Date Collected: 07/10/12 09:20
Date Received: 07/11/12 07:20

Lab Sample ID: 720-43207-7
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Acenaphthylene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Chrysene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Fluoranthene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Fluorene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Naphthalene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Phenanthrene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1
Pyrene	ND		5.0		ug/Kg		07/11/12 11:59	07/16/12 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*33 - 120*	*07/11/12 11:59*	*07/16/12 15:35*	*1*
Terphenyl-d14	*64*		*35 - 146*	*07/11/12 11:59*	*07/16/12 15:35*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**18**		1.0		mg/Kg		07/11/12 12:00	07/12/12 19:06	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/11/12 12:00	07/12/12 19:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.5*		*0 - 1*	*07/11/12 12:00*	*07/12/12 19:06*	*1*
p-Terphenyl	*54*		*38 - 148*	*07/11/12 12:00*	*07/12/12 19:06*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-116955/1-A
Matrix: Solid
Analysis Batch: 117110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 116955

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Acenaphthylene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Anthracene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Chrysene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Fluoranthene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Fluorene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Naphthalene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Phenanthrene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Pyrene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*33 - 120*	*07/11/12 09:17*	*07/13/12 11:38*	*1*
Terphenyl-d14	*82*		*35 - 146*	*07/11/12 09:17*	*07/13/12 11:38*	*1*

Lab Sample ID: LCS 720-116955/2-A
Matrix: Solid
Analysis Batch: 117110

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 116955

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	333	240		ug/Kg		72	49 - 120
Acenaphthylene	333	235		ug/Kg		71	52 - 120
Anthracene	333	247		ug/Kg		74	52 - 120
Benzo[a]anthracene	333	246		ug/Kg		74	52 - 120
Benzo[a]pyrene	333	263		ug/Kg		79	54 - 120
Benzo[b]fluoranthene	333	285		ug/Kg		86	51 - 120
Benzo[g,h,i]perylene	333	235		ug/Kg		71	48 - 120
Benzo[k]fluoranthene	333	262		ug/Kg		79	56 - 120
Chrysene	333	227		ug/Kg		68	40 - 120
Dibenz(a,h)anthracene	333	259		ug/Kg		78	50 - 120
Fluoranthene	333	265		ug/Kg		80	57 - 120
Fluorene	333	251		ug/Kg		75	52 - 120
Indeno[1,2,3-cd]pyrene	333	256		ug/Kg		77	48 - 120
Naphthalene	333	230		ug/Kg		69	46 - 120
Phenanthrene	333	240		ug/Kg		72	48 - 120
Pyrene	333	235		ug/Kg		71	53 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*81*		*33 - 120*
Terphenyl-d14	*85*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-116955/3-A
Matrix: Solid
Analysis Batch: 117110

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 116955

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			333	235		ug/Kg		71	49 - 120	2	20
Acenaphthylene			333	224		ug/Kg		67	52 - 120	5	20
Anthracene			333	236		ug/Kg		71	52 - 120	5	20
Benzo[a]anthracene			333	244		ug/Kg		73	52 - 120	1	20
Benzo[a]pyrene			333	262		ug/Kg		79	54 - 120	1	20
Benzo[b]fluoranthene			333	281		ug/Kg		84	51 - 120	1	20
Benzo[g,h,i]perylene			333	233		ug/Kg		70	48 - 120	1	20
Benzo[k]fluoranthene			333	259		ug/Kg		78	56 - 120	1	20
Chrysene			333	225		ug/Kg		67	40 - 120	1	20
Dibenz(a,h)anthracene			333	254		ug/Kg		76	50 - 120	2	20
Fluoranthene			333	256		ug/Kg		77	57 - 120	4	20
Fluorene			333	238		ug/Kg		71	52 - 120	5	20
Indeno[1,2,3-cd]pyrene			333	253		ug/Kg		76	48 - 120	1	20
Naphthalene			333	223		ug/Kg		67	46 - 120	3	20
Phenanthrene			333	236		ug/Kg		71	48 - 120	2	20
Pyrene			333	224		ug/Kg		67	53 - 120	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*33 - 120*
Terphenyl-d14	*82*		*35 - 146*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-116971/1-A
Matrix: Solid
Analysis Batch: 117020

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 116971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		07/11/12 12:00	07/12/12 12:49	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/11/12 12:00	07/12/12 12:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 1*	*07/11/12 12:00*	*07/12/12 12:49*	*1*
p-Terphenyl	*70*		*38 - 148*	*07/11/12 12:00*	*07/12/12 12:49*	*1*

Lab Sample ID: LCS 720-116971/2-A
Matrix: Solid
Analysis Batch: 117020

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 116971

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			83.1	55.5		mg/Kg		67	36 - 112		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*62*		*38 - 148*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-116971/3-A
Matrix: Solid
Analysis Batch: 117020

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 116971

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.7	56.5		mg/Kg		68	36 - 112	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*63*		*38 - 148*

GC/MS Semi VOA

Prep Batch: 116955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43207-1	SO-2344-BASE1-100712	Total/NA	Solid	3546	
720-43207-2	SO-2344-WSW1-100712	Total/NA	Solid	3546	
720-43207-3	SO-2344-SSW1-100712	Total/NA	Solid	3546	
720-43207-4	SO-2344-SSW2-100712	Total/NA	Solid	3546	
720-43207-5	SO-2344-BASE2-100712	Total/NA	Solid	3546	
720-43207-6	SO-2344-NSW2-100712	Total/NA	Solid	3546	
720-43207-7	SO-2344-NSW1-100712	Total/NA	Solid	3546	
LCS 720-116955/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-116955/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-116955/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 117110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-116955/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	116955
LCSD 720-116955/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	116955
MB 720-116955/1-A	Method Blank	Total/NA	Solid	8270C SIM	116955

Analysis Batch: 117152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43207-1	SO-2344-BASE1-100712	Total/NA	Solid	8270C SIM	116955

Analysis Batch: 117206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43207-2	SO-2344-WSW1-100712	Total/NA	Solid	8270C SIM	116955
720-43207-3	SO-2344-SSW1-100712	Total/NA	Solid	8270C SIM	116955
720-43207-4	SO-2344-SSW2-100712	Total/NA	Solid	8270C SIM	116955
720-43207-5	SO-2344-BASE2-100712	Total/NA	Solid	8270C SIM	116955
720-43207-6	SO-2344-NSW2-100712	Total/NA	Solid	8270C SIM	116955
720-43207-7	SO-2344-NSW1-100712	Total/NA	Solid	8270C SIM	116955

GC Semi VOA

Prep Batch: 116971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43207-1	SO-2344-BASE1-100712	Silica Gel Cleanup	Solid	3546	
720-43207-2	SO-2344-WSW1-100712	Silica Gel Cleanup	Solid	3546	
720-43207-3	SO-2344-SSW1-100712	Silica Gel Cleanup	Solid	3546	
720-43207-4	SO-2344-SSW2-100712	Silica Gel Cleanup	Solid	3546	
720-43207-5	SO-2344-BASE2-100712	Silica Gel Cleanup	Solid	3546	
720-43207-6	SO-2344-NSW2-100712	Silica Gel Cleanup	Solid	3546	
720-43207-7	SO-2344-NSW1-100712	Silica Gel Cleanup	Solid	3546	
LCS 720-116971/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-116971/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-116971/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 117020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43207-2	SO-2344-WSW1-100712	Silica Gel Cleanup	Solid	8015B	116971
720-43207-6	SO-2344-NSW2-100712	Silica Gel Cleanup	Solid	8015B	116971
720-43207-7	SO-2344-NSW1-100712	Silica Gel Cleanup	Solid	8015B	116971
LCS 720-116971/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	116971
LCSD 720-116971/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	116971

GC Semi VOA (Continued)

Analysis Batch: 117020 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-116971/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	116971

Analysis Batch: 117094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43207-1	SO-2344-BASE1-100712	Silica Gel Cleanup	Solid	8015B	116971
720-43207-3	SO-2344-SSW1-100712	Silica Gel Cleanup	Solid	8015B	116971
720-43207-4	SO-2344-SSW2-100712	Silica Gel Cleanup	Solid	8015B	116971
720-43207-5	SO-2344-BASE2-100712	Silica Gel Cleanup	Solid	8015B	116971

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-BASE1-100712

Lab Sample ID: 720-43207-1

Date Collected: 07/10/12 08:50
Matrix: Solid
Date Received: 07/11/12 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			116955	07/11/12 11:59	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	117152	07/14/12 07:47	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117094	07/13/12 22:04	JZ	TAL SF

Client Sample ID: SO-2344-WSW1-100712

Lab Sample ID: 720-43207-2

Date Collected: 07/10/12 09:07
Matrix: Solid
Date Received: 07/11/12 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			116955	07/11/12 11:59	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	117206	07/16/12 14:25	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117020	07/12/12 17:03	JZ	TAL SF

Client Sample ID: SO-2344-SSW1-100712

Lab Sample ID: 720-43207-3

Date Collected: 07/10/12 09:20
Matrix: Solid
Date Received: 07/11/12 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			116955	07/11/12 11:59	MP	TAL SF
Total/NA	Analysis	8270C SIM		5	117206	07/16/12 18:27	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		5	117094	07/13/12 22:29	JZ	TAL SF

Client Sample ID: SO-2344-SSW2-100712

Lab Sample ID: 720-43207-4

Date Collected: 07/10/12 11:55
Matrix: Solid
Date Received: 07/11/12 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			116955	07/11/12 11:59	MP	TAL SF
Total/NA	Analysis	8270C SIM		10	117206	07/16/12 18:51	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		20	117094	07/13/12 22:53	JZ	TAL SF

Client Sample ID: SO-2344-BASE2-100712

Lab Sample ID: 720-43207-5

Date Collected: 07/10/12 12:00
Matrix: Solid
Date Received: 07/11/12 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			116955	07/11/12 11:59	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	117206	07/16/12 14:48	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117094	07/13/12 23:18	JZ	TAL SF

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Client Sample ID: SO-2344-NSW2-100712

Lab Sample ID: 720-43207-6

Date Collected: 07/10/12 12:15
Matrix: Solid
Date Received: 07/11/12 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			116955	07/11/12 11:59	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	117206	07/16/12 15:12	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117020	07/12/12 18:41	JZ	TAL SF

Client Sample ID: SO-2344-NSW1-100712

Lab Sample ID: 720-43207-7

Date Collected: 07/10/12 09:20
Matrix: Solid
Date Received: 07/11/12 07:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			116955	07/11/12 11:59	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	117206	07/16/12 15:35	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117020	07/12/12 19:06	JZ	TAL SF

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pleasanton	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43207-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-43207-1	SO-2344-BASE1-100712	Solid	07/10/12 08:50	07/11/12 07:20
720-43207-2	SO-2344-WSW1-100712	Solid	07/10/12 09:07	07/11/12 07:20
720-43207-3	SO-2344-SSW1-100712	Solid	07/10/12 09:20	07/11/12 07:20
720-43207-4	SO-2344-SSW2-100712	Solid	07/10/12 11:55	07/11/12 07:20
720-43207-5	SO-2344-BASE2-100712	Solid	07/10/12 12:00	07/11/12 07:20
720-43207-6	SO-2344-NSW2-100712	Solid	07/10/12 12:15	07/11/12 07:20
720-43207-7	SO-2344-NSW1-100712	Solid	07/10/12 09:20	07/11/12 07:20

Test America- Pleasanton

139385

720-43207

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-3-Rav2-20120620
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Renee Ransom	Phone Number: (408) 580-4664 Fax Number: (408) 225-8504

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO by EPA 8260B	DRO and MORO by EPA 8015 (with Silica Gel Cleaup)	VOCs by 8260B	Total and Dissolved CAM 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	PAHs by EPA 8270C SIM	SVOCS by 8270C			Special Instructions
														4.1°C
SD-2344-BASE1-100712	S	jars	2	7/10/12 0850	None		X			X				
SD-2344-NSW1-100712	S	jars	2	7/10/12 0957	None		X			X				
SD-2344-SSW1-100712	S	jars	1	7/10/12 0920	None		X			X				
SD-2344-SSW2-100712	S	jar	1	7/10/12 1155	None		X			X				
SD-2344-BASE2-100712	S	jar	1	7/10/12 1200	None		X			X				
SD-2344-NSW2-100712	S	jar	1	7/10/12 1215	None		X			X				
SD-2344-NSW1-100712	S	jar	1	7/10/12 0920	None		X			X				

No more samples

Relinquished By: Date/Time: - sealed in cooler Ren N Pen - Renee Ransom 3:20 pm 7/10/12	Received by: Date/Time:	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal _____
Relinquished By: Date/Time:	Received by: Date/Time:	Sample Integrity: (Check) Intact _____ On Ice: _____ Custody
Relinquished By: Date/Time:	Received in Lab by: Date/Time: 7/11/12 0720	

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of aftar 30 days.

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-43207-1

Login Number: 43207
List Number: 1
Creator: Mullen, Joan

List Source: TestAmerica Pleasanton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-43231-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
7/24/2012 12:42:56 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Job ID: 720-43231-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-43231-1

Comments
No additional comments.

Receipt
The samples were received on 7/12/2012 6:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-SSW3-110712 (720-43231-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-NSW3-110712 — Lab Sample ID: 720-43231-1

No Detections

Client Sample ID: SO-2344-SSW3-110712 — Lab Sample ID: 720-43231-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	39		0.99		mg/Kg	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	93		50		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-ESW1-110712 — Lab Sample ID: 720-43231-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	20		0.99		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-BASE4-110712 — Lab Sample ID: 720-43231-4

No Detections

Client Sample ID: SO-2344-NSW4-110712 — Lab Sample ID: 720-43231-5

No Detections

Client Sample ID: SO-2344-SSW4-110712 — Lab Sample ID: 720-43231-6

No Detections

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-NSW3-110712
Date Collected: 07/11/12 09:15
Date Received: 07/12/12 18:40

Lab Sample ID: 720-43231-1
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Acenaphthylene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Chrysene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Fluorene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Naphthalene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Phenanthrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1
Pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 02:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*96*		*33 - 120*	*07/12/12 19:36*	*07/19/12 02:15*	*1*
Terphenyl-d14	*95*		*35 - 146*	*07/12/12 19:36*	*07/19/12 02:15*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		07/13/12 14:27	07/17/12 21:16	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/13/12 14:27	07/17/12 21:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/13/12 14:27*	*07/17/12 21:16*	*1*
p-Terphenyl	*64*		*38 - 148*	*07/13/12 14:27*	*07/17/12 21:16*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-SSW3-110712
Date Collected: 07/11/12 09:25
Date Received: 07/12/12 18:40

Lab Sample ID: 720-43231-2
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Acenaphthylene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Anthracene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Benzo[a]anthracene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Benzo[a]pyrene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Benzo[b]fluoranthene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Benzo[g,h,i]perylene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Benzo[k]fluoranthene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Chrysene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Fluoranthene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Fluorene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Indeno[1,2,3-cd]pyrene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Naphthalene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Phenanthrene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5
Pyrene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 02:39	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*33 - 120*	*07/12/12 19:36*	*07/19/12 02:39*	*5*
Terphenyl-d14	*73*		*35 - 146*	*07/12/12 19:36*	*07/19/12 02:39*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**39**		0.99		mg/Kg		07/13/12 14:27	07/17/12 21:40	1
Motor Oil Range Organics [C24-C36]	**93**		50		mg/Kg		07/13/12 14:27	07/17/12 21:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.3*		*0 - 1*	*07/13/12 14:27*	*07/17/12 21:40*	*1*
p-Terphenyl	*67*		*38 - 148*	*07/13/12 14:27*	*07/17/12 21:40*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-ESW1-110712
Date Collected: 07/11/12 09:45
Date Received: 07/12/12 18:40

Lab Sample ID: 720-43231-3
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Acenaphthylene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Anthracene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Benzo[a]anthracene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Benzo[a]pyrene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Benzo[b]fluoranthene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Benzo[g,h,i]perylene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Benzo[k]fluoranthene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Chrysene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Dibenz(a,h)anthracene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Fluoranthene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Fluorene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Indeno[1,2,3-cd]pyrene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Naphthalene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Phenanthrene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1
Pyrene	ND		4.9		ug/Kg		07/12/12 19:36	07/19/12 03:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*33 - 120*	*07/12/12 19:36*	*07/19/12 03:02*	*1*
Terphenyl-d14	*97*		*35 - 146*	*07/12/12 19:36*	*07/19/12 03:02*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**20**		0.99		mg/Kg		07/13/12 14:27	07/17/12 22:04	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		07/13/12 14:27	07/17/12 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 1*	*07/13/12 14:27*	*07/17/12 22:04*	*1*
p-Terphenyl	*68*		*38 - 148*	*07/13/12 14:27*	*07/17/12 22:04*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-BASE4-110712
Date Collected: 07/11/12 09:50
Date Received: 07/12/12 18:40

Lab Sample ID: 720-43231-4
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Acenaphthylene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Chrysene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Fluorene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Naphthalene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Phenanthrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1
Pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*97*		*33 - 120*	*07/12/12 19:36*	*07/19/12 03:25*	*1*
Terphenyl-d14	*99*		*35 - 146*	*07/12/12 19:36*	*07/19/12 03:25*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		07/13/12 14:27	07/17/12 22:29	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/13/12 14:27	07/17/12 22:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/13/12 14:27*	*07/17/12 22:29*	*1*
p-Terphenyl	*70*		*38 - 148*	*07/13/12 14:27*	*07/17/12 22:29*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-NSW4-110712
Date Collected: 07/11/12 09:55
Date Received: 07/12/12 18:40

Lab Sample ID: 720-43231-5
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Acenaphthylene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Chrysene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Fluorene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Naphthalene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Phenanthrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1
Pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 03:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*103*		*33 - 120*	*07/12/12 19:36*	*07/19/12 03:49*	*1*
Terphenyl-d14	*102*		*35 - 146*	*07/12/12 19:36*	*07/19/12 03:49*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		07/13/12 14:27	07/17/12 22:53	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		07/13/12 14:27	07/17/12 22:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/13/12 14:27*	*07/17/12 22:53*	*1*
p-Terphenyl	*87*		*38 - 148*	*07/13/12 14:27*	*07/17/12 22:53*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-SSW4-110712
Date Collected: 07/11/12 11:55
Date Received: 07/12/12 18:40

Lab Sample ID: 720-43231-6
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Acenaphthylene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Chrysene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Fluorene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Naphthalene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Phenanthrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1
Pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/19/12 04:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*33 - 120*	*07/12/12 19:36*	*07/19/12 04:12*	*1*
Terphenyl-d14	*96*		*35 - 146*	*07/12/12 19:36*	*07/19/12 04:12*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		07/13/12 14:27	07/17/12 23:18	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/13/12 14:27	07/17/12 23:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/13/12 14:27*	*07/17/12 23:18*	*1*
p-Terphenyl	*86*		*38 - 148*	*07/13/12 14:27*	*07/17/12 23:18*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-117079/1-A
Matrix: Solid
Analysis Batch: 117297

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117079

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Acenaphthylene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Chrysene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Fluorene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Naphthalene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Phenanthrene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*33 - 120*	*07/12/12 19:36*	*07/17/12 18:46*	*1*
Terphenyl-d14	*95*		*35 - 146*	*07/12/12 19:36*	*07/17/12 18:46*	*1*

Lab Sample ID: LCS 720-117079/2-A
Matrix: Solid
Analysis Batch: 117297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117079

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	332	257		ug/Kg		77	49 - 120
Acenaphthylene	332	252		ug/Kg		76	52 - 120
Anthracene	332	252		ug/Kg		76	52 - 120
Benzo[a]anthracene	332	247		ug/Kg		74	52 - 120
Benzo[a]pyrene	332	265		ug/Kg		80	54 - 120
Benzo[b]fluoranthene	332	278		ug/Kg		84	51 - 120
Benzo[g,h,i]perylene	332	295		ug/Kg		89	48 - 120
Benzo[k]fluoranthene	332	261		ug/Kg		78	56 - 120
Chrysene	332	257		ug/Kg		77	40 - 120
Dibenz(a,h)anthracene	332	275		ug/Kg		83	50 - 120
Fluoranthene	332	261		ug/Kg		79	57 - 120
Fluorene	332	254		ug/Kg		77	52 - 120
Indeno[1,2,3-cd]pyrene	332	281		ug/Kg		85	48 - 120
Naphthalene	332	235		ug/Kg		71	46 - 120
Phenanthrene	332	256		ug/Kg		77	48 - 120
Pyrene	332	272		ug/Kg		82	53 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*78*		*33 - 120*
Terphenyl-d14	*90*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-117079/3-A
Matrix: Solid
Analysis Batch: 117297

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117079

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			328	270		ug/Kg		82	49 - 120	5	20
Acenaphthylene			328	265		ug/Kg		81	52 - 120	5	20
Anthracene			328	256		ug/Kg		78	52 - 120	1	20
Benzo[a]anthracene			328	247		ug/Kg		75	52 - 120	0	20
Benzo[a]pyrene			328	274		ug/Kg		83	54 - 120	3	20
Benzo[b]fluoranthene			328	273		ug/Kg		83	51 - 120	2	20
Benzo[g,h,i]perylene			328	295		ug/Kg		90	48 - 120	0	20
Benzo[k]fluoranthene			328	267		ug/Kg		81	56 - 120	2	20
Chrysene			328	258		ug/Kg		79	40 - 120	0	20
Dibenz(a,h)anthracene			328	275		ug/Kg		84	50 - 120	0	20
Fluoranthene			328	265		ug/Kg		81	57 - 120	1	20
Fluorene			328	258		ug/Kg		79	52 - 120	1	20
Indeno[1,2,3-cd]pyrene			328	285		ug/Kg		87	48 - 120	1	20
Naphthalene			328	247		ug/Kg		75	46 - 120	5	20
Phenanthrene			328	264		ug/Kg		80	48 - 120	3	20
Pyrene			328	275		ug/Kg		84	53 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*83*		*33 - 120*
Terphenyl-d14	*90*		*35 - 146*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-117130/1-A
Matrix: Solid
Analysis Batch: 117182

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 117130

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.98		mg/Kg		07/13/12 14:27	07/16/12 13:23	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		07/13/12 14:27	07/16/12 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/13/12 14:27*	*07/16/12 13:23*	*1*
p-Terphenyl	*87*		*38 - 148*	*07/13/12 14:27*	*07/16/12 13:23*	*1*

Lab Sample ID: LCS 720-117130/2-A
Matrix: Solid
Analysis Batch: 117182

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 117130

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			82.1	68.6		mg/Kg		84	36 - 112		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*74*		*38 - 148*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-117130/3-A
Matrix: Solid
Analysis Batch: 117182

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 117130

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.7	63.6		mg/Kg		77	36 - 112	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*67*		*38 - 148*

GC/MS Semi VOA

Prep Batch: 117079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43231-1	SO-2344-NSW3-110712	Total/NA	Solid	3546	
720-43231-2	SO-2344-SSW3-110712	Total/NA	Solid	3546	
720-43231-3	SO-2344-ESW1-110712	Total/NA	Solid	3546	
720-43231-4	SO-2344-BASE4-110712	Total/NA	Solid	3546	
720-43231-5	SO-2344-NSW4-110712	Total/NA	Solid	3546	
720-43231-6	SO-2344-SSW4-110712	Total/NA	Solid	3546	
LCS 720-117079/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-117079/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-117079/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 117297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-117079/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	117079
LCSD 720-117079/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	117079
MB 720-117079/1-A	Method Blank	Total/NA	Solid	8270C SIM	117079

Analysis Batch: 117432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43231-1	SO-2344-NSW3-110712	Total/NA	Solid	8270C SIM	117079
720-43231-2	SO-2344-SSW3-110712	Total/NA	Solid	8270C SIM	117079
720-43231-3	SO-2344-ESW1-110712	Total/NA	Solid	8270C SIM	117079
720-43231-4	SO-2344-BASE4-110712	Total/NA	Solid	8270C SIM	117079
720-43231-5	SO-2344-NSW4-110712	Total/NA	Solid	8270C SIM	117079
720-43231-6	SO-2344-SSW4-110712	Total/NA	Solid	8270C SIM	117079

GC Semi VOA

Prep Batch: 117130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43231-1	SO-2344-NSW3-110712	Silica Gel Cleanup	Solid	3546	
720-43231-2	SO-2344-SSW3-110712	Silica Gel Cleanup	Solid	3546	
720-43231-3	SO-2344-ESW1-110712	Silica Gel Cleanup	Solid	3546	
720-43231-4	SO-2344-BASE4-110712	Silica Gel Cleanup	Solid	3546	
720-43231-5	SO-2344-NSW4-110712	Silica Gel Cleanup	Solid	3546	
720-43231-6	SO-2344-SSW4-110712	Silica Gel Cleanup	Solid	3546	
LCS 720-117130/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-117130/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-117130/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 117182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-117130/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	117130
LCSD 720-117130/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	117130
MB 720-117130/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	117130

Analysis Batch: 117277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43231-1	SO-2344-NSW3-110712	Silica Gel Cleanup	Solid	8015B	117130
720-43231-2	SO-2344-SSW3-110712	Silica Gel Cleanup	Solid	8015B	117130
720-43231-3	SO-2344-ESW1-110712	Silica Gel Cleanup	Solid	8015B	117130
720-43231-4	SO-2344-BASE4-110712	Silica Gel Cleanup	Solid	8015B	117130
720-43231-5	SO-2344-NSW4-110712	Silica Gel Cleanup	Solid	8015B	117130

GC Semi VOA (Continued)

Analysis Batch: 117277 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43231-6	SO-2344-SSW4-110712	Silica Gel Cleanup	Solid	8015B	117130

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-NSW3-110712

Lab Sample ID: 720-43231-1

Date Collected: 07/11/12 09:15
Matrix: Solid
Date Received: 07/12/12 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117079	07/12/12 19:36	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	117432	07/19/12 02:15	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117130	07/13/12 14:27	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117277	07/17/12 21:16	JZ	TAL SF

Client Sample ID: SO-2344-SSW3-110712

Lab Sample ID: 720-43231-2

Date Collected: 07/11/12 09:25
Matrix: Solid
Date Received: 07/12/12 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117079	07/12/12 19:36	RU	TAL SF
Total/NA	Analysis	8270C SIM		5	117432	07/19/12 02:39	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117130	07/13/12 14:27	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117277	07/17/12 21:40	JZ	TAL SF

Client Sample ID: SO-2344-ESW1-110712

Lab Sample ID: 720-43231-3

Date Collected: 07/11/12 09:45
Matrix: Solid
Date Received: 07/12/12 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117079	07/12/12 19:36	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	117432	07/19/12 03:02	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117130	07/13/12 14:27	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117277	07/17/12 22:04	JZ	TAL SF

Client Sample ID: SO-2344-BASE4-110712

Lab Sample ID: 720-43231-4

Date Collected: 07/11/12 09:50
Matrix: Solid
Date Received: 07/12/12 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117079	07/12/12 19:36	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	117432	07/19/12 03:25	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117130	07/13/12 14:27	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117277	07/17/12 22:29	JZ	TAL SF

Client Sample ID: SO-2344-NSW4-110712

Lab Sample ID: 720-43231-5

Date Collected: 07/11/12 09:55
Matrix: Solid
Date Received: 07/12/12 18:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117079	07/12/12 19:36	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	117432	07/19/12 03:49	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117130	07/13/12 14:27	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117277	07/17/12 22:53	JZ	TAL SF

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Client Sample ID: SO-2344-SSW4-110712
Date Collected: 07/11/12 11:55
Date Received: 07/12/12 18:40

Lab Sample ID: 720-43231-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117079	07/12/12 19:36	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	117432	07/19/12 04:12	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117130	07/13/12 14:27	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117277	07/17/12 23:18	JZ	TAL SF

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pleasanton	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43231-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-43231-1	SO-2344-NSW3-110712	Solid	07/11/12 09:15	07/12/12 18:40
720-43231-2	SO-2344-SSW3-110712	Solid	07/11/12 09:25	07/12/12 18:40
720-43231-3	SO-2344-ESW1-110712	Solid	07/11/12 09:45	07/12/12 18:40
720-43231-4	SO-2344-BASE4-110712	Solid	07/11/12 09:50	07/12/12 18:40
720-43231-5	SO-2344-NSW4-110712	Solid	07/11/12 09:55	07/12/12 18:40
720-43231-6	SO-2344-SSW4-110712	Solid	07/11/12 11:55	07/12/12 18:40

Test America- Pleasanton

139414

720-43231

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-3-Rev2-20120620
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Renee Ransom	Phone Number: (408) 580-4664 Fax Number: (408) 225-8506

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO by EPA 8260B	DRO and MORO by EPA 8015 (with Silica Gel Cleaup)	VOCs by 8260B	Total and Dissolved CAM 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	PAHs by EPA 8270C SIM	SVOCS by 8270C			Special Instructions
SO-2344-NSW3-110712	SO	jar	1	7/11/12 0915	None		X			X				
SO-2344-SSW3-110712	SO	jar	1	7/11/12 0925	None		X			X				
SO-2344-ESW1-110712	SO	jar	1	7/11/12 0945	None		X			X				
SO-2344-BASE4-110712	SO	jar	1	7/11/12 0950	None		X			X				
SO-2344-NSW4-110712	SO	jar	1	07/11/12 0955	None		X			X				
SO-2344-SSW4-110712	SO	jar	1	07/11/12 1155	None		X			X				
SO-2344-BASE3-110712	SO	jar	1	7/11/12 1015	None		X			X				Hold
SO-2344-SSW3-110712	SO	jar	1	7/11/12 1020	None		X			X				Hold

Relinquished By: Date/Time: 1240 7/11/12 Ren N Pam (Renee Ransom)	Received by: Date/Time: 7-11-12 1928	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time: 7-11-12 1840	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Date/Time: Joan Hulden 7-11-12 1840	Sample Integrity: (Check) 2.5°C Intact _____ On Ice: X Custody

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-43231-1

Login Number: 43231
List Number: 1
Creator: Mullen, Joan

List Source: TestAmerica Pleasanton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-43300-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
7/27/2012 5:27:22 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

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Have a Question? Ask The Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Job ID: 720-43300-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-43300-1

Comments
No additional comments.

Receipt
The samples were received on 7/13/2012 5:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1º C.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-NSW5-110712 (720-43300-3), SO-2344-WSW2-110712 (720-43300-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC Semi VOA
Method 8015B: Capric acid surrogate recovery for the following sample(s) was outside control limits: SO-2344-WSW2-110712 (720-43300-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Client Sample ID: SO-2344-SSW6-110712 — Lab Sample ID: 720-43300-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	2.7		0.99		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-WSW2-110712 — Lab Sample ID: 720-43300-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	20		9.9		ug/Kg	2		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	37		1.0		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-NSW5-110712 — Lab Sample ID: 720-43300-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	67		49		ug/Kg	10		8270C SIM	Total/NA
Benzo[b]fluoranthene	110		49		ug/Kg	10		8270C SIM	Total/NA
Benzo[g,h,i]perylene	54		49		ug/Kg	10		8270C SIM	Total/NA
Chrysene	53		49		ug/Kg	10		8270C SIM	Total/NA
Fluoranthene	74		49		ug/Kg	10		8270C SIM	Total/NA
Phenanthrene	60		49		ug/Kg	10		8270C SIM	Total/NA
Pyrene	120		49		ug/Kg	10		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	28		0.98		mg/Kg	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	55		49		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-NSW6-110712 — Lab Sample ID: 720-43300-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	5.6		5.0		ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	7.7		5.0		ug/Kg	1		8270C SIM	Total/NA
Pyrene	25		5.0		ug/Kg	1		8270C SIM	Total/NA

Client Sample ID: SO-2344-ESW2-110712 — Lab Sample ID: 720-43300-5

No Detections

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Client Sample ID: SO-2344-SSW6-110712
Date Collected: 07/11/12 14:00
Date Received: 07/13/12 17:55

Lab Sample ID: 720-43300-1
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Acenaphthylene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Anthracene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Chrysene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Fluoranthene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Fluorene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Naphthalene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Phenanthrene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1
Pyrene	ND		5.0		ug/Kg		07/16/12 09:14	07/27/12 14:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*33 - 120*	*07/16/12 09:14*	*07/27/12 14:40*	*1*
Terphenyl-d14	*62*		*35 - 146*	*07/16/12 09:14*	*07/27/12 14:40*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**2.7**		0.99		mg/Kg		07/23/12 08:43	07/25/12 00:20	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/23/12 08:43	07/25/12 00:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.2*		*0 - 1*	*07/23/12 08:43*	*07/25/12 00:20*	*1*
p-Terphenyl	*89*		*38 - 148*	*07/23/12 08:43*	*07/25/12 00:20*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Client Sample ID: SO-2344-WSW2-110712
Date Collected: 07/11/12 14:05
Date Received: 07/13/12 17:55

Lab Sample ID: 720-43300-2
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Acenaphthylene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Anthracene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Benzo[a]anthracene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Benzo[a]pyrene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Benzo[b]fluoranthene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Benzo[g,h,i]perylene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Benzo[k]fluoranthene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Chrysene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Dibenz(a,h)anthracene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Fluoranthene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Fluorene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Indeno[1,2,3-cd]pyrene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Naphthalene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Phenanthrene	**20**		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2
Pyrene	ND		9.9		ug/Kg		07/16/12 09:14	07/27/12 15:03	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*33 - 120*	*07/16/12 09:14*	*07/27/12 15:03*	*2*
Terphenyl-d14	*90*		*35 - 146*	*07/16/12 09:14*	*07/27/12 15:03*	*2*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**37**		1.0		mg/Kg		07/23/12 08:43	07/25/12 00:45	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/23/12 08:43	07/25/12 00:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*2*	*X*	*0 - 1*	*07/23/12 08:43*	*07/25/12 00:45*	*1*
p-Terphenyl	*57*		*38 - 148*	*07/23/12 08:43*	*07/25/12 00:45*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Client Sample ID: SO-2344-NSW5-110712
Date Collected: 07/11/12 14:10
Date Received: 07/13/12 17:55

Lab Sample ID: 720-43300-3
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Acenaphthylene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Anthracene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Benzo[a]anthracene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Benzo[a]pyrene	**67**		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Benzo[b]fluoranthene	**110**		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Benzo[g,h,i]perylene	**54**		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Benzo[k]fluoranthene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Chrysene	**53**		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Dibenz(a,h)anthracene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Fluoranthene	**74**		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Fluorene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Indeno[1,2,3-cd]pyrene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Naphthalene	ND		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Phenanthrene	**60**		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10
Pyrene	**120**		49		ug/Kg		07/17/12 11:26	07/27/12 15:26	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*33 - 120*	*07/17/12 11:26*	*07/27/12 15:26*	*10*
Terphenyl-d14	*83*		*35 - 146*	*07/17/12 11:26*	*07/27/12 15:26*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**28**		0.98		mg/Kg		07/23/12 08:43	07/25/12 01:09	1
Motor Oil Range Organics [C24-C36]	**55**		49		mg/Kg		07/23/12 08:43	07/25/12 01:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.06*		*0 - 1*	*07/23/12 08:43*	*07/25/12 01:09*	*1*
p-Terphenyl	*63*		*38 - 148*	*07/23/12 08:43*	*07/25/12 01:09*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Client Sample ID: SO-2344-NSW6-110712
Date Collected: 07/11/12 14:15
Date Received: 07/13/12 17:55

Lab Sample ID: 720-43300-4
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Acenaphthylene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Anthracene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Chrysene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Fluoranthene	**5.6**		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Fluorene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Naphthalene	ND		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Phenanthrene	**7.7**		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1
Pyrene	**25**		5.0		ug/Kg		07/17/12 11:26	07/27/12 15:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*79*		*33 - 120*	*07/17/12 11:26*	*07/27/12 15:50*	*1*
Terphenyl-d14	*89*		*35 - 146*	*07/17/12 11:26*	*07/27/12 15:50*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.98		mg/Kg		07/23/12 08:43	07/25/12 01:33	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		07/23/12 08:43	07/25/12 01:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/23/12 08:43*	*07/25/12 01:33*	*1*
p-Terphenyl	*75*		*38 - 148*	*07/23/12 08:43*	*07/25/12 01:33*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Client Sample ID: SO-2344-ESW2-110712
Date Collected: 07/11/12 14:20
Date Received: 07/13/12 17:55

Lab Sample ID: 720-43300-5
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Acenaphthylene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Anthracene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Benzo[a]anthracene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Benzo[a]pyrene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Benzo[b]fluoranthene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Benzo[g,h,i]perylene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Benzo[k]fluoranthene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Chrysene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Dibenz(a,h)anthracene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Fluoranthene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Fluorene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Indeno[1,2,3-cd]pyrene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Naphthalene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Phenanthrene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1
Pyrene	ND		4.9		ug/Kg		07/17/12 11:26	07/27/12 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*75*		*33 - 120*	*07/17/12 11:26*	*07/27/12 16:13*	*1*
Terphenyl-d14	*88*		*35 - 146*	*07/17/12 11:26*	*07/27/12 16:13*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		07/23/12 08:43	07/25/12 01:58	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/23/12 08:43	07/25/12 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/23/12 08:43*	*07/25/12 01:58*	*1*
p-Terphenyl	*69*		*38 - 148*	*07/23/12 08:43*	*07/25/12 01:58*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-117200/1-A
Matrix: Solid
Analysis Batch: 117615

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117200

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Acenaphthylene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Anthracene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Chrysene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Fluoranthene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Fluorene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Naphthalene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Phenanthrene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1
Pyrene	ND		5.0		ug/Kg		07/16/12 09:14	07/21/12 11:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*77*		*33 - 120*	*07/16/12 09:14*	*07/21/12 11:34*	*1*
Terphenyl-d14	*82*		*35 - 146*	*07/16/12 09:14*	*07/21/12 11:34*	*1*

Lab Sample ID: LCS 720-117200/2-A
Matrix: Solid
Analysis Batch: 117615

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117200

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	333	256		ug/Kg		77	49 - 120
Acenaphthylene	333	252		ug/Kg		76	52 - 120
Anthracene	333	260		ug/Kg		78	52 - 120
Benzo[a]anthracene	333	257		ug/Kg		77	52 - 120
Benzo[a]pyrene	333	273		ug/Kg		82	54 - 120
Benzo[b]fluoranthene	333	271		ug/Kg		82	51 - 120
Benzo[g,h,i]perylene	333	280		ug/Kg		84	48 - 120
Benzo[k]fluoranthene	333	273		ug/Kg		82	56 - 120
Chrysene	333	267		ug/Kg		80	40 - 120
Dibenz(a,h)anthracene	333	287		ug/Kg		86	50 - 120
Fluoranthene	333	260		ug/Kg		78	57 - 120
Fluorene	333	256		ug/Kg		77	52 - 120
Indeno[1,2,3-cd]pyrene	333	283		ug/Kg		85	48 - 120
Naphthalene	333	238		ug/Kg		72	46 - 120
Phenanthrene	333	256		ug/Kg		77	48 - 120
Pyrene	333	262		ug/Kg		79	53 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*73*		*33 - 120*
Terphenyl-d14	*80*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-117200/3-A
Matrix: Solid
Analysis Batch: 117615

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117200

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			332	270		ug/Kg		81	49 - 120	5	20
Acenaphthylene			332	265		ug/Kg		80	52 - 120	5	20
Anthracene			332	278		ug/Kg		84	52 - 120	6	20
Benzo[a]anthracene			332	271		ug/Kg		81	52 - 120	5	20
Benzo[a]pyrene			332	287		ug/Kg		86	54 - 120	5	20
Benzo[b]fluoranthene			332	296		ug/Kg		89	51 - 120	9	20
Benzo[g,h,i]perylene			332	291		ug/Kg		88	48 - 120	4	20
Benzo[k]fluoranthene			332	278		ug/Kg		84	56 - 120	2	20
Chrysene			332	274		ug/Kg		83	40 - 120	3	20
Dibenz(a,h)anthracene			332	297		ug/Kg		89	50 - 120	4	20
Fluoranthene			332	273		ug/Kg		82	57 - 120	5	20
Fluorene			332	272		ug/Kg		82	52 - 120	6	20
Indeno[1,2,3-cd]pyrene			332	295		ug/Kg		89	48 - 120	4	20
Naphthalene			332	258		ug/Kg		78	46 - 120	8	20
Phenanthrene			332	276		ug/Kg		83	48 - 120	8	20
Pyrene			332	272		ug/Kg		82	53 - 120	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*33 - 120*
Terphenyl-d14	*83*		*35 - 146*

Lab Sample ID: MB 720-117302/1-A
Matrix: Solid
Analysis Batch: 117664

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117302

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Acenaphthylene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Anthracene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Chrysene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Fluoranthene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Fluorene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Naphthalene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Phenanthrene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1
Pyrene	ND		5.0		ug/Kg		07/17/12 11:26	07/23/12 13:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*83*		*33 - 120*	*07/17/12 11:26*	*07/23/12 13:02*	*1*
Terphenyl-d14	*93*		*35 - 146*	*07/17/12 11:26*	*07/23/12 13:02*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCS 720-117302/2-A
Matrix: Solid
Analysis Batch: 117664

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117302

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	331	291		ug/Kg		88	49 - 120
Acenaphthylene	331	275		ug/Kg		83	52 - 120
Anthracene	331	290		ug/Kg		88	52 - 120
Benzo[a]anthracene	331	291		ug/Kg		88	52 - 120
Benzo[a]pyrene	331	306		ug/Kg		92	54 - 120
Benzo[b]fluoranthene	331	301		ug/Kg		91	51 - 120
Benzo[g,h,i]perylene	331	317		ug/Kg		95	48 - 120
Benzo[k]fluoranthene	331	316		ug/Kg		95	56 - 120
Chrysene	331	301		ug/Kg		91	40 - 120
Dibenz(a,h)anthracene	331	321		ug/Kg		97	50 - 120
Fluoranthene	331	288		ug/Kg		87	57 - 120
Fluorene	331	281		ug/Kg		85	52 - 120
Indeno[1,2,3-cd]pyrene	331	318		ug/Kg		96	48 - 120
Naphthalene	331	271		ug/Kg		82	46 - 120
Phenanthrene	331	292		ug/Kg		88	48 - 120
Pyrene	331	322		ug/Kg		97	53 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*84*		*33 - 120*
Terphenyl-d14	*94*		*35 - 146*

Lab Sample ID: LCSD 720-117302/3-A
Matrix: Solid
Analysis Batch: 117664

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117302

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	331	286		ug/Kg		86	49 - 120	2	20
Acenaphthylene	331	276		ug/Kg		83	52 - 120	0	20
Anthracene	331	289		ug/Kg		87	52 - 120	1	20
Benzo[a]anthracene	331	294		ug/Kg		89	52 - 120	1	20
Benzo[a]pyrene	331	306		ug/Kg		92	54 - 120	0	20
Benzo[b]fluoranthene	331	321		ug/Kg		97	51 - 120	6	20
Benzo[g,h,i]perylene	331	316		ug/Kg		95	48 - 120	0	20
Benzo[k]fluoranthene	331	302		ug/Kg		91	56 - 120	5	20
Chrysene	331	297		ug/Kg		90	40 - 120	1	20
Dibenz(a,h)anthracene	331	322		ug/Kg		97	50 - 120	0	20
Fluoranthene	331	290		ug/Kg		87	57 - 120	1	20
Fluorene	331	282		ug/Kg		85	52 - 120	0	20
Indeno[1,2,3-cd]pyrene	331	318		ug/Kg		96	48 - 120	0	20
Naphthalene	331	265		ug/Kg		80	46 - 120	2	20
Phenanthrene	331	292		ug/Kg		88	48 - 120	0	20
Pyrene	331	321		ug/Kg		97	53 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*83*		*33 - 120*
Terphenyl-d14	*94*		*35 - 146*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-117657/1-A
Matrix: Solid
Analysis Batch: 117715

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 117657

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		07/23/12 08:43	07/24/12 18:37	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/23/12 08:43	07/24/12 18:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/23/12 08:43*	*07/24/12 18:37*	*1*
p-Terphenyl	*87*		*38 - 148*	*07/23/12 08:43*	*07/24/12 18:37*	*1*

Lab Sample ID: LCS 720-117657/2-A
Matrix: Solid
Analysis Batch: 117715

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 117657

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			82.2	59.0		mg/Kg		72	36 - 112		

Surrogate			*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl			*58*		*38 - 148*

Lab Sample ID: LCSD 720-117657/3-A
Matrix: Solid
Analysis Batch: 117715

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 117657

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.3	68.6		mg/Kg		83	36 - 112	15	35

Surrogate			*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl			*69*		*38 - 148*

Lab Sample ID: 720-43300-1 MS
Matrix: Solid
Analysis Batch: 117715

Client Sample ID: SO-2344-SSW6-110712
Prep Type: Silica Gel Cleanup
Prep Batch: 117657

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	2.7		83.0	67.0		mg/Kg		77	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
p-Terphenyl	*55*		*38 - 148*

Lab Sample ID: 720-43300-1 MSD
Matrix: Solid
Analysis Batch: 117715

Client Sample ID: SO-2344-SSW6-110712
Prep Type: Silica Gel Cleanup
Prep Batch: 117657

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	2.7		83.3	61.4		mg/Kg		70	50 - 150	9	30

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 720-43300-1 MSD
Matrix: Solid
Analysis Batch: 117715

Client Sample ID: SO-2344-SSW6-110712
Prep Type: Silica Gel Cleanup
Prep Batch: 117657

Surrogate	MSD %Recovery	MSD Qualifier	Limits
p-Terphenyl	*55*		*38 - 148*

QC Association Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

GC/MS Semi VOA

Prep Batch: 117200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43300-1	SO-2344-SSW6-110712	Total/NA	Solid	3546	
720-43300-2	SO-2344-WSW2-110712	Total/NA	Solid	3546	
LCS 720-117200/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-117200/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-117200/1-A	Method Blank	Total/NA	Solid	3546	

Prep Batch: 117302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43300-3	SO-2344-NSW5-110712	Total/NA	Solid	3546	
720-43300-4	SO-2344-NSW6-110712	Total/NA	Solid	3546	
720-43300-5	SO-2344-ESW2-110712	Total/NA	Solid	3546	
LCS 720-117302/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-117302/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-117302/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 117615

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-117200/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	117200
LCSD 720-117200/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	117200
MB 720-117200/1-A	Method Blank	Total/NA	Solid	8270C SIM	117200

Analysis Batch: 117664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-117302/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	117302
LCSD 720-117302/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	117302
MB 720-117302/1-A	Method Blank	Total/NA	Solid	8270C SIM	117302

Analysis Batch: 117965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43300-1	SO-2344-SSW6-110712	Total/NA	Solid	8270C SIM	117200
720-43300-2	SO-2344-WSW2-110712	Total/NA	Solid	8270C SIM	117200
720-43300-3	SO-2344-NSW5-110712	Total/NA	Solid	8270C SIM	117302
720-43300-4	SO-2344-NSW6-110712	Total/NA	Solid	8270C SIM	117302
720-43300-5	SO-2344-ESW2-110712	Total/NA	Solid	8270C SIM	117302

GC Semi VOA

Prep Batch: 117657

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43300-1	SO-2344-SSW6-110712	Silica Gel Cleanup	Solid	3546	
720-43300-1 MS	SO-2344-SSW6-110712	Silica Gel Cleanup	Solid	3546	
720-43300-1 MSD	SO-2344-SSW6-110712	Silica Gel Cleanup	Solid	3546	
720-43300-2	SO-2344-WSW2-110712	Silica Gel Cleanup	Solid	3546	
720-43300-3	SO-2344-NSW5-110712	Silica Gel Cleanup	Solid	3546	
720-43300-4	SO-2344-NSW6-110712	Silica Gel Cleanup	Solid	3546	
720-43300-5	SO-2344-ESW2-110712	Silica Gel Cleanup	Solid	3546	
LCS 720-117657/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-117657/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-117657/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

GC Semi VOA (Continued)

Analysis Batch: 117715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43300-1	SO-2344-SSW6-110712	Silica Gel Cleanup	Solid	8015B	117657
720-43300-1 MS	SO-2344-SSW6-110712	Silica Gel Cleanup	Solid	8015B	117657
720-43300-1 MSD	SO-2344-SSW6-110712	Silica Gel Cleanup	Solid	8015B	117657
720-43300-2	SO-2344-WSW2-110712	Silica Gel Cleanup	Solid	8015B	117657
720-43300-3	SO-2344-NSW5-110712	Silica Gel Cleanup	Solid	8015B	117657
720-43300-4	SO-2344-NSW6-110712	Silica Gel Cleanup	Solid	8015B	117657
720-43300-5	SO-2344-ESW2-110712	Silica Gel Cleanup	Solid	8015B	117657
LCS 720-117657/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	117657
LCSD 720-117657/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	117657
MB 720-117657/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	117657

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Client Sample ID: SO-2344-SSW6-110712

Lab Sample ID: 720-43300-1

Date Collected: 07/11/12 14:00
Matrix: Solid
Date Received: 07/13/12 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117200	07/16/12 09:14	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	117965	07/27/12 14:40	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117657	07/23/12 08:43	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117715	07/25/12 00:20	DH	TAL SF

Client Sample ID: SO-2344-WSW2-110712

Lab Sample ID: 720-43300-2

Date Collected: 07/11/12 14:05
Matrix: Solid
Date Received: 07/13/12 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117200	07/16/12 09:14	MP	TAL SF
Total/NA	Analysis	8270C SIM		2	117965	07/27/12 15:03	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117657	07/23/12 08:43	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117715	07/25/12 00:45	DH	TAL SF

Client Sample ID: SO-2344-NSW5-110712

Lab Sample ID: 720-43300-3

Date Collected: 07/11/12 14:10
Matrix: Solid
Date Received: 07/13/12 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117302	07/17/12 11:26	MP	TAL SF
Total/NA	Analysis	8270C SIM		10	117965	07/27/12 15:26	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117657	07/23/12 08:43	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117715	07/25/12 01:09	DH	TAL SF

Client Sample ID: SO-2344-NSW6-110712

Lab Sample ID: 720-43300-4

Date Collected: 07/11/12 14:15
Matrix: Solid
Date Received: 07/13/12 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117302	07/17/12 11:26	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	117965	07/27/12 15:50	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117657	07/23/12 08:43	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117715	07/25/12 01:33	DH	TAL SF

Client Sample ID: SO-2344-ESW2-110712

Lab Sample ID: 720-43300-5

Date Collected: 07/11/12 14:20
Matrix: Solid
Date Received: 07/13/12 17:55

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			117302	07/17/12 11:26	MP	TAL SF
Total/NA	Analysis	8270C SIM		1	117965	07/27/12 16:13	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117657	07/23/12 08:43	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117715	07/25/12 01:58	DH	TAL SF

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43300-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-43300-1	SO-2344-SSW6-110712	Solid	07/11/12 14:00	07/13/12 17:55
720-43300-2	SO-2344-WSW2-110712	Solid	07/11/12 14:05	07/13/12 17:55
720-43300-3	SO-2344-NSW5-110712	Solid	07/11/12 14:10	07/13/12 17:55
720-43300-4	SO-2344-NSW6-110712	Solid	07/11/12 14:15	07/13/12 17:55
720-43300-5	SO-2344-ESW2-110712	Solid	07/11/12 14:20	07/13/12 17:55

720-43300

Test America- Pleasanton

B7487

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-3-Rev2-20120620
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Renee Ransom	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	DRO and MORO by EPA 8015 (with Silica Gel Cleaup)	VOCs by 8260B	Total and Dissolved CAM 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	PAHs by EPA 8270C SIM	SVOCS by 8270C			Special Instructions
SO-2344-SSW6-110712	S	jar	1	7/11/12 1400	None	X			X				
SO-2344-WSW2-110712	S	jar	1	7/11/12 1405	None	X			X				
SO-2344-NSW5-110712	S	jar	1	7/11/12 1410	None	X			X				
SO-2344-NSW6-110712	S	jar	1	7/11/12 1415	None	X			X				
SO-2344-ESW2-110712	S	jar	1	7/11/12 1420	None	X			X				
						RWP 7/13/12							
			normal samples										

Relinquished By: Date/Time: 7/13/12 @ 3:00 pm Renee Ransom RWP/Ram	Received by: Date/Time: TAT 07/13/12 @ 1615	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time: TAT 07/13/12 @ 1755	Received by: Date/Time: 7/13/12 1755	
Relinquished By: Date/Time:	Received in Lab by: Date/Time:	Sample Integrity: (Check) 3.1°C Intact _____ On Ice: _____ Custody

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-43300-1

Login Number: 43300

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Appendix F

Certified Laboratory Analytical Reports – Waste

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-43270-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
7/17/2012 12:50:24 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-43270-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-43270-1

Comments
No additional comments.

Receipt
The samples were received on 7/13/2012 7:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.4º C.

Except:

Received 4 trip blank vials not listed on coc. Logged on hold.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
No analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Metals
Method 6010B: The continuing calibration verification (CCV) associated with analysis batch 117168 recovered above the upper control limit for Cr. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: 720-43270-k-1

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Client Sample ID: W-2344-COMP-120712 **Lab Sample ID: 720-43270-1**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1900		53		ug/L	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	6100		110		ug/L	1		8015B	Silica Gel Cleanup
Lead	0.0060		0.0050		mg/L	1		6010B	Dissolved
Zinc	0.023		0.020		mg/L	1		6010B	Dissolved

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Client Sample ID: W-2344-COMP-120712
Date Collected: 07/12/12 08:30
Date Received: 07/13/12 07:10

Lab Sample ID: 720-43270-1
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			07/13/12 14:58	1
Acetone	ND		50		ug/L			07/13/12 14:58	1
Benzene	ND		0.50		ug/L			07/13/12 14:58	1
Dichlorobromomethane	ND		0.50		ug/L			07/13/12 14:58	1
Bromobenzene	ND		1.0		ug/L			07/13/12 14:58	1
Chlorobromomethane	ND		1.0		ug/L			07/13/12 14:58	1
Bromoform	ND		1.0		ug/L			07/13/12 14:58	1
Bromomethane	ND		1.0		ug/L			07/13/12 14:58	1
2-Butanone (MEK)	ND		50		ug/L			07/13/12 14:58	1
n-Butylbenzene	ND		1.0		ug/L			07/13/12 14:58	1
sec-Butylbenzene	ND		1.0		ug/L			07/13/12 14:58	1
tert-Butylbenzene	ND		1.0		ug/L			07/13/12 14:58	1
Carbon disulfide	ND		5.0		ug/L			07/13/12 14:58	1
Carbon tetrachloride	ND		0.50		ug/L			07/13/12 14:58	1
Chlorobenzene	ND		0.50		ug/L			07/13/12 14:58	1
Chloroethane	ND		1.0		ug/L			07/13/12 14:58	1
Chloroform	ND		1.0		ug/L			07/13/12 14:58	1
Chloromethane	ND		1.0		ug/L			07/13/12 14:58	1
2-Chlorotoluene	ND		0.50		ug/L			07/13/12 14:58	1
4-Chlorotoluene	ND		0.50		ug/L			07/13/12 14:58	1
Chlorodibromomethane	ND		0.50		ug/L			07/13/12 14:58	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/13/12 14:58	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/13/12 14:58	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/13/12 14:58	1
1,3-Dichloropropane	ND		1.0		ug/L			07/13/12 14:58	1
1,1-Dichloropropene	ND		0.50		ug/L			07/13/12 14:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/13/12 14:58	1
Ethylene Dibromide	ND		0.50		ug/L			07/13/12 14:58	1
Dibromomethane	ND		0.50		ug/L			07/13/12 14:58	1
Dichlorodifluoromethane	ND		0.50		ug/L			07/13/12 14:58	1
1,1-Dichloroethane	ND		0.50		ug/L			07/13/12 14:58	1
1,2-Dichloroethane	ND		0.50		ug/L			07/13/12 14:58	1
1,1-Dichloroethene	ND		0.50		ug/L			07/13/12 14:58	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/13/12 14:58	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/13/12 14:58	1
1,2-Dichloropropane	ND		0.50		ug/L			07/13/12 14:58	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/13/12 14:58	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/13/12 14:58	1
Ethylbenzene	ND		0.50		ug/L			07/13/12 14:58	1
Hexachlorobutadiene	ND		1.0		ug/L			07/13/12 14:58	1
2-Hexanone	ND		50		ug/L			07/13/12 14:58	1
Isopropylbenzene	ND		0.50		ug/L			07/13/12 14:58	1
4-Isopropyltoluene	ND		1.0		ug/L			07/13/12 14:58	1
Methylene Chloride	ND		5.0		ug/L			07/13/12 14:58	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			07/13/12 14:58	1
Naphthalene	ND		1.0		ug/L			07/13/12 14:58	1
N-Propylbenzene	ND		1.0		ug/L			07/13/12 14:58	1
Styrene	ND		0.50		ug/L			07/13/12 14:58	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			07/13/12 14:58	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/13/12 14:58	1
Tetrachloroethene	ND		0.50		ug/L			07/13/12 14:58	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Client Sample ID: W-2344-COMP-120712
Date Collected: 07/12/12 08:30
Date Received: 07/13/12 07:10

Lab Sample ID: 720-43270-1
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50		ug/L			07/13/12 14:58	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			07/13/12 14:58	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			07/13/12 14:58	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/13/12 14:58	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/13/12 14:58	1
Trichloroethene	ND		0.50		ug/L			07/13/12 14:58	1
Trichlorofluoromethane	ND		1.0		ug/L			07/13/12 14:58	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/13/12 14:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/13/12 14:58	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/13/12 14:58	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/13/12 14:58	1
Vinyl acetate	ND		10		ug/L			07/13/12 14:58	1
Vinyl chloride	ND		0.50		ug/L			07/13/12 14:58	1
Xylenes, Total	ND		1.0		ug/L			07/13/12 14:58	1
2,2-Dichloropropane	ND		0.50		ug/L			07/13/12 14:58	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			07/13/12 14:58	1
TBA	ND		4.0		ug/L			07/13/12 14:58	1
DIPE	ND		0.50		ug/L			07/13/12 14:58	1
TAME	ND		0.50		ug/L			07/13/12 14:58	1
Ethyl t-butyl ether	ND		0.50		ug/L			07/13/12 14:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*67 - 130*		*07/13/12 14:58*	*1*
1,2-Dichloroethane-d4 (Surr)	*122*		*75 - 138*		*07/13/12 14:58*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/13/12 14:58*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Acenaphthene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Acenaphthylene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Fluorene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Phenanthrene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Anthracene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Benzo[a]anthracene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Chrysene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Benzo[a]pyrene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Fluoranthene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Pyrene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 02:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*51*		*29 - 120*	*07/13/12 10:47*	*07/14/12 02:21*	*1*
Terphenyl-d14	*52*		*45 - 120*	*07/13/12 10:47*	*07/14/12 02:21*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Client Sample ID: W-2344-COMP-120712
Date Collected: 07/12/12 08:30
Date Received: 07/13/12 07:10

Lab Sample ID: 720-43270-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Bis(2-chloroethyl)ether	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2-Chlorophenol	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
1,3-Dichlorobenzene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
1,4-Dichlorobenzene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Benzyl alcohol	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
1,2-Dichlorobenzene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2-Methylphenol	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
4-Methylphenol	ND		8.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
N-Nitrosodi-n-propylamine	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Hexachloroethane	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Nitrobenzene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Isophorone	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2-Nitrophenol	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2,4-Dimethylphenol	ND		3.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Bis(2-chloroethoxy)methane	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
2,4-Dichlorophenol	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
1,2,4-Trichlorobenzene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Naphthalene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
4-Chloroaniline	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Hexachlorobutadiene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
4-Chloro-3-methylphenol	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
2-Methylnaphthalene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Hexachlorocyclopentadiene	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
2,4,6-Trichlorophenol	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2,4,5-Trichlorophenol	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2-Chloronaphthalene	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2-Nitroaniline	ND		10		ug/L		07/16/12 07:24	07/16/12 13:51	1
Dimethyl phthalate	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Acenaphthylene	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
3-Nitroaniline	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Acenaphthene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2,4-Dinitrophenol	ND		10		ug/L		07/16/12 07:24	07/16/12 13:51	1
4-Nitrophenol	ND		10		ug/L		07/16/12 07:24	07/16/12 13:51	1
Dibenzofuran	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2,4-Dinitrotoluene	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
2,6-Dinitrotoluene	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Diethyl phthalate	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
4-Chlorophenyl phenyl ether	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Fluorene	ND		4.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
4-Nitroaniline	ND		10		ug/L		07/16/12 07:24	07/16/12 13:51	1
2-Methyl-4,6-dinitrophenol	ND		10		ug/L		07/16/12 07:24	07/16/12 13:51	1
N-Nitrosodiphenylamine	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
4-Bromophenyl phenyl ether	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Hexachlorobenzene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Pentachlorophenol	ND		10		ug/L		07/16/12 07:24	07/16/12 13:51	1
Phenanthrene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Anthracene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Di-n-butyl phthalate	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Fluoranthene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Pyrene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Client Sample ID: W-2344-COMP-120712
Date Collected: 07/12/12 08:30
Date Received: 07/13/12 07:10

Lab Sample ID: 720-43270-1
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Butyl benzyl phthalate	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
3,3'-Dichlorobenzidine	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Benzo[a]anthracene	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Bis(2-ethylhexyl) phthalate	ND		10		ug/L		07/16/12 07:24	07/16/12 13:51	1
Chrysene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Di-n-octyl phthalate	ND		5.2		ug/L		07/16/12 07:24	07/16/12 13:51	1
Benzo[b]fluoranthene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Benzo[a]pyrene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Benzo[k]fluoranthene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Indeno[1,2,3-cd]pyrene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Benzo[g,h,i]perylene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Benzoic acid	ND		10		ug/L		07/16/12 07:24	07/16/12 13:51	1
Azobenzene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1
Dibenz(a,h)anthracene	ND		2.1		ug/L		07/16/12 07:24	07/16/12 13:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*66*		*25 - 102*	*07/16/12 07:24*	*07/16/12 13:51*	*1*
2-Fluorobiphenyl	*73*		*10 - 101*	*07/16/12 07:24*	*07/16/12 13:51*	*1*
Terphenyl-d14	*67*		*57 - 117*	*07/16/12 07:24*	*07/16/12 13:51*	*1*
2-Fluorophenol	*34*		*10 - 65*	*07/16/12 07:24*	*07/16/12 13:51*	*1*
Phenol-d5	*20*		*10 - 46*	*07/16/12 07:24*	*07/16/12 13:51*	*1*
2,4,6-Tribromophenol	*82*		*18 - 123*	*07/16/12 07:24*	*07/16/12 13:51*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1900**		53		ug/L		07/13/12 10:45	07/16/12 15:54	1
Motor Oil Range Organics [C24-C36]	**6100**		110		ug/L		07/13/12 10:45	07/16/12 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.04*		*0 - 5*	*07/13/12 10:45*	*07/16/12 15:54*	*1*
p-Terphenyl	*35*		*31 - 150*	*07/13/12 10:45*	*07/16/12 15:54*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0025		mg/L		07/13/12 14:09	07/14/12 10:46	1
Chromium	ND		0.010		mg/L		07/13/12 14:09	07/14/12 10:46	1
Nickel	ND		0.010		mg/L		07/13/12 14:09	07/14/12 10:46	1
Lead	ND		0.0050		mg/L		07/13/12 14:09	07/14/12 10:46	1
Zinc	ND		0.020		mg/L		07/13/12 14:09	07/14/12 10:46	1

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020		mg/L		07/16/12 10:05	07/16/12 14:19	1
Chromium	ND		0.010		mg/L		07/16/12 10:05	07/16/12 14:19	1
Nickel	ND		0.010		mg/L		07/16/12 10:05	07/16/12 14:19	1
Lead	**0.0060**		0.0050		mg/L		07/16/12 10:05	07/16/12 14:19	1
Zinc	**0.023**		0.020		mg/L		07/16/12 10:05	07/16/12 14:19	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-117089/6
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			07/13/12 08:57	1
Acetone	ND		50		ug/L			07/13/12 08:57	1
Benzene	ND		0.50		ug/L			07/13/12 08:57	1
Dichlorobromomethane	ND		0.50		ug/L			07/13/12 08:57	1
Bromobenzene	ND		1.0		ug/L			07/13/12 08:57	1
Chlorobromomethane	ND		1.0		ug/L			07/13/12 08:57	1
Bromoform	ND		1.0		ug/L			07/13/12 08:57	1
Bromomethane	ND		1.0		ug/L			07/13/12 08:57	1
2-Butanone (MEK)	ND		50		ug/L			07/13/12 08:57	1
n-Butylbenzene	ND		1.0		ug/L			07/13/12 08:57	1
sec-Butylbenzene	ND		1.0		ug/L			07/13/12 08:57	1
tert-Butylbenzene	ND		1.0		ug/L			07/13/12 08:57	1
Carbon disulfide	ND		5.0		ug/L			07/13/12 08:57	1
Carbon tetrachloride	ND		0.50		ug/L			07/13/12 08:57	1
Chlorobenzene	ND		0.50		ug/L			07/13/12 08:57	1
Chloroethane	ND		1.0		ug/L			07/13/12 08:57	1
Chloroform	ND		1.0		ug/L			07/13/12 08:57	1
Chloromethane	ND		1.0		ug/L			07/13/12 08:57	1
2-Chlorotoluene	ND		0.50		ug/L			07/13/12 08:57	1
4-Chlorotoluene	ND		0.50		ug/L			07/13/12 08:57	1
Chlorodibromomethane	ND		0.50		ug/L			07/13/12 08:57	1
1,2-Dichlorobenzene	ND		0.50		ug/L			07/13/12 08:57	1
1,3-Dichlorobenzene	ND		0.50		ug/L			07/13/12 08:57	1
1,4-Dichlorobenzene	ND		0.50		ug/L			07/13/12 08:57	1
1,3-Dichloropropane	ND		1.0		ug/L			07/13/12 08:57	1
1,1-Dichloropropene	ND		0.50		ug/L			07/13/12 08:57	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			07/13/12 08:57	1
Ethylene Dibromide	ND		0.50		ug/L			07/13/12 08:57	1
Dibromomethane	ND		0.50		ug/L			07/13/12 08:57	1
Dichlorodifluoromethane	ND		0.50		ug/L			07/13/12 08:57	1
1,1-Dichloroethane	ND		0.50		ug/L			07/13/12 08:57	1
1,2-Dichloroethane	ND		0.50		ug/L			07/13/12 08:57	1
1,1-Dichloroethene	ND		0.50		ug/L			07/13/12 08:57	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			07/13/12 08:57	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			07/13/12 08:57	1
1,2-Dichloropropane	ND		0.50		ug/L			07/13/12 08:57	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			07/13/12 08:57	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			07/13/12 08:57	1
Ethylbenzene	ND		0.50		ug/L			07/13/12 08:57	1
Hexachlorobutadiene	ND		1.0		ug/L			07/13/12 08:57	1
2-Hexanone	ND		50		ug/L			07/13/12 08:57	1
Isopropylbenzene	ND		0.50		ug/L			07/13/12 08:57	1
4-Isopropyltoluene	ND		1.0		ug/L			07/13/12 08:57	1
Methylene Chloride	ND		5.0		ug/L			07/13/12 08:57	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			07/13/12 08:57	1
Naphthalene	ND		1.0		ug/L			07/13/12 08:57	1
N-Propylbenzene	ND		1.0		ug/L			07/13/12 08:57	1
Styrene	ND		0.50		ug/L			07/13/12 08:57	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			07/13/12 08:57	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-117089/6
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			07/13/12 08:57	1
Tetrachloroethene	ND		0.50		ug/L			07/13/12 08:57	1
Toluene	ND		0.50		ug/L			07/13/12 08:57	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			07/13/12 08:57	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			07/13/12 08:57	1
1,1,1-Trichloroethane	ND		0.50		ug/L			07/13/12 08:57	1
1,1,2-Trichloroethane	ND		0.50		ug/L			07/13/12 08:57	1
Trichloroethene	ND		0.50		ug/L			07/13/12 08:57	1
Trichlorofluoromethane	ND		1.0		ug/L			07/13/12 08:57	1
1,2,3-Trichloropropane	ND		0.50		ug/L			07/13/12 08:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			07/13/12 08:57	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			07/13/12 08:57	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			07/13/12 08:57	1
Vinyl acetate	ND		10		ug/L			07/13/12 08:57	1
Vinyl chloride	ND		0.50		ug/L			07/13/12 08:57	1
Xylenes, Total	ND		1.0		ug/L			07/13/12 08:57	1
2,2-Dichloropropane	ND		0.50		ug/L			07/13/12 08:57	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			07/13/12 08:57	1
TBA	ND		4.0		ug/L			07/13/12 08:57	1
DIPE	ND		0.50		ug/L			07/13/12 08:57	1
TAME	ND		0.50		ug/L			07/13/12 08:57	1
Ethyl t-butyl ether	ND		0.50		ug/L			07/13/12 08:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*67 - 130*		*07/13/12 08:57*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*75 - 138*		*07/13/12 08:57*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/13/12 08:57*	*1*

Lab Sample ID: LCS 720-117089/7
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	29.2		ug/L		117	62 - 130
Acetone	125	96.3		ug/L		77	26 - 180
Benzene	25.0	21.7		ug/L		87	79 - 130
Dichlorobromomethane	25.0	28.3		ug/L		113	70 - 130
Bromobenzene	25.0	22.3		ug/L		89	70 - 130
Chlorobromomethane	25.0	24.0		ug/L		96	70 - 130
Bromoform	25.0	24.2		ug/L		97	68 - 136
Bromomethane	25.0	27.1		ug/L		108	43 - 151
2-Butanone (MEK)	125	119		ug/L		95	54 - 130
n-Butylbenzene	25.0	25.1		ug/L		100	70 - 142
sec-Butylbenzene	25.0	24.4		ug/L		98	70 - 134
tert-Butylbenzene	25.0	25.0		ug/L		100	70 - 135
Carbon disulfide	25.0	19.8		ug/L		79	58 - 130
Carbon tetrachloride	25.0	28.3		ug/L		113	70 - 146
Chlorobenzene	25.0	22.5		ug/L		90	70 - 130
Chloroethane	25.0	26.5		ug/L		106	62 - 138

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-117089/7
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	25.0	24.6		ug/L		98	70 - 130
Chloromethane	25.0	22.4		ug/L		90	52 - 175
2-Chlorotoluene	25.0	24.7		ug/L		99	70 - 130
4-Chlorotoluene	25.0	24.4		ug/L		98	70 - 130
Chlorodibromomethane	25.0	26.5		ug/L		106	70 - 145
1,2-Dichlorobenzene	25.0	22.4		ug/L		90	70 - 130
1,3-Dichlorobenzene	25.0	23.1		ug/L		92	70 - 130
1,4-Dichlorobenzene	25.0	22.7		ug/L		91	70 - 130
1,3-Dichloropropane	25.0	24.0		ug/L		96	70 - 130
1,1-Dichloropropene	25.0	24.0		ug/L		96	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	24.0		ug/L		96	70 - 136
Ethylene Dibromide	25.0	25.8		ug/L		103	70 - 130
Dibromomethane	25.0	24.1		ug/L		96	70 - 130
Dichlorodifluoromethane	25.0	21.4		ug/L		86	34 - 132
1,1-Dichloroethane	25.0	23.0		ug/L		92	70 - 130
1,2-Dichloroethane	25.0	23.9		ug/L		96	61 - 132
1,1-Dichloroethene	25.0	21.6		ug/L		86	64 - 128
cis-1,2-Dichloroethene	25.0	24.2		ug/L		97	70 - 130
trans-1,2-Dichloroethene	25.0	19.4		ug/L		78	68 - 130
1,2-Dichloropropane	25.0	21.9		ug/L		88	70 - 130
cis-1,3-Dichloropropene	25.0	25.9		ug/L		104	70 - 130
trans-1,3-Dichloropropene	25.0	25.9		ug/L		104	70 - 140
Ethylbenzene	25.0	22.8		ug/L		91	80 - 120
Hexachlorobutadiene	25.0	23.2		ug/L		93	70 - 130
2-Hexanone	125	116		ug/L		93	60 - 164
Isopropylbenzene	25.0	24.4		ug/L		98	70 - 130
4-Isopropyltoluene	25.0	25.2		ug/L		101	70 - 130
Methylene Chloride	25.0	22.7		ug/L		91	70 - 147
4-Methyl-2-pentanone (MIBK)	125	117		ug/L		94	58 - 130
Naphthalene	25.0	25.1		ug/L		100	70 - 130
N-Propylbenzene	25.0	23.5		ug/L		94	70 - 130
Styrene	25.0	24.1		ug/L		96	70 - 130
1,1,1,2-Tetrachloroethane	25.0	25.4		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.8		ug/L		99	70 - 130
Tetrachloroethene	25.0	22.2		ug/L		89	70 - 130
Toluene	25.0	22.1		ug/L		88	78 - 120
1,2,3-Trichlorobenzene	25.0	22.9		ug/L		92	70 - 130
1,2,4-Trichlorobenzene	25.0	22.8		ug/L		91	70 - 130
1,1,1-Trichloroethane	25.0	26.8		ug/L		107	70 - 130
1,1,2-Trichloroethane	25.0	24.2		ug/L		97	70 - 130
Trichloroethene	25.0	21.8		ug/L		87	70 - 130
Trichlorofluoromethane	25.0	26.3		ug/L		105	66 - 132
1,2,3-Trichloropropane	25.0	26.1		ug/L		104	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.6		ug/L		98	42 - 162
1,2,4-Trimethylbenzene	25.0	24.9		ug/L		100	70 - 132
1,3,5-Trimethylbenzene	25.0	25.4		ug/L		102	70 - 130
Vinyl acetate	25.0	25.0		ug/L		100	43 - 163
Vinyl chloride	25.0	24.9		ug/L		100	54 - 135
m-Xylene & p-Xylene	50.0	47.1		ug/L		94	70 - 142

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-117089/7
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	25.0	24.3		ug/L		97	70 - 130
2,2-Dichloropropane	25.0	29.1		ug/L		116	70 - 140
TBA	500	486		ug/L		97	70 - 130
DIPE	25.0	23.3		ug/L		93	69 - 134
TAME	25.0	30.5		ug/L		122	79 - 130
Ethyl t-butyl ether	25.0	26.8		ug/L		107	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*105*		*75 - 138*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCS 720-117089/9
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	491		ug/L		98	62 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*75 - 138*
Toluene-d8 (Surr)	*100*		*70 - 130*

Lab Sample ID: LCSD 720-117089/10
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12	500	450		ug/L		90	62 - 120	9	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*103*		*75 - 138*
Toluene-d8 (Surr)	*99*		*70 - 130*

Lab Sample ID: LCSD 720-117089/8
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	29.4		ug/L		118	62 - 130	1	20
Acetone	125	92.5		ug/L		74	26 - 180	4	30
Benzene	25.0	22.9		ug/L		92	79 - 130	5	20
Dichlorobromomethane	25.0	29.1		ug/L		116	70 - 130	3	20
Bromobenzene	25.0	23.6		ug/L		94	70 - 130	6	20
Chlorobromomethane	25.0	24.9		ug/L		100	70 - 130	4	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-117089/8
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromoform	25.0	24.8		ug/L		99	68 - 136	2	20
Bromomethane	25.0	28.3		ug/L		113	43 - 151	4	20
2-Butanone (MEK)	125	113		ug/L		90	54 - 130	6	20
n-Butylbenzene	25.0	27.4		ug/L		110	70 - 142	9	20
sec-Butylbenzene	25.0	26.6		ug/L		106	70 - 134	9	20
tert-Butylbenzene	25.0	27.0		ug/L		108	70 - 135	8	20
Carbon disulfide	25.0	21.4		ug/L		86	58 - 130	8	20
Carbon tetrachloride	25.0	29.8		ug/L		119	70 - 146	5	20
Chlorobenzene	25.0	24.0		ug/L		96	70 - 130	6	20
Chloroethane	25.0	27.9		ug/L		112	62 - 138	5	20
Chloroform	25.0	25.7		ug/L		103	70 - 130	4	20
Chloromethane	25.0	23.8		ug/L		95	52 - 175	6	20
2-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130	7	20
4-Chlorotoluene	25.0	25.9		ug/L		104	70 - 130	6	20
Chlorodibromomethane	25.0	27.2		ug/L		109	70 - 145	3	20
1,2-Dichlorobenzene	25.0	23.9		ug/L		96	70 - 130	6	20
1,3-Dichlorobenzene	25.0	24.5		ug/L		98	70 - 130	6	20
1,4-Dichlorobenzene	25.0	23.9		ug/L		96	70 - 130	5	20
1,3-Dichloropropane	25.0	24.8		ug/L		99	70 - 130	3	20
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130	6	20
1,2-Dibromo-3-Chloropropane	25.0	24.2		ug/L		97	70 - 136	1	20
Ethylene Dibromide	25.0	26.0		ug/L		104	70 - 130	1	20
Dibromomethane	25.0	24.7		ug/L		99	70 - 130	2	20
Dichlorodifluoromethane	25.0	22.2		ug/L		89	34 - 132	4	20
1,1-Dichloroethane	25.0	24.3		ug/L		97	70 - 130	5	20
1,2-Dichloroethane	25.0	24.5		ug/L		98	61 - 132	2	20
1,1-Dichloroethene	25.0	23.0		ug/L		92	64 - 128	6	20
cis-1,2-Dichloroethene	25.0	25.4		ug/L		102	70 - 130	5	20
trans-1,2-Dichloroethene	25.0	20.7		ug/L		83	68 - 130	6	20
1,2-Dichloropropane	25.0	23.2		ug/L		93	70 - 130	6	20
cis-1,3-Dichloropropene	25.0	26.9		ug/L		108	70 - 130	4	20
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 140	2	20
Ethylbenzene	25.0	24.8		ug/L		99	80 - 120	8	20
Hexachlorobutadiene	25.0	25.0		ug/L		100	70 - 130	7	20
2-Hexanone	125	109		ug/L		87	60 - 164	6	20
Isopropylbenzene	25.0	26.3		ug/L		105	70 - 130	7	20
4-Isopropyltoluene	25.0	27.0		ug/L		108	70 - 130	7	20
Methylene Chloride	25.0	23.9		ug/L		96	70 - 147	5	20
4-Methyl-2-pentanone (MIBK)	125	113		ug/L		91	58 - 130	3	20
Naphthalene	25.0	26.2		ug/L		105	70 - 130	4	20
N-Propylbenzene	25.0	25.4		ug/L		102	70 - 130	8	20
Styrene	25.0	25.6		ug/L		102	70 - 130	6	20
1,1,1,2-Tetrachloroethane	25.0	27.2		ug/L		109	70 - 130	7	20
1,1,2,2-Tetrachloroethane	25.0	25.0		ug/L		100	70 - 130	1	20
Tetrachloroethene	25.0	23.4		ug/L		94	70 - 130	5	20
Toluene	25.0	23.8		ug/L		95	78 - 120	7	20
1,2,3-Trichlorobenzene	25.0	24.4		ug/L		98	70 - 130	6	20
1,2,4-Trichlorobenzene	25.0	24.3		ug/L		97	70 - 130	6	20
1,1,1-Trichloroethane	25.0	28.3		ug/L		113	70 - 130	5	20
1,1,2-Trichloroethane	25.0	24.9		ug/L		100	70 - 130	3	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-117089/8
Matrix: Water
Analysis Batch: 117089

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichloroethene			25.0	23.3		ug/L		93	70 - 130	7	20
Trichlorofluoromethane			25.0	27.2		ug/L		109	66 - 132	3	20
1,2,3-Trichloropropane			25.0	26.2		ug/L		105	70 - 130	0	20
1,1,2-Trichloro-1,2,2-trifluoroethane			25.0	25.7		ug/L		103	42 - 162	4	20
1,2,4-Trimethylbenzene			25.0	27.0		ug/L		108	70 - 132	8	20
1,3,5-Trimethylbenzene			25.0	27.3		ug/L		109	70 - 130	7	20
Vinyl acetate			25.0	23.6		ug/L		94	43 - 163	6	20
Vinyl chloride			25.0	26.9		ug/L		108	54 - 135	8	20
m-Xylene & p-Xylene			50.0	50.3		ug/L		101	70 - 142	7	20
o-Xylene			25.0	25.8		ug/L		103	70 - 130	6	20
2,2-Dichloropropane			25.0	31.4		ug/L		126	70 - 140	8	20
TBA			500	510		ug/L		102	70 - 130	5	20
DIPE			25.0	24.4		ug/L		98	69 - 134	5	20
TAME			25.0	31.4		ug/L		126	79 - 130	3	20
Ethyl t-butyl ether			25.0	27.6		ug/L		110	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 138*
Toluene-d8 (Surr)	*99*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-117180/1-A
Matrix: Water
Analysis Batch: 117207

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117180

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Bis(2-chloroethyl)ether	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2-Chlorophenol	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
1,3-Dichlorobenzene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
1,4-Dichlorobenzene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Benzyl alcohol	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
1,2-Dichlorobenzene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2-Methylphenol	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
4-Methylphenol	ND		8.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
N-Nitrosodi-n-propylamine	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Hexachloroethane	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Nitrobenzene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Isophorone	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2-Nitrophenol	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2,4-Dimethylphenol	ND		3.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Bis(2-chloroethoxy)methane	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2,4-Dichlorophenol	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
1,2,4-Trichlorobenzene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Naphthalene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
4-Chloroaniline	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-117180/1-A
Matrix: Water
Analysis Batch: 117207

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117180

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorobutadiene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
4-Chloro-3-methylphenol	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2-Methylnaphthalene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Hexachlorocyclopentadiene	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2,4,6-Trichlorophenol	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2,4,5-Trichlorophenol	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2-Chloronaphthalene	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2-Nitroaniline	ND		10		ug/L		07/16/12 07:24	07/16/12 13:27	1
Dimethyl phthalate	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Acenaphthylene	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
3-Nitroaniline	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Acenaphthene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2,4-Dinitrophenol	ND		10		ug/L		07/16/12 07:24	07/16/12 13:27	1
4-Nitrophenol	ND		10		ug/L		07/16/12 07:24	07/16/12 13:27	1
Dibenzofuran	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2,4-Dinitrotoluene	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
2,6-Dinitrotoluene	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Diethyl phthalate	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
4-Chlorophenyl phenyl ether	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Fluorene	ND		4.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
4-Nitroaniline	ND		10		ug/L		07/16/12 07:24	07/16/12 13:27	1
2-Methyl-4,6-dinitrophenol	ND		10		ug/L		07/16/12 07:24	07/16/12 13:27	1
N-Nitrosodiphenylamine	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
4-Bromophenyl phenyl ether	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Hexachlorobenzene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Pentachlorophenol	ND		10		ug/L		07/16/12 07:24	07/16/12 13:27	1
Phenanthrene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Anthracene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Di-n-butyl phthalate	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Fluoranthene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Pyrene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Butyl benzyl phthalate	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
3,3'-Dichlorobenzidine	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Benzo[a]anthracene	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Bis(2-ethylhexyl) phthalate	ND		10		ug/L		07/16/12 07:24	07/16/12 13:27	1
Chrysene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Di-n-octyl phthalate	ND		5.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Benzo[b]fluoranthene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Benzo[a]pyrene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Benzo[k]fluoranthene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Indeno[1,2,3-cd]pyrene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Benzo[g,h,i]perylene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Benzoic acid	ND		10		ug/L		07/16/12 07:24	07/16/12 13:27	1
Azobenzene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1
Dibenz(a,h)anthracene	ND		2.0		ug/L		07/16/12 07:24	07/16/12 13:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*66*		*25 - 102*	*07/16/12 07:24*	*07/16/12 13:27*	*1*
2-Fluorobiphenyl	*62*		*10 - 101*	*07/16/12 07:24*	*07/16/12 13:27*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-117180/1-A
Matrix: Water
Analysis Batch: 117207

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117180

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	*87*		*57 - 117*	*07/16/12 07:24*	*07/16/12 13:27*	*1*
2-Fluorophenol	*31*		*10 - 65*	*07/16/12 07:24*	*07/16/12 13:27*	*1*
Phenol-d5	*19*		*10 - 46*	*07/16/12 07:24*	*07/16/12 13:27*	*1*
2,4,6-Tribromophenol	*84*		*18 - 123*	*07/16/12 07:24*	*07/16/12 13:27*	*1*

Lab Sample ID: LCS 720-117180/2-A
Matrix: Water
Analysis Batch: 117207

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117180

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	50.0	9.60		ug/L		19	10 - 115
Bis(2-chloroethyl)ether	50.0	29.7		ug/L		59	12 - 115
2-Chlorophenol	50.0	24.0		ug/L		48	14 - 115
1,3-Dichlorobenzene	50.0	8.98		ug/L		18	13 - 115
1,4-Dichlorobenzene	50.0	9.06		ug/L		18	14 - 115
Benzyl alcohol	50.0	23.4		ug/L		47	19 - 115
1,2-Dichlorobenzene	50.0	9.82		ug/L		20	17 - 115
2-Methylphenol	50.0	21.2		ug/L		42	13 - 115
4-Methylphenol	100	36.3		ug/L		36	10 - 115
N-Nitrosodi-n-propylamine	50.0	29.5		ug/L		59	17 - 115
Hexachloroethane	50.0	7.24		ug/L		14	9 - 115
Nitrobenzene	50.0	25.9		ug/L		52	18 - 115
Isophorone	50.0	32.3		ug/L		65	18 - 134
2-Nitrophenol	50.0	28.6		ug/L		57	14 - 115
2,4-Dimethylphenol	50.0	26.6		ug/L		53	10 - 119
Bis(2-chloroethoxy)methane	50.0	30.5		ug/L		61	10 - 119
2,4-Dichlorophenol	50.0	28.2		ug/L		56	13 - 118
1,2,4-Trichlorobenzene	50.0	14.1		ug/L		28	17 - 115
Naphthalene	50.0	17.7		ug/L		35	12 - 115
4-Chloroaniline	50.0	28.8		ug/L		58	26 - 115
Hexachlorobutadiene	50.0	9.45		ug/L		19	12 - 115
4-Chloro-3-methylphenol	50.0	30.8		ug/L		62	19 - 128
2-Methylnaphthalene	50.0	22.2		ug/L		44	16 - 115
Hexachlorocyclopentadiene	50.0	18.1		ug/L		36	10 - 115
2,4,6-Trichlorophenol	50.0	33.6		ug/L		67	20 - 120
2,4,5-Trichlorophenol	50.0	33.2		ug/L		66	22 - 117
2-Chloronaphthalene	50.0	27.9		ug/L		56	17 - 115
2-Nitroaniline	50.0	40.3		ug/L		81	37 - 119
Dimethyl phthalate	50.0	40.7		ug/L		81	48 - 127
Acenaphthylene	50.0	34.1		ug/L		68	29 - 129
3-Nitroaniline	50.0	39.5		ug/L		79	40 - 115
Acenaphthene	50.0	31.2		ug/L		62	25 - 115
2,4-Dinitrophenol	50.0	44.2		ug/L		88	44 - 116
4-Nitrophenol	50.0	18.6		ug/L		37	20 - 115
Dibenzofuran	50.0	32.8		ug/L		66	28 - 115
2,4-Dinitrotoluene	50.0	48.6		ug/L		97	61 - 118
2,6-Dinitrotoluene	50.0	41.4		ug/L		83	46 - 119
Diethyl phthalate	50.0	44.3		ug/L		89	59 - 115
4-Chlorophenyl phenyl ether	50.0	35.6		ug/L		71	32 - 115

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-117180/2-A
Matrix: Water
Analysis Batch: 117207

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117180

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluorene	50.0	36.2		ug/L		72	39 - 115
4-Nitroaniline	50.0	46.0		ug/L		92	67 - 115
2-Methyl-4,6-dinitrophenol	50.0	46.4		ug/L		93	53 - 115
N-Nitrosodiphenylamine	50.0	41.7		ug/L		83	57 - 115
4-Bromophenyl phenyl ether	50.0	39.0		ug/L		78	42 - 115
Hexachlorobenzene	50.0	42.3		ug/L		85	49 - 115
Pentachlorophenol	50.0	44.3		ug/L		89	54 - 115
Phenanthrene	50.0	41.4		ug/L		83	54 - 115
Anthracene	50.0	42.7		ug/L		85	54 - 115
Di-n-butyl phthalate	50.0	43.6		ug/L		87	58 - 115
Fluoranthene	50.0	44.4		ug/L		89	65 - 115
Pyrene	50.0	44.5		ug/L		89	64 - 122
Butyl benzyl phthalate	50.0	48.6		ug/L		97	37 - 115
3,3'-Dichlorobenzidine	50.0	43.0		ug/L		86	24 - 110
Benzo[a]anthracene	50.0	44.7		ug/L		89	63 - 116
Bis(2-ethylhexyl) phthalate	50.0	49.5		ug/L		99	59 - 115
Chrysene	50.0	47.4		ug/L		95	70 - 115
Di-n-octyl phthalate	50.0	48.8		ug/L		98	12 - 115
Benzo[b]fluoranthene	50.0	38.0		ug/L		76	66 - 115
Benzo[a]pyrene	50.0	41.9		ug/L		84	62 - 121
Benzo[k]fluoranthene	50.0	47.4		ug/L		95	66 - 115
Indeno[1,2,3-cd]pyrene	50.0	46.5		ug/L		93	68 - 115
Benzo[g,h,i]perylene	50.0	48.2		ug/L		96	67 - 128
Benzoic acid	50.0	16.7		ug/L		33	10 - 115
Azobenzene	50.0	36.1		ug/L		72	42 - 115
Dibenz(a,h)anthracene	50.0	48.1		ug/L		96	65 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*59*		*25 - 102*
2-Fluorobiphenyl	*58*		*10 - 101*
Terphenyl-d14	*91*		*57 - 117*
2-Fluorophenol	*27*		*10 - 65*
Phenol-d5	*18*		*10 - 46*
2,4,6-Tribromophenol	*85*		*18 - 123*

Lab Sample ID: LCSD 720-117180/3-A
Matrix: Water
Analysis Batch: 117207

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117180

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol	50.0	12.1		ug/L		24	10 - 115	23	51
Bis(2-chloroethyl)ether	50.0	36.8		ug/L		74	12 - 115	21	35
2-Chlorophenol	50.0	29.5		ug/L		59	14 - 115	21	40
1,3-Dichlorobenzene	50.0	11.0		ug/L		22	13 - 115	20	40
1,4-Dichlorobenzene	50.0	11.2		ug/L		22	14 - 115	21	41
Benzyl alcohol	50.0	27.6		ug/L		55	19 - 115	16	35
1,2-Dichlorobenzene	50.0	11.9		ug/L		24	17 - 115	19	35
2-Methylphenol	50.0	26.3		ug/L		53	13 - 115	21	35
4-Methylphenol	100	44.9		ug/L		45	10 - 115	21	35

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-117180/3-A
Matrix: Water
Analysis Batch: 117207

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117180

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodi-n-propylamine	50.0	36.3		ug/L		73	17 - 115	21	34
Hexachloroethane	50.0	8.60		ug/L		17	9 - 115	17	35
Nitrobenzene	50.0	32.1		ug/L		64	18 - 115	21	43
Isophorone	50.0	36.2		ug/L		72	18 - 134	11	39
2-Nitrophenol	50.0	33.7		ug/L		67	14 - 115	16	46
2,4-Dimethylphenol	50.0	30.6		ug/L		61	10 - 119	14	44
Bis(2-chloroethoxy)methane	50.0	35.3		ug/L		71	10 - 119	15	46
2,4-Dichlorophenol	50.0	33.0		ug/L		66	13 - 118	16	38
1,2,4-Trichlorobenzene	50.0	15.5		ug/L		31	17 - 115	9	51
Naphthalene	50.0	19.9		ug/L		40	12 - 115	12	42
4-Chloroaniline	50.0	29.9		ug/L		60	26 - 115	4	49
Hexachlorobutadiene	50.0	10.6		ug/L		21	12 - 115	11	46
4-Chloro-3-methylphenol	50.0	35.2		ug/L		70	19 - 128	13	40
2-Methylnaphthalene	50.0	24.7		ug/L		49	16 - 115	11	45
Hexachlorocyclopentadiene	50.0	20.4		ug/L		41	10 - 115	12	63
2,4,6-Trichlorophenol	50.0	37.7		ug/L		75	20 - 120	12	43
2,4,5-Trichlorophenol	50.0	36.5		ug/L		73	22 - 117	9	41
2-Chloronaphthalene	50.0	30.5		ug/L		61	17 - 115	9	49
2-Nitroaniline	50.0	42.4		ug/L		85	37 - 119	5	29
Dimethyl phthalate	50.0	42.2		ug/L		84	48 - 127	4	29
Acenaphthylene	50.0	37.0		ug/L		74	29 - 129	8	40
3-Nitroaniline	50.0	38.9		ug/L		78	40 - 115	2	30
Acenaphthene	50.0	34.1		ug/L		68	25 - 115	9	40
2,4-Dinitrophenol	50.0	46.2		ug/L		92	44 - 116	4	21
4-Nitrophenol	50.0	20.5		ug/L		41	20 - 115	10	32
Dibenzofuran	50.0	35.7		ug/L		71	28 - 115	8	46
2,4-Dinitrotoluene	50.0	48.3		ug/L		97	61 - 118	1	19
2,6-Dinitrotoluene	50.0	44.3		ug/L		89	46 - 119	7	26
Diethyl phthalate	50.0	44.2		ug/L		88	59 - 115	0	24
4-Chlorophenyl phenyl ether	50.0	38.9		ug/L		78	32 - 115	9	38
Fluorene	50.0	38.8		ug/L		78	39 - 115	7	39
4-Nitroaniline	50.0	46.7		ug/L		93	67 - 115	2	23
2-Methyl-4,6-dinitrophenol	50.0	46.7		ug/L		93	53 - 115	1	19
N-Nitrosodiphenylamine	50.0	42.6		ug/L		85	57 - 115	2	27
4-Bromophenyl phenyl ether	50.0	41.4		ug/L		83	42 - 115	6	29
Hexachlorobenzene	50.0	43.6		ug/L		87	49 - 115	3	28
Pentachlorophenol	50.0	44.5		ug/L		89	54 - 115	0	22
Phenanthrene	50.0	42.1		ug/L		84	54 - 115	2	35
Anthracene	50.0	43.2		ug/L		86	54 - 115	1	25
Di-n-butyl phthalate	50.0	43.6		ug/L		87	58 - 115	0	26
Fluoranthene	50.0	44.2		ug/L		88	65 - 115	0	26
Pyrene	50.0	43.3		ug/L		87	64 - 122	3	22
Butyl benzyl phthalate	50.0	47.5		ug/L		95	37 - 115	2	21
3,3'-Dichlorobenzidine	50.0	40.7		ug/L		81	24 - 110	5	30
Benzo[a]anthracene	50.0	44.3		ug/L		89	63 - 116	1	24
Bis(2-ethylhexyl) phthalate	50.0	50.4		ug/L		101	59 - 115	2	30
Chrysene	50.0	48.4		ug/L		97	70 - 115	2	24
Di-n-octyl phthalate	50.0	48.6		ug/L		97	12 - 115	0	27
Benzo[b]fluoranthene	50.0	37.3		ug/L		75	66 - 115	2	31
Benzo[a]pyrene	50.0	41.1		ug/L		82	62 - 121	2	23

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-117180/3-A
Matrix: Water
Analysis Batch: 117207

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117180

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[k]fluoranthene			50.0	47.5		ug/L		95	66 - 115	0	39
Indeno[1,2,3-cd]pyrene			50.0	46.0		ug/L		92	68 - 115	1	19
Benzo[g,h,i]perylene			50.0	47.4		ug/L		95	67 - 128	2	35
Benzoic acid			50.0	19.2		ug/L		38	10 - 115	14	56
Azobenzene			50.0	39.4		ug/L		79	42 - 115	9	35
Dibenz(a,h)anthracene			50.0	47.3		ug/L		95	65 - 121	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*68*		*25 - 102*
2-Fluorobiphenyl	*63*		*10 - 101*
Terphenyl-d14	*89*		*57 - 117*
2-Fluorophenol	*34*		*10 - 65*
Phenol-d5	*23*		*10 - 46*
2,4,6-Tribromophenol	*84*		*18 - 123*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-117111/1-A
Matrix: Water
Analysis Batch: 117152

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117111

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Acenaphthene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Acenaphthylene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Fluorene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Phenanthrene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Anthracene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Benzo[a]anthracene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Chrysene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Benzo[a]pyrene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Fluoranthene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Pyrene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/13/12 10:47	07/14/12 01:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*70*		*29 - 120*	*07/13/12 10:47*	*07/14/12 01:57*	*1*
Terphenyl-d14	*91*		*45 - 120*	*07/13/12 10:47*	*07/14/12 01:57*	*1*

Lab Sample ID: LCS 720-117111/2-A
Matrix: Water
Analysis Batch: 117152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117111

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Naphthalene			10.0	6.49		ug/L		65	33 - 120		

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCS 720-117111/2-A
Matrix: Water
Analysis Batch: 117152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117111

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	10.0	7.33		ug/L		73	37 - 120
Acenaphthylene	10.0	7.19		ug/L		72	36 - 120
Fluorene	10.0	7.38		ug/L		74	22 - 120
Phenanthrene	10.0	7.99		ug/L		80	44 - 120
Anthracene	10.0	8.32		ug/L		83	45 - 120
Benzo[a]anthracene	10.0	7.45		ug/L		75	48 - 120
Chrysene	10.0	7.71		ug/L		77	40 - 94
Benzo[a]pyrene	10.0	7.38		ug/L		74	50 - 120
Benzo[b]fluoranthene	10.0	8.02		ug/L		80	48 - 120
Benzo[k]fluoranthene	10.0	6.63		ug/L		66	50 - 120
Benzo[g,h,i]perylene	10.0	6.42		ug/L		64	39 - 121
Indeno[1,2,3-cd]pyrene	10.0	6.50		ug/L		65	40 - 126
Fluoranthene	10.0	8.66		ug/L		87	46 - 120
Pyrene	10.0	8.03		ug/L		80	50 - 120
Dibenz(a,h)anthracene	10.0	6.20		ug/L		62	37 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*65*		*29 - 120*
Terphenyl-d14	*75*		*45 - 120*

Lab Sample ID: LCSD 720-117111/3-A
Matrix: Water
Analysis Batch: 117152

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117111

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	10.0	6.21		ug/L		62	33 - 120	4	35
Acenaphthene	10.0	7.04		ug/L		70	37 - 120	4	35
Acenaphthylene	10.0	7.00		ug/L		70	36 - 120	3	35
Fluorene	10.0	7.18		ug/L		72	22 - 120	3	35
Phenanthrene	10.0	7.85		ug/L		79	44 - 120	2	35
Anthracene	10.0	8.07		ug/L		81	45 - 120	3	35
Benzo[a]anthracene	10.0	7.27		ug/L		73	48 - 120	2	35
Chrysene	10.0	7.23		ug/L		72	40 - 94	6	35
Benzo[a]pyrene	10.0	6.53		ug/L		65	50 - 120	12	35
Benzo[b]fluoranthene	10.0	7.40		ug/L		74	48 - 120	8	35
Benzo[k]fluoranthene	10.0	6.09		ug/L		61	50 - 120	8	35
Benzo[g,h,i]perylene	10.0	5.64		ug/L		56	39 - 121	13	35
Indeno[1,2,3-cd]pyrene	10.0	5.65		ug/L		57	40 - 126	14	35
Fluoranthene	10.0	8.21		ug/L		82	46 - 120	5	35
Pyrene	10.0	7.83		ug/L		78	50 - 120	3	35
Dibenz(a,h)anthracene	10.0	5.44		ug/L		54	37 - 125	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*62*		*29 - 120*
Terphenyl-d14	*71*		*45 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-117109/1-A
Matrix: Water
Analysis Batch: 117182

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 117109

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		07/13/12 10:45	07/16/12 19:34	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		07/13/12 10:45	07/16/12 19:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*07/13/12 10:45*	*07/16/12 19:34*	*1*
p-Terphenyl	*58*		*31 - 150*	*07/13/12 10:45*	*07/16/12 19:34*	*1*

Lab Sample ID: LCS 720-117109/2-A
Matrix: Water
Analysis Batch: 117182

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 117109

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2500	1280		ug/L		51	32 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*56*		*31 - 150*

Lab Sample ID: LCSD 720-117109/3-A
Matrix: Water
Analysis Batch: 117182

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 117109

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	2500	1170		ug/L		47	32 - 119	9	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*50*		*31 - 150*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-117129/1-A
Matrix: Water
Analysis Batch: 117168

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117129

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0025		mg/L		07/13/12 14:07	07/14/12 09:38	1
Chromium	ND		0.010		mg/L		07/13/12 14:07	07/14/12 09:38	1
Nickel	ND		0.010		mg/L		07/13/12 14:07	07/14/12 09:38	1
Lead	ND		0.0050		mg/L		07/13/12 14:07	07/14/12 09:38	1
Zinc	ND		0.020		mg/L		07/13/12 14:07	07/14/12 09:38	1

Lab Sample ID: LCS 720-117129/2-A
Matrix: Water
Analysis Batch: 117168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117129

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	1.00	0.996		mg/L		100	80 - 120
Chromium	1.00	1.04		mg/L		104	80 - 120

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 720-117129/2-A
Matrix: Water
Analysis Batch: 117168

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117129

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nickel			1.00	0.997		mg/L		100	80 - 120		
Lead			1.00	0.998		mg/L		100	80 - 120		
Zinc			1.00	0.995		mg/L		100	80 - 120		

Lab Sample ID: LCSD 720-117129/3-A
Matrix: Water
Analysis Batch: 117168

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117129

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium			1.00	0.988		mg/L		99	80 - 120	1	20
Chromium			1.00	1.03		mg/L		103	80 - 120	1	20
Nickel			1.00	0.991		mg/L		99	80 - 120	1	20
Lead			1.00	0.991		mg/L		99	80 - 120	1	20
Zinc			1.00	0.988		mg/L		99	80 - 120	1	20

Lab Sample ID: 720-43270-1 MS
Matrix: Water
Analysis Batch: 117168

Client Sample ID: W-2344-COMP-120712
Prep Type: Total/NA
Prep Batch: 117129

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cadmium	ND		1.00	0.976		mg/L		98	75 - 125		
Chromium	ND		1.00	1.05		mg/L		105	75 - 125		
Nickel	ND		1.00	0.961		mg/L		96	75 - 125		
Lead	ND		1.00	0.961		mg/L		96	75 - 125		
Zinc	ND		1.00	0.980		mg/L		98	75 - 125		

Lab Sample ID: 720-43270-1 MSD
Matrix: Water
Analysis Batch: 117168

Client Sample ID: W-2344-COMP-120712
Prep Type: Total/NA
Prep Batch: 117129

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		1.00	0.971		mg/L		97	75 - 125	1	20
Chromium	ND		1.00	1.06		mg/L		106	75 - 125	1	20
Nickel	ND		1.00	0.960		mg/L		96	75 - 125	0	20
Lead	ND		1.00	0.955		mg/L		96	75 - 125	1	20
Zinc	ND		1.00	0.976		mg/L		98	75 - 125	0	20

Lab Sample ID: LCS 720-117199/2-A
Matrix: Water
Analysis Batch: 117229

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 117199

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cadmium			1.00	0.954		mg/L		95	80 - 120		
Chromium			1.00	0.991		mg/L		99	80 - 120		
Nickel			1.00	0.994		mg/L		99	80 - 120		
Lead			1.00	0.980		mg/L		98	80 - 120		
Zinc			1.00	0.972		mg/L		97	80 - 120		

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 720-117199/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 117229 — **Prep Batch: 117199**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium			1.00	0.976		mg/L		98	80 - 120	2	20
Chromium			1.00	0.999		mg/L		100	80 - 120	1	20
Nickel			1.00	1.01		mg/L		101	80 - 120	1	20
Lead			1.00	0.998		mg/L		100	80 - 120	2	20
Zinc			1.00	0.990		mg/L		99	80 - 120	2	20

Lab Sample ID: MB 720-117120/1-B — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 117229 — **Prep Batch: 117199**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020		mg/L		07/16/12 09:23	07/16/12 14:06	1
Chromium	ND		0.010		mg/L		07/16/12 09:23	07/16/12 14:06	1
Nickel	ND		0.010		mg/L		07/16/12 09:23	07/16/12 14:06	1
Lead	ND		0.0050		mg/L		07/16/12 09:23	07/16/12 14:06	1
Zinc	ND		0.020		mg/L		07/16/12 09:23	07/16/12 14:06	1

Lab Sample ID: 720-43270-1 MS — **Client Sample ID: W-2344-COMP-120712**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 117229 — **Prep Batch: 117199**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	ND		1.00	0.947		mg/L		95	75 - 125
Chromium	ND		1.00	0.996		mg/L		100	75 - 125
Nickel	ND		1.00	0.993		mg/L		99	75 - 125
Lead	0.0060		1.00	0.980		mg/L		97	75 - 125
Zinc	0.023		1.00	0.987		mg/L		96	75 - 125

Lab Sample ID: 720-43270-1 MSD — **Client Sample ID: W-2344-COMP-120712**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 117229 — **Prep Batch: 117199**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	ND		1.00	0.951		mg/L		95	75 - 125	1	20
Chromium	ND		1.00	1.01		mg/L		101	75 - 125	1	20
Nickel	ND		1.00	0.997		mg/L		99	75 - 125	0	20
Lead	0.0060		1.00	0.985		mg/L		98	75 - 125	1	20
Zinc	0.023		1.00	0.992		mg/L		97	75 - 125	0	20

GC/MS VOA

Analysis Batch: 117089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-117089/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-117089/9	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-117089/10	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-117089/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-117089/6	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

GC/MS Semi VOA

Prep Batch: 117111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Total/NA	Water	3510C	
LCS 720-117111/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-117111/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-117111/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 117152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Total/NA	Water	8270C SIM	117111
LCS 720-117111/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	117111
LCSD 720-117111/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	117111
MB 720-117111/1-A	Method Blank	Total/NA	Water	8270C SIM	117111

Prep Batch: 117180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Total/NA	Water	3510C	
LCS 720-117180/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-117180/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-117180/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 117207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Total/NA	Water	8270C	117180
LCS 720-117180/2-A	Lab Control Sample	Total/NA	Water	8270C	117180
LCSD 720-117180/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	117180
MB 720-117180/1-A	Method Blank	Total/NA	Water	8270C	117180

GC Semi VOA

Prep Batch: 117109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-117109/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-117109/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-117109/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

GC Semi VOA (Continued)

Analysis Batch: 117182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Silica Gel Cleanup	Water	8015B	117109
LCS 720-117109/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	117109
LCSD 720-117109/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	117109
MB 720-117109/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	117109

Metals

Prep Batch: 117129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Total/NA	Water	3010A	
720-43270-1 MS	W-2344-COMP-120712	Total/NA	Water	3010A	
720-43270-1 MSD	W-2344-COMP-120712	Total/NA	Water	3010A	
LCS 720-117129/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 720-117129/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
MB 720-117129/1-A	Method Blank	Total/NA	Water	3010A	

Analysis Batch: 117168

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Total/NA	Water	6010B	117129
720-43270-1 MS	W-2344-COMP-120712	Total/NA	Water	6010B	117129
720-43270-1 MSD	W-2344-COMP-120712	Total/NA	Water	6010B	117129
LCS 720-117129/2-A	Lab Control Sample	Total/NA	Water	6010B	117129
LCSD 720-117129/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	117129
MB 720-117129/1-A	Method Blank	Total/NA	Water	6010B	117129

Prep Batch: 117199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Dissolved	Water	3005A	
720-43270-1 MS	W-2344-COMP-120712	Dissolved	Water	3005A	
720-43270-1 MSD	W-2344-COMP-120712	Dissolved	Water	3005A	
LCS 720-117199/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 720-117199/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
MB 720-117120/1-B	Method Blank	Dissolved	Water	3005A	

Analysis Batch: 117229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43270-1	W-2344-COMP-120712	Dissolved	Water	6010B	117199
720-43270-1 MS	W-2344-COMP-120712	Dissolved	Water	6010B	117199
720-43270-1 MSD	W-2344-COMP-120712	Dissolved	Water	6010B	117199
LCS 720-117199/2-A	Lab Control Sample	Total Recoverable	Water	6010B	117199
LCSD 720-117199/3-A	Lab Control Sample Dup	Total Recoverable	Water	6010B	117199
MB 720-117120/1-B	Method Blank	Dissolved	Water	6010B	117199

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Client Sample ID: W-2344-COMP-120712
Date Collected: 07/12/12 08:30
Date Received: 07/13/12 07:10

Lab Sample ID: 720-43270-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	117089	07/13/12 14:58	AC	TAL SF
Total/NA	Prep	3510C			117111	07/13/12 10:47	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	117152	07/14/12 02:21	ML	TAL SF
Total/NA	Prep	3510C			117180	07/16/12 07:24	AM	TAL SF
Total/NA	Analysis	8270C		1	117207	07/16/12 13:51	ML	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			117109	07/13/12 10:45	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117182	07/16/12 15:54	JZ	TAL SF
Total/NA	Prep	3010A			117129	07/13/12 14:09	ET	TAL SF
Total/NA	Analysis	6010B		1	117168	07/14/12 10:46	BA	TAL SF
Dissolved	Prep	3005A			117199	07/16/12 10:05	ET	TAL SF
Dissolved	Analysis	6010B		1	117229	07/16/12 14:19	EFH	TAL SF

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica Pleasanton	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL SF
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SF
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF
6010B	Metals (ICP)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43270-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-43270-1	W-2344-COMP-120712	Water	07/12/12 08:30	07/13/12 07:10

139459

Test America- Pleasanton

720-43270

Client Name/Address:	Project / PO Number:
Antea Group/UPRR **312 Piercy Road** **San Jose, CA 95138**	**Santa Rosa CA-2 Fourth Street and 34 Sixth Street** **Antea Group Project No. UPR8248** **PEDD-2344-3-Rev2-20120620**
Project Manager/Phone Number: **Lia Holden / 408-826-1863** Sampler: Renee Ransom 920.540.9564	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	~~TPH-G~~ GRO and ~~BTEX~~ by EPA 8260B	DRO and MORO by EPA 8015 (with Silica Gel Cleanup)	~~PCE and TCE by 8270C~~	Total and Dissolved CAM 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	PAHs by EPA 8270	VOC's by 8260B	SVOC's by 8270C		Special Instructions
IN-2344-COMP-120712	W	jars	10	7/12/12 8330	None; HCl; NITRIC	X	X		X	X	X	X		24 hr. RUSH
					RUSH									
					NONCRE SAMPLES									

Relinquished By: Date/Time: 7/12/12 @ 310pm RenPan (Renee Ransom)	Received by: Date/Time:	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours X 5 days _____ 48 hours _____ normal _____
Relinquished By: Date/Time:	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Test America Date/Time: 7/13/12 0710	Sample Integrity: (Check) 2.4°C Intact _____ On Ice: _____ Custody

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

7/17/2012

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-43270-1

Login Number: 43270

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-43205-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
7/24/2012 10:40:05 AM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-43205-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-43205-1

Comments
No additional comments.

Receipt
The samples were received on 7/11/2012 7:20 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.6º C.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-COMP1-100712 (720-43205-1), SO-2344-COMP2-100712 (720-43205-2). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC Semi VOA
Method 8015B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: SO-2344-COMP2-100712 (720-43205-2).

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Client Sample ID: SO-2344-COMP1-100712 — Lab Sample ID: 720-43205-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	44		1.0		mg/Kg	1		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	84		50		mg/Kg	1		8015B	Silica Gel Cleanup
Chromium	120		2.0		mg/Kg	4		6010B	Total/NA
Nickel	140		2.0		mg/Kg	4		6010B	Total/NA
Lead	8.0		2.0		mg/Kg	4		6010B	Total/NA
Zinc	56		6.0		mg/Kg	4		6010B	Total/NA
Nickel	2.3		0.25		mg/L	2.5		6010B	STLC Citrate
Chromium	0.29		0.25		mg/L	2.5		6010B	STLC Citrate

Client Sample ID: SO-2344-COMP2-100712 — Lab Sample ID: 720-43205-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C5-C12	800		240		ug/Kg	1		8260B	Total/NA
Acenaphthene	180		49		ug/Kg	10		8270C SIM	Total/NA
Acenaphthylene	53		49		ug/Kg	10		8270C SIM	Total/NA
Fluorene	57		49		ug/Kg	10		8270C SIM	Total/NA
Pyrene	85		49		ug/Kg	10		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	4200		50		mg/Kg	50		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	4600		2500		mg/Kg	50		8015B	Silica Gel Cleanup
Cadmium	0.51		0.50		mg/Kg	4		6010B	Total/NA
Chromium	90		2.0		mg/Kg	4		6010B	Total/NA
Nickel	140		2.0		mg/Kg	4		6010B	Total/NA
Lead	6.9		2.0		mg/Kg	4		6010B	Total/NA
Zinc	56		6.0		mg/Kg	4		6010B	Total/NA
Nickel	2.3		0.25		mg/L	2.5		6010B	STLC Citrate
Chromium	0.61		0.25		mg/L	2.5		6010B	STLC Citrate

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Client Sample ID: SO-2344-COMP1-100712
Date Collected: 07/10/12 08:30
Date Received: 07/11/12 09:32

Lab Sample ID: 720-43205-1
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.6		ug/Kg		07/11/12 09:50	07/11/12 15:07	1
Benzene	ND		4.6		ug/Kg		07/11/12 09:50	07/11/12 15:07	1
Ethylbenzene	ND		4.6		ug/Kg		07/11/12 09:50	07/11/12 15:07	1
Toluene	ND		4.6		ug/Kg		07/11/12 09:50	07/11/12 15:07	1
Xylenes, Total	ND		9.1		ug/Kg		07/11/12 09:50	07/11/12 15:07	1
Gasoline Range Organics (GRO) -C5-C12	ND		230		ug/Kg		07/11/12 09:50	07/11/12 15:07	1
Tetrachloroethene	ND		4.6		ug/Kg		07/11/12 09:50	07/11/12 15:07	1
Trichloroethene	ND		4.6		ug/Kg		07/11/12 09:50	07/11/12 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*45 - 131*	*07/11/12 09:50*	*07/11/12 15:07*	*1*
1,2-Dichloroethane-d4 (Surr)	*121*		*60 - 140*	*07/11/12 09:50*	*07/11/12 15:07*	*1*
Toluene-d8 (Surr)	*97*		*58 - 140*	*07/11/12 09:50*	*07/11/12 15:07*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Acenaphthylene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Anthracene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Benzo[a]anthracene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Benzo[a]pyrene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Benzo[b]fluoranthene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Benzo[g,h,i]perylene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Benzo[k]fluoranthene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Chrysene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Dibenz(a,h)anthracene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Fluoranthene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Fluorene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Indeno[1,2,3-cd]pyrene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Naphthalene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Phenanthrene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10
Pyrene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:14	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*33 - 120*	*07/11/12 12:55*	*07/16/12 19:14*	*10*
Terphenyl-d14	*60*		*35 - 146*	*07/11/12 12:55*	*07/16/12 19:14*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**44**		1.0		mg/Kg		07/11/12 12:00	07/12/12 15:49	1
Motor Oil Range Organics [C24-C36]	**84**		50		mg/Kg		07/11/12 12:00	07/12/12 15:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.8*		*0 - 1*	*07/11/12 12:00*	*07/12/12 15:49*	*1*
p-Terphenyl	*41*		*38 - 148*	*07/11/12 12:00*	*07/12/12 15:49*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.50		mg/Kg		07/11/12 18:03	07/12/12 12:07	4
Chromium	**120**		2.0		mg/Kg		07/11/12 18:03	07/12/12 12:07	4
Nickel	**140**		2.0		mg/Kg		07/11/12 18:03	07/12/12 12:07	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Client Sample ID: SO-2344-COMP1-100712
Date Collected: 07/10/12 08:30
Date Received: 07/11/12 09:32

Lab Sample ID: 720-43205-1
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**8.0**		2.0		mg/Kg		07/11/12 18:03	07/12/12 12:07	4
Zinc	**56**		6.0		mg/Kg		07/11/12 18:03	07/12/12 12:07	4

Method: 6010B - Metals (ICP) - STLC Citrate

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.13		mg/L		07/16/12 09:07	07/16/12 13:43	2.5
Cadmium	ND		0.050		mg/L		07/16/12 09:07	07/16/12 13:43	2.5
Nickel	**2.3**		0.25		mg/L		07/16/12 09:07	07/16/12 13:43	2.5
Zinc	ND		0.50		mg/L		07/16/12 09:07	07/16/12 13:43	2.5
Chromium	**0.29**		0.25		mg/L		07/16/12 09:07	07/16/12 13:43	2.5

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Client Sample ID: SO-2344-COMP2-100712
Date Collected: 07/10/12 12:05
Date Received: 07/11/12 09:32

Lab Sample ID: 720-43205-2
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8		ug/Kg		07/11/12 09:50	07/11/12 18:33	1
Benzene	ND		4.8		ug/Kg		07/11/12 09:50	07/11/12 18:33	1
Ethylbenzene	ND		4.8		ug/Kg		07/11/12 09:50	07/11/12 18:33	1
Toluene	ND		4.8		ug/Kg		07/11/12 09:50	07/11/12 18:33	1
Xylenes, Total	ND		9.5		ug/Kg		07/11/12 09:50	07/11/12 18:33	1
Gasoline Range Organics (GRO) -C5-C12	**800**		240		ug/Kg		07/11/12 09:50	07/11/12 18:33	1
Tetrachloroethene	ND		4.8		ug/Kg		07/11/12 09:50	07/11/12 18:33	1
Trichloroethene	ND		4.8		ug/Kg		07/11/12 09:50	07/11/12 18:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*80*		*45 - 131*	*07/11/12 09:50*	*07/11/12 18:33*	*1*
1,2-Dichloroethane-d4 (Surr)	*118*		*60 - 140*	*07/11/12 09:50*	*07/11/12 18:33*	*1*
Toluene-d8 (Surr)	*86*		*58 - 140*	*07/11/12 09:50*	*07/11/12 18:33*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	**180**		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Acenaphthylene	**53**		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Anthracene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Benzo[a]anthracene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Benzo[a]pyrene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Benzo[b]fluoranthene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Benzo[g,h,i]perylene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Benzo[k]fluoranthene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Chrysene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Dibenz(a,h)anthracene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Fluoranthene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Fluorene	**57**		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Indeno[1,2,3-cd]pyrene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Naphthalene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Phenanthrene	ND		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10
Pyrene	**85**		49		ug/Kg		07/11/12 12:55	07/16/12 19:38	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*40*		*33 - 120*	*07/11/12 12:55*	*07/16/12 19:38*	*10*
Terphenyl-d14	*41*		*35 - 146*	*07/11/12 12:55*	*07/16/12 19:38*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**4200**		50		mg/Kg		07/11/12 12:00	07/13/12 21:40	50
Motor Oil Range Organics [C24-C36]	**4600**		2500		mg/Kg		07/11/12 12:00	07/13/12 21:40	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/11/12 12:00*	*07/13/12 21:40*	*50*
p-Terphenyl	*0*	*X D*	*38 - 148*	*07/11/12 12:00*	*07/13/12 21:40*	*50*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	**0.51**		0.50		mg/Kg		07/11/12 18:03	07/12/12 12:11	4
Chromium	**90**		2.0		mg/Kg		07/11/12 18:03	07/12/12 12:11	4
Nickel	**140**		2.0		mg/Kg		07/11/12 18:03	07/12/12 12:11	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Client Sample ID: SO-2344-COMP2-100712
Date Collected: 07/10/12 12:05
Date Received: 07/11/12 09:32

Lab Sample ID: 720-43205-2
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	**6.9**		2.0		mg/Kg		07/11/12 18:03	07/12/12 12:11	4
Zinc	**56**		6.0		mg/Kg		07/11/12 18:03	07/12/12 12:11	4

Method: 6010B - Metals (ICP) - STLC Citrate

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.13		mg/L		07/16/12 09:07	07/16/12 13:47	2.5
Cadmium	ND		0.050		mg/L		07/16/12 09:07	07/16/12 13:47	2.5
Nickel	**2.3**		0.25		mg/L		07/16/12 09:07	07/16/12 13:47	2.5
Zinc	ND		0.50		mg/L		07/16/12 09:07	07/16/12 13:47	2.5
Chromium	**0.61**		0.25		mg/L		07/16/12 09:07	07/16/12 13:47	2.5

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-116965/1-A
Matrix: Solid
Analysis Batch: 116943

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 116965

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		07/11/12 07:00	07/11/12 08:30	1
Benzene	ND		5.0		ug/Kg		07/11/12 07:00	07/11/12 08:30	1
Ethylbenzene	ND		5.0		ug/Kg		07/11/12 07:00	07/11/12 08:30	1
Toluene	ND		5.0		ug/Kg		07/11/12 07:00	07/11/12 08:30	1
Xylenes, Total	ND		10		ug/Kg		07/11/12 07:00	07/11/12 08:30	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		07/11/12 07:00	07/11/12 08:30	1
Tetrachloroethene	ND		5.0		ug/Kg		07/11/12 07:00	07/11/12 08:30	1
Trichloroethene	ND		5.0		ug/Kg		07/11/12 07:00	07/11/12 08:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*98*		*45 - 131*	*07/11/12 07:00*	*07/11/12 08:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*121*		*60 - 140*	*07/11/12 07:00*	*07/11/12 08:30*	*1*
Toluene-d8 (Surr)	*101*		*58 - 140*	*07/11/12 07:00*	*07/11/12 08:30*	*1*

Lab Sample ID: LCS 720-116965/2-A
Matrix: Solid
Analysis Batch: 116943

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 116965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	63.8		ug/Kg		128	70 - 144
Benzene	50.0	50.6		ug/Kg		101	70 - 130
Ethylbenzene	50.0	50.2		ug/Kg		100	80 - 137
Toluene	50.0	48.4		ug/Kg		97	80 - 128
m-Xylene & p-Xylene	100	113		ug/Kg		113	70 - 146
o-Xylene	50.0	52.4		ug/Kg		105	70 - 140
Tetrachloroethene	50.0	54.4		ug/Kg		109	70 - 132
Trichloroethene	50.0	52.0		ug/Kg		104	70 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*117*		*60 - 140*
Toluene-d8 (Surr)	*102*		*58 - 140*

Lab Sample ID: LCS 720-116965/4-A
Matrix: Solid
Analysis Batch: 116943

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 116965

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	1000	1040		ug/Kg		104	61 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*124*		*60 - 140*
Toluene-d8 (Surr)	*101*		*58 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-116965/3-A
Matrix: Solid
Analysis Batch: 116943

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 116965

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			50.0	59.0		ug/Kg		118	70 - 144	8	20
Benzene			50.0	47.6		ug/Kg		95	70 - 130	6	20
Ethylbenzene			50.0	48.2		ug/Kg		96	80 - 137	4	20
Toluene			50.0	46.6		ug/Kg		93	80 - 128	4	20
m-Xylene & p-Xylene			100	107		ug/Kg		107	70 - 146	5	20
o-Xylene			50.0	50.6		ug/Kg		101	70 - 140	3	20
Tetrachloroethene			50.0	50.4		ug/Kg		101	70 - 132	8	20
Trichloroethene			50.0	48.8		ug/Kg		98	70 - 133	6	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*115*		*60 - 140*
Toluene-d8 (Surr)	*101*		*58 - 140*

Lab Sample ID: LCSD 720-116965/5-A
Matrix: Solid
Analysis Batch: 116943

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 116965

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			1000	935		ug/Kg		94	61 - 128	11	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*124*		*60 - 140*
Toluene-d8 (Surr)	*102*		*58 - 140*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-116955/1-A
Matrix: Solid
Analysis Batch: 117110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 116955

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Acenaphthylene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Anthracene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Chrysene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Fluoranthene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Fluorene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Naphthalene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1
Phenanthrene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: MB 720-116955/1-A
Matrix: Solid
Analysis Batch: 117110

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 116955

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Pyrene	ND		5.0		ug/Kg		07/11/12 09:17	07/13/12 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*33 - 120*	*07/11/12 09:17*	*07/13/12 11:38*	*1*
Terphenyl-d14	*82*		*35 - 146*	*07/11/12 09:17*	*07/13/12 11:38*	*1*

Lab Sample ID: LCS 720-116955/2-A
Matrix: Solid
Analysis Batch: 117110

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 116955

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	333	240		ug/Kg		72	49 - 120
Acenaphthylene	333	235		ug/Kg		71	52 - 120
Anthracene	333	247		ug/Kg		74	52 - 120
Benzo[a]anthracene	333	246		ug/Kg		74	52 - 120
Benzo[a]pyrene	333	263		ug/Kg		79	54 - 120
Benzo[b]fluoranthene	333	285		ug/Kg		86	51 - 120
Benzo[g,h,i]perylene	333	235		ug/Kg		71	48 - 120
Benzo[k]fluoranthene	333	262		ug/Kg		79	56 - 120
Chrysene	333	227		ug/Kg		68	40 - 120
Dibenz(a,h)anthracene	333	259		ug/Kg		78	50 - 120
Fluoranthene	333	265		ug/Kg		80	57 - 120
Fluorene	333	251		ug/Kg		75	52 - 120
Indeno[1,2,3-cd]pyrene	333	256		ug/Kg		77	48 - 120
Naphthalene	333	230		ug/Kg		69	46 - 120
Phenanthrene	333	240		ug/Kg		72	48 - 120
Pyrene	333	235		ug/Kg		71	53 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*81*		*33 - 120*
Terphenyl-d14	*85*		*35 - 146*

Lab Sample ID: LCSD 720-116955/3-A
Matrix: Solid
Analysis Batch: 117110

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 116955

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	333	235		ug/Kg		71	49 - 120	2	20
Acenaphthylene	333	224		ug/Kg		67	52 - 120	5	20
Anthracene	333	236		ug/Kg		71	52 - 120	5	20
Benzo[a]anthracene	333	244		ug/Kg		73	52 - 120	1	20
Benzo[a]pyrene	333	262		ug/Kg		79	54 - 120	1	20
Benzo[b]fluoranthene	333	281		ug/Kg		84	51 - 120	1	20
Benzo[g,h,i]perylene	333	233		ug/Kg		70	48 - 120	1	20
Benzo[k]fluoranthene	333	259		ug/Kg		78	56 - 120	1	20
Chrysene	333	225		ug/Kg		67	40 - 120	1	20
Dibenz(a,h)anthracene	333	254		ug/Kg		76	50 - 120	2	20
Fluoranthene	333	256		ug/Kg		77	57 - 120	4	20
Fluorene	333	238		ug/Kg		71	52 - 120	5	20

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-116955/3-A
Matrix: Solid
Analysis Batch: 117110

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 116955

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Indeno[1,2,3-cd]pyrene			333	253		ug/Kg		76	48 - 120	1	20
Naphthalene			333	223		ug/Kg		67	46 - 120	3	20
Phenanthrene			333	236		ug/Kg		71	48 - 120	2	20
Pyrene			333	224		ug/Kg		67	53 - 120	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*79*		*33 - 120*
Terphenyl-d14	*82*		*35 - 146*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-116971/1-A
Matrix: Solid
Analysis Batch: 117020

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 116971

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		07/11/12 12:00	07/12/12 12:49	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		07/11/12 12:00	07/12/12 12:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 1*	*07/11/12 12:00*	*07/12/12 12:49*	*1*
p-Terphenyl	*70*		*38 - 148*	*07/11/12 12:00*	*07/12/12 12:49*	*1*

Lab Sample ID: LCS 720-116971/2-A
Matrix: Solid
Analysis Batch: 117020

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 116971

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]			83.1	55.5		mg/Kg		67	36 - 112

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*62*		*38 - 148*

Lab Sample ID: LCSD 720-116971/3-A
Matrix: Solid
Analysis Batch: 117020

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 116971

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.7	56.5		mg/Kg		68	36 - 112	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*63*		*38 - 148*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 720-43205-1 MS
Matrix: Solid
Analysis Batch: 117020

Client Sample ID: SO-2344-COMP1-100712
Prep Type: Silica Gel Cleanup
Prep Batch: 116971

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	44		83.1	144		mg/Kg		120	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
p-Terphenyl	*42*		*38 - 148*

Lab Sample ID: 720-43205-1 MSD
Matrix: Solid
Analysis Batch: 117020

Client Sample ID: SO-2344-COMP1-100712
Prep Type: Silica Gel Cleanup
Prep Batch: 116971

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	44		82.4	150		mg/Kg		128	50 - 150	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
p-Terphenyl	*36*	*X*	*38 - 148*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-117003/1-A
Matrix: Solid
Analysis Batch: 117053

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117003

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.13		mg/Kg		07/11/12 18:03	07/12/12 10:51	1
Lead	ND		0.50		mg/Kg		07/11/12 18:03	07/12/12 10:51	1
Nickel	ND		0.50		mg/Kg		07/11/12 18:03	07/12/12 10:51	1
Zinc	ND		1.5		mg/Kg		07/11/12 18:03	07/12/12 10:51	1
Chromium	ND		0.50		mg/Kg		07/11/12 18:03	07/12/12 10:51	1

Lab Sample ID: LCS 720-117003/2-A
Matrix: Solid
Analysis Batch: 117053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117003

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	50.0	49.0		mg/Kg		98	80 - 120
Lead	50.0	50.5		mg/Kg		101	80 - 120
Nickel	50.0	50.3		mg/Kg		101	80 - 120
Zinc	50.0	49.2		mg/Kg		98	80 - 120
Chromium	50.0	50.2		mg/Kg		100	80 - 120

Lab Sample ID: LCSD 720-117003/3-A
Matrix: Solid
Analysis Batch: 117053

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117003

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	50.0	48.3		mg/Kg		97	80 - 120	1	20
Lead	50.0	49.4		mg/Kg		99	80 - 120	2	20
Nickel	50.0	49.2		mg/Kg		98	80 - 120	2	20
Zinc	50.0	48.4		mg/Kg		97	80 - 120	2	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 720-117003/3-A
Matrix: Solid
Analysis Batch: 117053

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117003

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium			50.0	48.7		mg/Kg		97	80 - 120	3	20

Lab Sample ID: LCSSRM 720-117003/23-A
Matrix: Solid
Analysis Batch: 117053

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117003

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits		
Cadmium			42.0	35.5		mg/Kg		85	67 - 118		
Lead			280	248		mg/Kg		88	62 - 113		
Nickel			106	93.6		mg/Kg		88	65 - 117		
Zinc			574	479		mg/Kg		83	62 - 110		
Chromium			269	244		mg/Kg		91	67 - 121		

Lab Sample ID: MB 720-117199/1-A
Matrix: Solid
Analysis Batch: 117229

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 117199

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020		mg/L		07/16/12 09:07	07/16/12 12:11	1
Lead	ND		0.0050		mg/L		07/16/12 09:07	07/16/12 12:11	1
Nickel	ND		0.010		mg/L		07/16/12 09:07	07/16/12 12:11	1
Zinc	ND		0.020		mg/L		07/16/12 09:07	07/16/12 12:11	1
Chromium	ND		0.010		mg/L		07/16/12 09:07	07/16/12 12:11	1

Lab Sample ID: LCS 720-117199/2-A
Matrix: Solid
Analysis Batch: 117229

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 117199

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cadmium			1.00	0.954		mg/L		95	80 - 120		
Lead			1.00	0.980		mg/L		98	80 - 120		
Nickel			1.00	0.994		mg/L		99	80 - 120		
Zinc			1.00	0.972		mg/L		97	80 - 120		
Chromium			1.00	0.991		mg/L		99	80 - 120		

Lab Sample ID: LCSD 720-117199/3-A
Matrix: Solid
Analysis Batch: 117229

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 117199

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium			1.00	0.976		mg/L		98	80 - 120	2	20
Lead			1.00	0.998		mg/L		100	80 - 120	2	20
Nickel			1.00	1.01		mg/L		101	80 - 120	1	20
Zinc			1.00	0.990		mg/L		99	80 - 120	2	20
Chromium			1.00	0.999		mg/L		100	80 - 120	1	20

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LB4 720-116996/1-B LB4
Matrix: Solid
Analysis Batch: 117229

Client Sample ID: Method Blank
Prep Type: STLC Citrate
Prep Batch: 117199

Analyte	LB4 Result	LB4 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.050		mg/L		07/16/12 09:07	07/16/12 13:10	2.5
Lead	ND		0.13		mg/L		07/16/12 09:07	07/16/12 13:10	2.5
Nickel	ND		0.25		mg/L		07/16/12 09:07	07/16/12 13:10	2.5
Zinc	ND		0.50		mg/L		07/16/12 09:07	07/16/12 13:10	2.5
Chromium	ND		0.25		mg/L		07/16/12 09:07	07/16/12 13:10	2.5

QC Association Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

GC/MS VOA

Analysis Batch: 116943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	Total/NA	Solid	8260B	116965
720-43205-2	SO-2344-COMP2-100712	Total/NA	Solid	8260B	116965
LCS 720-116965/2-A	Lab Control Sample	Total/NA	Solid	8260B	116965
LCS 720-116965/4-A	Lab Control Sample	Total/NA	Solid	8260B	116965
LCSD 720-116965/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B	116965
LCSD 720-116965/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B	116965
MB 720-116965/1-A	Method Blank	Total/NA	Solid	8260B	116965

Prep Batch: 116965

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	Total/NA	Solid	5035	
720-43205-2	SO-2344-COMP2-100712	Total/NA	Solid	5035	
LCS 720-116965/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 720-116965/4-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 720-116965/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 720-116965/5-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 720-116965/1-A	Method Blank	Total/NA	Solid	5035	

GC/MS Semi VOA

Prep Batch: 116955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	Total/NA	Solid	3546	
720-43205-2	SO-2344-COMP2-100712	Total/NA	Solid	3546	
LCS 720-116955/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-116955/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-116955/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 117110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-116955/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	116955
LCSD 720-116955/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	116955
MB 720-116955/1-A	Method Blank	Total/NA	Solid	8270C SIM	116955

Analysis Batch: 117206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	Total/NA	Solid	8270C SIM	116955
720-43205-2	SO-2344-COMP2-100712	Total/NA	Solid	8270C SIM	116955

GC Semi VOA

Prep Batch: 116971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	Silica Gel Cleanup	Solid	3546	
720-43205-1 MS	SO-2344-COMP1-100712	Silica Gel Cleanup	Solid	3546	
720-43205-1 MSD	SO-2344-COMP1-100712	Silica Gel Cleanup	Solid	3546	
720-43205-2	SO-2344-COMP2-100712	Silica Gel Cleanup	Solid	3546	
LCS 720-116971/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-116971/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-116971/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

GC Semi VOA (Continued)

Analysis Batch: 117020

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	Silica Gel Cleanup	Solid	8015B	116971
720-43205-1 MS	SO-2344-COMP1-100712	Silica Gel Cleanup	Solid	8015B	116971
720-43205-1 MSD	SO-2344-COMP1-100712	Silica Gel Cleanup	Solid	8015B	116971
LCS 720-116971/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	116971
LCSD 720-116971/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	116971
MB 720-116971/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	116971

Analysis Batch: 117094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-2	SO-2344-COMP2-100712	Silica Gel Cleanup	Solid	8015B	116971

Metals

Leach Batch: 116996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	STLC Citrate	Solid	CA WET Citrate	
720-43205-2	SO-2344-COMP2-100712	STLC Citrate	Solid	CA WET Citrate	
LB4 720-116996/1-B LB4	Method Blank	STLC Citrate	Solid	CA WET Citrate	

Prep Batch: 117003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	Total/NA	Solid	3050B	
720-43205-2	SO-2344-COMP2-100712	Total/NA	Solid	3050B	
LCS 720-117003/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-117003/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-117003/23-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-117003/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 117053

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	Total/NA	Solid	6010B	117003
720-43205-2	SO-2344-COMP2-100712	Total/NA	Solid	6010B	117003
LCS 720-117003/2-A	Lab Control Sample	Total/NA	Solid	6010B	117003
LCSD 720-117003/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	117003
LCSSRM 720-117003/23-A	Lab Control Sample	Total/NA	Solid	6010B	117003
MB 720-117003/1-A	Method Blank	Total/NA	Solid	6010B	117003

Prep Batch: 117199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	STLC Citrate	Solid	3005A	116996
720-43205-2	SO-2344-COMP2-100712	STLC Citrate	Solid	3005A	116996
LB4 720-116996/1-B LB4	Method Blank	STLC Citrate	Solid	3005A	116996
LCS 720-117199/2-A	Lab Control Sample	Total Recoverable	Solid	3005A	
LCSD 720-117199/3-A	Lab Control Sample Dup	Total Recoverable	Solid	3005A	
MB 720-117199/1-A	Method Blank	Total Recoverable	Solid	3005A	

Analysis Batch: 117229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43205-1	SO-2344-COMP1-100712	STLC Citrate	Solid	6010B	117199
720-43205-2	SO-2344-COMP2-100712	STLC Citrate	Solid	6010B	117199
LB4 720-116996/1-B LB4	Method Blank	STLC Citrate	Solid	6010B	117199
LCS 720-117199/2-A	Lab Control Sample	Total Recoverable	Solid	6010B	117199

Metals (Continued)

Analysis Batch: 117229 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-117199/3-A	Lab Control Sample Dup	Total Recoverable	Solid	6010B	117199
MB 720-117199/1-A	Method Blank	Total Recoverable	Solid	6010B	117199

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Client Sample ID: SO-2344-COMP1-100712

Lab Sample ID: 720-43205-1

Date Collected: 07/10/12 08:30

Matrix: Solid

Date Received: 07/11/12 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			116965	07/11/12 09:50	YB	TAL SF
Total/NA	Analysis	8260B		1	116943	07/11/12 15:07	AC	TAL SF
Total/NA	Prep	3546			116955	07/11/12 12:55	MP	TAL SF
Total/NA	Analysis	8270C SIM		10	117206	07/16/12 19:14	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	117020	07/12/12 15:49	JZ	TAL SF
Total/NA	Prep	3050B			117003	07/11/12 18:03	CDT	TAL SF
Total/NA	Analysis	6010B		4	117053	07/12/12 12:07	EFH	TAL SF
STLC Citrate	Leach	CA WET Citrate			116996	07/11/12 15:56	ASB	TAL SF
STLC Citrate	Prep	3005A			117199	07/16/12 09:07	ET	TAL SF
STLC Citrate	Analysis	6010B		2.5	117229	07/16/12 13:43	EFH	TAL SF

Client Sample ID: SO-2344-COMP2-100712

Lab Sample ID: 720-43205-2

Date Collected: 07/10/12 12:05

Matrix: Solid

Date Received: 07/11/12 09:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			116965	07/11/12 09:50	YB	TAL SF
Total/NA	Analysis	8260B		1	116943	07/11/12 18:33	AC	TAL SF
Total/NA	Prep	3546			116955	07/11/12 12:55	MP	TAL SF
Total/NA	Analysis	8270C SIM		10	117206	07/16/12 19:38	ML	TAL SF
Silica Gel Cleanup	Prep	3546			116971	07/11/12 12:00	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		50	117094	07/13/12 21:40	JZ	TAL SF
Total/NA	Prep	3050B			117003	07/11/12 18:03	CDT	TAL SF
Total/NA	Analysis	6010B		4	117053	07/12/12 12:11	EFH	TAL SF
STLC Citrate	Leach	CA WET Citrate			116996	07/11/12 15:56	ASB	TAL SF
STLC Citrate	Prep	3005A			117199	07/16/12 09:07	ET	TAL SF
STLC Citrate	Analysis	6010B		2.5	117229	07/16/12 13:47	EFH	TAL SF

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SF
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF
6010B	Metals (ICP)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43205-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-43205-1	SO-2344-COMP1-100712	Solid	07/10/12 08:30	07/11/12 09:32
720-43205-2	SO-2344-COMP2-100712	Solid	07/10/12 12:05	07/11/12 09:32

Test America- Pleasanton

139390

720-43205

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-3-Rev2-20120620
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Renee Ransom 408.580.4664	Phone Number: Fax Number: (408) 225-8506

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO and BTEX by EPA 8260B	DRO and MORO by EPA 8015 (with Silica Gel Cleaup)	PCE and TCE by 8270C	Total and Dissolved CAM 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	PAHs by EPA 8270				Special Instructions
						✓							4.1°C	
SO-2344-COMP1-100712	S	2 jar 3 Encore	5	7/10/12 0830	None	X	X	X	X	X				
SO-2344-COMP2-100712	S	2 jar 3 Encore	5	7/10/12 1205	None	X	X	X	X	X				

NO MORE SAMPLES

Relinquished By: -stored in cooler Date/Time: Ren Ran (Renee Ransom) 330pm 7/10/12	Received by: Date/Time:	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal _____ Sample Integrity: (Check) Intact _____ On Ice: _____ Custody
Relinquished By: Date/Time:	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Date/Time: 7/11/12 0720	

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-43205-1

Login Number: 43205

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-43229-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
7/25/2012 2:02:03 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Job ID: 720-43229-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-43229-1

Comments
No additional comments.

Receipt
The sample was received on 7/11/2012 6:40 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-COMP3-110712 (720-43229-1). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC Semi VOA
Method 8015B: Surrogate recovery for the following sample was outside control limits: SO-2344-COMP3-110712 (720-43229-1), (720-43229-1 MS), (720-43229-1 MSD). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Client Sample ID: SO-2344-COMP3-110712

Lab Sample ID: 720-43229-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[g,h,i]perylene	38		25		ug/Kg	5		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	160		3.0		mg/Kg	3		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	310		150		mg/Kg	3		8015B	Silica Gel Cleanup
Chromium	81		1.9		mg/Kg	4		6010B	Total/NA
Nickel	140		1.9		mg/Kg	4		6010B	Total/NA
Lead	4.7		1.9		mg/Kg	4		6010B	Total/NA
Zinc	42		5.7		mg/Kg	4		6010B	Total/NA
Nickel	3.6		0.25		mg/L	2.5		6010B	STLC Citrate
Chromium	0.31		0.25		mg/L	2.5		6010B	STLC Citrate

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Client Sample ID: SO-2344-COMP3-110712
Date Collected: 07/11/12 08:45
Date Received: 07/11/12 18:40

Lab Sample ID: 720-43229-1
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.1		ug/Kg		07/12/12 13:45	07/12/12 17:43	1
Ethylbenzene	ND		5.1		ug/Kg		07/12/12 13:45	07/12/12 17:43	1
Toluene	ND		5.1		ug/Kg		07/12/12 13:45	07/12/12 17:43	1
Xylenes, Total	ND		10		ug/Kg		07/12/12 13:45	07/12/12 17:43	1
Gasoline Range Organics (GRO) -C5-C12	ND		260		ug/Kg		07/12/12 13:45	07/12/12 17:43	1
PCE	ND		5.1		ug/Kg		07/12/12 13:45	07/12/12 17:43	1
TCE	ND		5.1		ug/Kg		07/12/12 13:45	07/12/12 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*75*		*45 - 131*	*07/12/12 13:45*	*07/12/12 17:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*	*07/12/12 13:45*	*07/12/12 17:43*	*1*
Toluene-d8 (Surr)	*93*		*58 - 140*	*07/12/12 13:45*	*07/12/12 17:43*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Acenaphthylene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Anthracene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Benzo[a]anthracene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Benzo[a]pyrene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Benzo[b]fluoranthene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Benzo[g,h,i]perylene	**38**		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Benzo[k]fluoranthene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Chrysene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Fluoranthene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Fluorene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Indeno[1,2,3-cd]pyrene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Naphthalene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Phenanthrene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5
Pyrene	ND		25		ug/Kg		07/12/12 19:36	07/19/12 04:35	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*69*		*33 - 120*	*07/12/12 19:36*	*07/19/12 04:35*	*5*
Terphenyl-d14	*74*		*35 - 146*	*07/12/12 19:36*	*07/19/12 04:35*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**160**		3.0		mg/Kg		07/13/12 14:27	07/19/12 13:55	3
Motor Oil Range Organics [C24-C36]	**310**		150		mg/Kg		07/13/12 14:27	07/19/12 13:55	3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.8*		*0 - 1*	*07/13/12 14:27*	*07/19/12 13:55*	*3*
p-Terphenyl	*24*	*X*	*38 - 148*	*07/13/12 14:27*	*07/19/12 13:55*	*3*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.47		mg/Kg		07/23/12 16:16	07/24/12 20:55	4
Chromium	**81**		1.9		mg/Kg		07/23/12 16:16	07/24/12 20:55	4
Nickel	**140**		1.9		mg/Kg		07/23/12 16:16	07/24/12 20:55	4
Lead	**4.7**		1.9		mg/Kg		07/23/12 16:16	07/24/12 20:55	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Client Sample ID: SO-2344-COMP3-110712
Date Collected: 07/11/12 08:45
Date Received: 07/11/12 18:40

Lab Sample ID: 720-43229-1
Matrix: Solid

Method: 6010B - Metals (ICP) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	**42**		5.7		mg/Kg		07/23/12 16:16	07/24/12 20:55	4

Method: 6010B - Metals (ICP) - STLC Citrate

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lead	ND		0.13		mg/L		07/19/12 10:48	07/19/12 14:07	2.5
Cadmium	ND		0.050		mg/L		07/19/12 10:48	07/19/12 14:07	2.5
Nickel	**3.6**		0.25		mg/L		07/19/12 10:48	07/19/12 14:07	2.5
Zinc	ND		0.50		mg/L		07/19/12 10:48	07/19/12 14:07	2.5
Chromium	**0.31**		0.25		mg/L		07/19/12 10:48	07/19/12 14:07	2.5

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-117042/1-A
Matrix: Solid
Analysis Batch: 117026

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117042

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		5.0		ug/Kg		07/12/12 07:30	07/12/12 08:37	1
Ethylbenzene	ND		5.0		ug/Kg		07/12/12 07:30	07/12/12 08:37	1
Toluene	ND		5.0		ug/Kg		07/12/12 07:30	07/12/12 08:37	1
Xylenes, Total	ND		10		ug/Kg		07/12/12 07:30	07/12/12 08:37	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		07/12/12 07:30	07/12/12 08:37	1
PCE	ND		5.0		ug/Kg		07/12/12 07:30	07/12/12 08:37	1
TCE	ND		5.0		ug/Kg		07/12/12 07:30	07/12/12 08:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*45 - 131*	*07/12/12 07:30*	*07/12/12 08:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*60 - 140*	*07/12/12 07:30*	*07/12/12 08:37*	*1*
Toluene-d8 (Surr)	*98*		*58 - 140*	*07/12/12 07:30*	*07/12/12 08:37*	*1*

Lab Sample ID: LCS 720-117042/2-A
Matrix: Solid
Analysis Batch: 117026

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117042

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	50.0	47.4		ug/Kg		95	70 - 130
Ethylbenzene	50.0	43.8		ug/Kg		88	80 - 137
Toluene	50.0	47.0		ug/Kg		94	80 - 128
m-Xylene & p-Xylene	100	84.0		ug/Kg		84	70 - 146
o-Xylene	50.0	45.8		ug/Kg		92	70 - 140
PCE	50.0	57.6		ug/Kg		115	70 - 132
TCE	50.0	55.4		ug/Kg		111	70 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*87*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Lab Sample ID: LCS 720-117042/4-A
Matrix: Solid
Analysis Batch: 117026

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117042

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	1000	978		ug/Kg		98	61 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*91*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*89*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-117042/3-A
Matrix: Solid
Analysis Batch: 117026

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117042

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene			50.0	47.4		ug/Kg		95	70 - 130	0	20
Ethylbenzene			50.0	43.4		ug/Kg		87	80 - 137	1	20
Toluene			50.0	47.2		ug/Kg		94	80 - 128	0	20
m-Xylene & p-Xylene			100	83.4		ug/Kg		83	70 - 146	1	20
o-Xylene			50.0	47.8		ug/Kg		96	70 - 140	4	20
PCE			50.0	59.2		ug/Kg		118	70 - 132	3	20
TCE			50.0	55.0		ug/Kg		110	70 - 133	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*86*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Lab Sample ID: LCSD 720-117042/5-A
Matrix: Solid
Analysis Batch: 117026

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117042

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			1000	973		ug/Kg		97	61 - 128	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*88*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-117079/1-A
Matrix: Solid
Analysis Batch: 117297

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117079

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Acenaphthylene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[a]anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[a]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Chrysene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Fluoranthene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Fluorene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Naphthalene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Phenanthrene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1
Pyrene	ND		5.0		ug/Kg		07/12/12 19:36	07/17/12 18:46	1

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: MB 720-117079/1-A
Matrix: Solid
Analysis Batch: 117297

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117079

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	76		33 - 120	07/12/12 19:36	07/17/12 18:46	1
Terphenyl-d14	95		35 - 146	07/12/12 19:36	07/17/12 18:46	1

Lab Sample ID: LCS 720-117079/2-A
Matrix: Solid
Analysis Batch: 117297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117079

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	332	257		ug/Kg		77	49 - 120
Acenaphthylene	332	252		ug/Kg		76	52 - 120
Anthracene	332	252		ug/Kg		76	52 - 120
Benzo[a]anthracene	332	247		ug/Kg		74	52 - 120
Benzo[a]pyrene	332	265		ug/Kg		80	54 - 120
Benzo[b]fluoranthene	332	278		ug/Kg		84	51 - 120
Benzo[g,h,i]perylene	332	295		ug/Kg		89	48 - 120
Benzo[k]fluoranthene	332	261		ug/Kg		78	56 - 120
Chrysene	332	257		ug/Kg		77	40 - 120
Dibenz(a,h)anthracene	332	275		ug/Kg		83	50 - 120
Fluoranthene	332	261		ug/Kg		79	57 - 120
Fluorene	332	254		ug/Kg		77	52 - 120
Indeno[1,2,3-cd]pyrene	332	281		ug/Kg		85	48 - 120
Naphthalene	332	235		ug/Kg		71	46 - 120
Phenanthrene	332	256		ug/Kg		77	48 - 120
Pyrene	332	272		ug/Kg		82	53 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	78		33 - 120
Terphenyl-d14	90		35 - 146

Lab Sample ID: LCSD 720-117079/3-A
Matrix: Solid
Analysis Batch: 117297

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117079

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	328	270		ug/Kg		82	49 - 120	5	20
Acenaphthylene	328	265		ug/Kg		81	52 - 120	5	20
Anthracene	328	256		ug/Kg		78	52 - 120	1	20
Benzo[a]anthracene	328	247		ug/Kg		75	52 - 120	0	20
Benzo[a]pyrene	328	274		ug/Kg		83	54 - 120	3	20
Benzo[b]fluoranthene	328	273		ug/Kg		83	51 - 120	2	20
Benzo[g,h,i]perylene	328	295		ug/Kg		90	48 - 120	0	20
Benzo[k]fluoranthene	328	267		ug/Kg		81	56 - 120	2	20
Chrysene	328	258		ug/Kg		79	40 - 120	0	20
Dibenz(a,h)anthracene	328	275		ug/Kg		84	50 - 120	0	20
Fluoranthene	328	265		ug/Kg		81	57 - 120	1	20
Fluorene	328	258		ug/Kg		79	52 - 120	1	20
Indeno[1,2,3-cd]pyrene	328	285		ug/Kg		87	48 - 120	1	20
Naphthalene	328	247		ug/Kg		75	46 - 120	5	20
Phenanthrene	328	264		ug/Kg		80	48 - 120	3	20

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-117079/3-A
Matrix: Solid
Analysis Batch: 117297

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117079

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Pyrene			328	275		ug/Kg		84	53 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*83*		*33 - 120*
Terphenyl-d14	*90*		*35 - 146*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-117130/1-A
Matrix: Solid
Analysis Batch: 117182

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 117130

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.98		mg/Kg		07/13/12 14:27	07/16/12 13:23	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		07/13/12 14:27	07/16/12 13:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*07/13/12 14:27*	*07/16/12 13:23*	*1*
p-Terphenyl	*87*		*38 - 148*	*07/13/12 14:27*	*07/16/12 13:23*	*1*

Lab Sample ID: LCS 720-117130/2-A
Matrix: Solid
Analysis Batch: 117182

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 117130

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			82.1	68.6		mg/Kg		84	36 - 112		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*74*		*38 - 148*

Lab Sample ID: LCSD 720-117130/3-A
Matrix: Solid
Analysis Batch: 117182

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 117130

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.7	63.6		mg/Kg		77	36 - 112	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*67*		*38 - 148*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-117693/1-A
Matrix: Solid
Analysis Batch: 117789

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 117693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.13		mg/Kg		07/23/12 16:16	07/24/12 20:04	1
Lead	ND		0.50		mg/Kg		07/23/12 16:16	07/24/12 20:04	1
Nickel	ND		0.50		mg/Kg		07/23/12 16:16	07/24/12 20:04	1
Zinc	ND		1.5		mg/Kg		07/23/12 16:16	07/24/12 20:04	1
Chromium	ND		0.50		mg/Kg		07/23/12 16:16	07/24/12 20:04	1

Lab Sample ID: LCS 720-117693/2-A
Matrix: Solid
Analysis Batch: 117789

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117693

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	50.0	44.9		mg/Kg		90	80 - 120
Lead	50.0	46.4		mg/Kg		93	80 - 120
Nickel	50.0	46.4		mg/Kg		93	80 - 120
Zinc	50.0	44.8		mg/Kg		90	80 - 120
Chromium	50.0	46.8		mg/Kg		94	80 - 120

Lab Sample ID: LCSD 720-117693/3-A
Matrix: Solid
Analysis Batch: 117789

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 117693

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	50.0	45.1		mg/Kg		90	80 - 120	1	20
Lead	50.0	46.9		mg/Kg		94	80 - 120	1	20
Nickel	50.0	46.9		mg/Kg		94	80 - 120	1	20
Zinc	50.0	45.1		mg/Kg		90	80 - 120	1	20
Chromium	50.0	47.5		mg/Kg		95	80 - 120	2	20

Lab Sample ID: LCSSRM 720-117693/25-A
Matrix: Solid
Analysis Batch: 117789

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 117693

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	42.0	36.5		mg/Kg		87	67 - 118
Lead	280	257		mg/Kg		92	62 - 113
Nickel	106	96.0		mg/Kg		91	65 - 117
Zinc	574	487		mg/Kg		85	62 - 110
Chromium	269	246		mg/Kg		91	67 - 121

Lab Sample ID: MB 720-117466/1-A
Matrix: Solid
Analysis Batch: 117484

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 117466

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020		mg/L		07/19/12 10:46	07/19/12 12:41	1
Lead	ND		0.0050		mg/L		07/19/12 10:46	07/19/12 12:41	1
Nickel	ND		0.010		mg/L		07/19/12 10:46	07/19/12 12:41	1
Zinc	ND		0.020		mg/L		07/19/12 10:46	07/19/12 12:41	1
Chromium	ND		0.010		mg/L		07/19/12 10:46	07/19/12 12:41	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 720-117466/2-A
Matrix: Solid
Analysis Batch: 117484

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 117466

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	1.00	1.01		mg/L		101	80 - 120
Lead	1.00	1.01		mg/L		101	80 - 120
Nickel	1.00	1.01		mg/L		101	80 - 120
Zinc	1.00	1.00		mg/L		100	80 - 120
Chromium	1.00	1.00		mg/L		100	80 - 120

Lab Sample ID: LCSD 720-117466/3-A
Matrix: Solid
Analysis Batch: 117484

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 117466

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	1.00	1.01		mg/L		101	80 - 120	0	20
Lead	1.00	1.02		mg/L		102	80 - 120	0	20
Nickel	1.00	1.01		mg/L		101	80 - 120	0	20
Zinc	1.00	1.00		mg/L		100	80 - 120	0	20
Chromium	1.00	1.00		mg/L		100	80 - 120	0	20

Lab Sample ID: LB4 720-117217/1-F LB4
Matrix: Solid
Analysis Batch: 117484

Client Sample ID: Method Blank
Prep Type: STLC Citrate
Prep Batch: 117466

Analyte	LB4 Result	LB4 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.050		mg/L		07/19/12 10:48	07/19/12 14:03	2.5
Lead	ND		0.13		mg/L		07/19/12 10:48	07/19/12 14:03	2.5
Nickel	ND		0.25		mg/L		07/19/12 10:48	07/19/12 14:03	2.5
Zinc	ND		0.50		mg/L		07/19/12 10:48	07/19/12 14:03	2.5
Chromium	ND		0.25		mg/L		07/19/12 10:48	07/19/12 14:03	2.5

QC Association Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

GC/MS VOA

Analysis Batch: 117026

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	Total/NA	Solid	8260B	117042
LCS 720-117042/2-A	Lab Control Sample	Total/NA	Solid	8260B	117042
LCS 720-117042/4-A	Lab Control Sample	Total/NA	Solid	8260B	117042
LCSD 720-117042/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B	117042
LCSD 720-117042/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B	117042
MB 720-117042/1-A	Method Blank	Total/NA	Solid	8260B	117042

Prep Batch: 117042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	Total/NA	Solid	5035	
LCS 720-117042/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 720-117042/4-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 720-117042/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 720-117042/5-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 720-117042/1-A	Method Blank	Total/NA	Solid	5035	

GC/MS Semi VOA

Prep Batch: 117079

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	Total/NA	Solid	3546	
LCS 720-117079/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-117079/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-117079/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 117297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-117079/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	117079
LCSD 720-117079/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	117079
MB 720-117079/1-A	Method Blank	Total/NA	Solid	8270C SIM	117079

Analysis Batch: 117432

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	Total/NA	Solid	8270C SIM	117079

GC Semi VOA

Prep Batch: 117130

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	Silica Gel Cleanup	Solid	3546	
LCS 720-117130/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-117130/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-117130/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 117182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-117130/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	117130
LCSD 720-117130/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	117130
MB 720-117130/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	117130

GC Semi VOA (Continued)

Analysis Batch: 117446

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	Silica Gel Cleanup	Solid	8015B	117130

Metals

Leach Batch: 117217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	STLC Citrate	Solid	CA WET Citrate	
LB4 720-117217/1-F LB4	Method Blank	STLC Citrate	Solid	CA WET Citrate	

Prep Batch: 117466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	STLC Citrate	Solid	3005A	117217
LB4 720-117217/1-F LB4	Method Blank	STLC Citrate	Solid	3005A	117217
LCS 720-117466/2-A	Lab Control Sample	Total Recoverable	Solid	3005A	
LCSD 720-117466/3-A	Lab Control Sample Dup	Total Recoverable	Solid	3005A	
MB 720-117466/1-A	Method Blank	Total Recoverable	Solid	3005A	

Analysis Batch: 117484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	STLC Citrate	Solid	6010B	117466
LB4 720-117217/1-F LB4	Method Blank	STLC Citrate	Solid	6010B	117466
LCS 720-117466/2-A	Lab Control Sample	Total Recoverable	Solid	6010B	117466
LCSD 720-117466/3-A	Lab Control Sample Dup	Total Recoverable	Solid	6010B	117466
MB 720-117466/1-A	Method Blank	Total Recoverable	Solid	6010B	117466

Prep Batch: 117693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	Total/NA	Solid	3050B	
LCS 720-117693/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-117693/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-117693/25-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-117693/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 117789

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-117693/2-A	Lab Control Sample	Total/NA	Solid	6010B	117693
LCSD 720-117693/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	117693
LCSSRM 720-117693/25-A	Lab Control Sample	Total/NA	Solid	6010B	117693
MB 720-117693/1-A	Method Blank	Total/NA	Solid	6010B	117693

Analysis Batch: 117802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-43229-1	SO-2344-COMP3-110712	Total/NA	Solid	6010B	117693

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Client Sample ID: SO-2344-COMP3-110712
Date Collected: 07/11/12 08:45
Date Received: 07/11/12 18:40

Lab Sample ID: 720-43229-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			117042	07/12/12 13:45	DH	TAL SF
Total/NA	Analysis	8260B		1	117026	07/12/12 17:43	AC	TAL SF
Total/NA	Prep	3546			117079	07/12/12 19:36	RU	TAL SF
Total/NA	Analysis	8270C SIM		5	117432	07/19/12 04:35	ML	TAL SF
Silica Gel Cleanup	Prep	3546			117130	07/13/12 14:27	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		3	117446	07/19/12 13:55	JZ	TAL SF
STLC Citrate	Leach	CA WET Citrate			117217	07/16/12 12:51	JR	TAL SF
STLC Citrate	Prep	3005A			117466	07/19/12 10:48	ET	TAL SF
STLC Citrate	Analysis	6010B		2.5	117484	07/19/12 14:07	CAM	TAL SF
Total/NA	Prep	3050B			117693	07/23/12 16:16	JR	TAL SF
Total/NA	Analysis	6010B		4	117802	07/24/12 20:55	BA	TAL SF

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL SF
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF
6010B	Metals (ICP)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-43229-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-43229-1	SO-2344-COMP3-110712	Solid	07/11/12 08:45	07/11/12 18:40

Test America- Pleasanton

139415

720-43229

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-3-Rev2-20120620
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Renee Ransom	Phone Number: (408) 580-4664 Fax Number: (408) 225-8506

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO and BTEX by EPA 8260B	DRO and MORO by EPA 8015 (with Silica Gel Cleaup)	PCE and TCE by 8270C	Total and Dissolved CAM 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	PAHs by EPA 8270				Special Instructions
SO-2344-Comp3-110712	SO	3 encores 2 jars	5	07/11/12 0845	None	X	X	X	X	X				

Relinquished By: Date/Time: 1240 7/11/12
Renee Ransom

Received by: Date/Time: 7-11-12 1428

Relinquished By: Date/Time: 7-11-12 1840

Received by: Date/Time:

Relinquished By: Date/Time:

Received in Lab by: Date/Time: 7-11-12 1840

Turnaround Time: (check)

Same Day _____ 72 Hours _____

24 Hours _____ 5 days _____

48 hours _____ normal X

Sample Integrity: (Check) 2.5C

Intact _____ On Ice: X _____ Custody

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

7/25/2012

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-43229-1

Login Number: 43229

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Appendix G

Waste Manifests

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of | 097077

GENERATOR

3. Generator's Name and Mailing Address

9451 Atkinson St. Unit L
Roseville CA 95747

4. Generator's Phone (916) 367-5165

5. Transporter 1 Company Name | 6. US EPA ID Number | A. Transporter's Phone

UNITED PUMPING SERVICE INC | C.A.D.0.7.2.9.6.8.7.7 | 626 951-9326

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address | 10. US EPA ID Number | C. Facility's Phone

Sea Port
879 Seaport Blvd
Redwood City CA 94063

(650) 364-1024

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. Non-Hazardous waste liquid				
b.				
c.				
d.				

D. Additional Description for Materials Listed Above

a. Grease trap waste | c.

b. | d.

E. Handling Codes for Wastes Listed Above

a. | c.

b. | d.

15. Special Handling Instructions and Additional Information

24-HR. EMERGENCY PH: 626/ 961-9326 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO #

16. **GENERATOR'S CERTIFICATION:** I Certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Type Name	Signature	Month	Day	Year
Noe Quezada Agent for Pacific		07	12	12

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt or waste materials covered by this manifest as noted in Item 19.

Printed/Type Name	Signature	Month	Day	Year
Jason D Camara		07	19	12

TRANSPORTER #2

#2625

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone *800-638-1477	4. Waste Tracking Number WG# 82970

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name
~~DENBESTE TRANSPORTATION INC~~ TNC Trucking
U.S. EPA ID Number
~~CAD981613632~~ CA1300014880

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
8426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4718
U.S. EPA ID Number
CAD982042476

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENBESTE JOB NUMBER: DB10810
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Nue Quezada Agent Per U.P.R.R. Signature: [signature] Month 10 Day 12 Year 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.: 32:10

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: ANTONIO GODINEZ Signature: [signature] 825 Month 10 Day 12 Year 12
Transporter 2 Printed/Typed Name: Signature: Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) 829 Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a
Printed/Typed Name: [illegible] Signature: [signature] Month 10 Day 12 Year 12

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

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TRANSPORTER #1

6163

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number: NA	2. Page 1 of: 1	3. Emergency Response Phone: 800-939-1477	4. Waste Tracking Number: UP# 87920

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5194

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name: Z+H Consulting
DENBESTE TRANSPORTATION INC
U.S. EPA ID Number: CAD 981975638

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
8429 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4718
U.S. EPA ID Number: CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	10	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5410 DENBESTE JOB NUMBER: DB10018
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Noe Quezada Agent for UPRR. Signature: [signature] Month: 10 Day: 10 Year: 12

INT'L
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.: 10 10 12

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: JEFF BAIN Signature: [signature] Month: 10 Day: 10 Year: 12
Transporter 2 Printed/Typed Name Signature Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a
Printed/Typed Name: Tom Wilson Signature: [signature] Month: 10 Day: 10 Year: 12

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TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number: N/A	2. Page 1 of 1	3. Emergency Response Phone: 800-638-1477	4. Waste Tracking Number: WO# 82920

GENERATOR

5. Generator's Name and Mailing Address:
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
916-789-5184

Generator's Site Address (if different than mailing address):
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

Generator's Phone:

6. Transporter 1 Company Name: ~~DENSOPE TRANSPORTATION INC.~~ E & H Consulting — U.S. EPA ID Number: CAR 175137

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
RECOLOGY HAY RD
6426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4718

U.S. EPA ID Number: CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZARDOUS SOILS	1	DT	18	Y
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information:
WASTE PROFILE NUMBER: 5419 DENSOPE JOB NUMBER: DB102918
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Nick Quezada Agent for UPRR — Signature — Month: 9 Day: 10 Year: 12

INTL

15. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:

TRANSPORTER

Transporter Signature (for exports only):

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: JEFF BAIN — Signature — Month: 9 Day: 10 Year: 12

Transporter 2 Printed/Typed Name — Signature — Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

17b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number:

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a

Printed/Typed Name — Signature — Month: 9 Day: 10 Year: 12

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TRANSPORTER #1

18

B-1

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 800-938-1477	4. Waste Tracking Number WGH 82920

GENERATOR

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-6184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name
DENSESTE TRANSPORTATION INC
U.S. EPA ID Number

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
6426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4719
U.S. EPA ID Number
CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENSESTE JOB NUMBER: DS10918
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Noe Quezada Agent for UPRR Signature: [signature] Month 4 Day 1 Year 12

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: 32.00
Transporter Signature (for exports only): Date leaving U.S.

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: [illegible] Signature: [signature] Month 4 Day 10 Year 12
Transporter 2 Printed/Typed Name: Signature: Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Joseph Sm[illegible] Signature: [signature] Month 4 Day 12 Year 12

TRANSPORTER #1

R-1

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number: N/A	2. Page 1 of: 1	3. Emergency Response Phone: 800-638-1477	4. Waste Tracking Number: WO# 82920

5. Generator's Name and Mailing Address:
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-6784

Generator's Site Address (if different than mailing address):
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name: DENBESTE TRANSPORTATION INC — U.S. EPA ID Number: CAD981733332

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
RECOLOGY HAY RD
8426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4719

U.S. EPA ID Number: CAD982042479

	9. Waste Shipping Name and Description	10. Containers: No.	10. Containers: Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information:
WASTE PROFILE NUMBER: 5418 DENBESTE JOB NUMBER: DB10818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Nico Quezada — Agent for UPRR — Signature: Nico Quezada — Month: 12 — Day: 10 — Year: 12

15. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit:
Transporter Signature (for exports only): — Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steven Lee Bettis — Signature: Steven Lee Bettis — Month: 12 — Day: 10 — Year: 12

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

17. Discrepancy

17a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Jerry Sikes — Signature — Month: 12 — Day: 10 — Year: 12

GENERATOR — TRANSPORTER — DESIGNATED FACILITY

#2595

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A
2. Page 1 of 1
3. Emergency Response Phone: 800-838-1477
4. Waste Tracking Number: Uno # 82920 (2 1)

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
16031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-788-5184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name
~~DENBESTE TRANSPORTATION INC~~ WAH
U.S. EPA ID Number: CAR000103127 ~~CAD983618648~~

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
9426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4718
U.S. EPA ID Number: CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENBESTE JOB NUMBER: DB10818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Nye Quezada (agent per UPRR) Signature: [signature] Month 11 Day 30 Year 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Patrick Carso Signature: P. Carso Month 12 Day 10 Year 12
Transporter 2 Printed/Typed Name: Signature: Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
17b. Alternate Facility (or Generator) Manifest Reference Number:
U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Jim Wilson Signature: [signature] Month 12 Day 10 Year 12

GENERATOR | TRANSPORTER | INT'L | DESIGNATED FACILITY

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TRANSPORTER #1

2595

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 800-939-1477	4. Waste Tracking Number WM 87920 ZZ

GENERATOR

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-6184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name
DENBESTE TRANSPORTATION INC WAH
U.S. EPA ID Number CAR000103127

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
6426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4719
U.S. EPA ID Number CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	OT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 S DENBESTE JOB NUMBER: DB10818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Noe Quezada — Agent for U.P.R.R. — Signature — Month 12 Day 10 Year 12

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.: 12 10

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: R CARSO — Signature — Month 12 Day 10 Year 12
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name — Signature — Month 12 Day 10 Year 12

169-BLC-O 6 10498 (Rev. 9/09)

TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number: N/A	2. Page 1 of 1	3. Emergency Response Phone: 800-338-1477	4. Waste Tracking Number: WB# 82920

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-6184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name: DENBESTE TRANSPORTATION INC WM Trucking — U.S. EPA ID Number: CAR000[illegible]3127

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
0426 HAY RD
VACAVILLE, CA 95697 USA
Facility's Phone: 707-678-4718
U.S. EPA ID Number: CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.
1.	NON HAZARDOUS SOILS	1	DT	18	Y
2.					
3.					
4.					

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENBESTE JOB NUMBER: DB10918
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Nic Quezada — Signature — Month/Day/Year: 07/12/12

15. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: 32.00
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Tim Barker — Signature — Month/Day/Year: 07/10/12 — 1079.84
Transporter 2 Printed/Typed Name — Signature — Month/Day/Year:

17. Discrepancy
17a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
17b. Alternate Facility (or Generator) — Manifest Reference Number: — U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month/Day/Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a
Printed/Typed Name — Signature — Month/Day/Year: 07/10/12

GENERATOR — TRANSPORTER INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 9/09)

TRANSPORTER #1

9D(4 x 2 61600

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone	4. Waste Tracking Number
N/A		800-939-1477	WD# 82920

GENERATOR

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-6184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

TRANSPORTER

6. Transporter 1 Company Name
DENBESTE TRANSPORTATION INC
U.S. EPA ID Number: CAD982513832

7. Transporter 2 Company Name
U.S. EPA ID Number:

DESIGNATED FACILITY

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
8428 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4719
U.S. EPA ID Number: CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENBESTE JOB NUMBER: DB10818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Noe Quezada Agent for Waste R. Signature: [signature] Month 4 Day 12 Year 12

INTL

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.: 32 CD

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: FLAVIO C GOMEZ Signature: [signature] Month 10 Day 12 Year 12
Transporter 2 Printed/Typed Name: Signature: Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
17b. Alternate Facility (or Generator) Manifest Reference Number: U.S. EPA ID Number:
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Tom Wilk Signature: [signature] Month 10 Day 12 Year 12

169-BLC-O 6 10/99 (Rev. 9/09)

TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 800-338-1477	4. Waste Tracking Number WM 82920

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name
DENBESTE TRANSPORTATION,INC TJ Perez Trucking
U.S. EPA ID Number CARO001516?

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
6426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4719
U.S. EPA ID Number CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	CT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 9418 DENBESTE JOB NUMBER: DB10818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Noe Quezada
Signature
Month 7 Day 16 Year 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Tomas Chavez
Signature
Month 7 Day 16 Year 12
Transporter 2 Printed/Typed Name
Signature
Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a
Printed/Typed Name
Signature
Month 7 Day 10 Year 12

GENERATOR
TRANSPORTER
INT'L
FACILITY

0498 (Rev. 9/09)
TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number: NA	2. Page 1 of: 1	3. Emergency Response Phone: 800-638-1477	4. Waste Tracking Number: WOA 52170

GENERATOR

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95401 USA

6. Transporter 1 Company Name: ~~DENBESTE TRANSPORTATION INC~~ JJ Perez Trucking — U.S. EPA ID Number: CAD009514176 CAD982513032

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
8426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4719. — U.S. EPA ID Number: CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	CT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5410 DENBESTE JOB NUMBER: DB10810
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Noe Quezada — Agent for U.P.R.R. — Signature — Month 4 Day 16 Year 12

INTL

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: 32 MD
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Daniel Gomez — Signature — Month 7 Day 10 Year 12
Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Tom Wilson — Signature — Month 7 Day 12 Year 12

14

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A

2. Page 1 of 1

3. Emergency Response Phone: 800-938-1477

4. Waste Tracking Number: WM # 82920

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name: ~~DENBESTE TRANSPORTATION INC~~ JJ Perez Trucking
U.S. EPA ID Number: CAD066154976

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
5428 HAY RD
VACAVILLE, CA 95697 USA
Facility's Phone: 707-678-4718
U.S. EPA ID Number: CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENBESTE JOB NUMBER: DB10818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Noe Quezada Rep for U.P.R.R. Signature: [signature] Month: 12 Day: 10 Year: 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: David Cosme Signature: [signature] Month: 12 Day: 10 Year: 12
Transporter 2 Printed/Typed Name: Signature: Month: Day: Year:

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: [signature] Signature: [signature] Month: 12 Day: 10 Year: 12

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 8 10498 (Rev. 9/09) TRANSPORTER #1

7E 017663 (01660)

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 800-838-1477	4. Waste Tracking Number

GENERATOR

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
916-789-5184
Generator's Phone:

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name
~~DENSEST TRANSPORTATION INC~~ E & A Trucking
U.S. EPA ID Number
CAR000172916

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
6426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4718
U.S. EPA ID Number
CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENSEST JOB NUMBER: DS10810
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Noe Quezada (Agent for UPRR)
Signature:
Month: 9 Day: 29 Year: 12

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: 32.10
Transporter Signature (for exports only): Date leaving U.S.: 7-5-12

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Alfredo Chavez
Signature:
Month: 7 Day: 10 Year: 12
Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Tom Wilson
Signature:
Month: 7 Day: 10 Year: 12

168-BLC-O 6 10498 (Rev. 9/09)

TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number: N/A

2. Page 1 of 1

3. Emergency Response Phone: 800-338-1477

4. Waste Tracking Number: WCH 82920

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5104

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name: DENBESTE TRANSPORTATION INC EAVID Tiburon CA

U.S. EPA ID Number: CAD981666

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
6426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4718

U.S. EPA ID Number: CAD982062475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENBESTE JOB NUMBER: OB10818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Nuc Quezada Agent - Per UPRR Signature: Month 7 Day 10 Year 12

INTL
15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.: 52.00

TRANSPORTER
16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Signature: Month 7 Day 10 Year 12
Transporter 2 Printed/Typed Name: Signature: Month Day Year

DESIGNATED FACILITY
17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Tim Wilk Signature: Month 7 Day 10 Year 12

169-BLC-O 5 10498 (Rev. 9/09)

TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number NA	2. Page 1 of 1	3. Emergency Response Phone 800-538-1477	4. Waste Tracking Number WO# 82920

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name
~~DENBESTE TRANSPORTATION INC~~ F. SALAS TRKG
U.S. EPA ID Number CAD981506631 CADOT4832

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
8439 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4718
U.S. EPA ID Number CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENBESTE JOB NUMBER: DB10818 LIC# 908982J
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.
Generator's/Offeror's Printed/Typed Name: Mac Quezada Agent for UPRR Signature: [signature] Month 7 Day 18 Year 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: 22:00
Transporter Signature (for exports only): Date leaving U.S.

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Fernando Salas Signature: [signature] Month 7 Day 10 Year 12
Transporter 2 Printed/Typed Name: Signature: Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

17b. Alternate Facility (or Generator) U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: [signature] Signature: [signature] Month 7 Day 10 Year 12

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 9/09) TRANSPORTER #1

17

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number N/A	2. Page 1 of 1	3. Emergency Response Phone 800-838-1477	4. Waste Tracking Number UG # 82920

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5184

Generator's Site Address (if different than mailing address)
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name
~~DENSBESTE TRANSPORTATION INC~~ ALLYN TRUCKING
U.S. EPA ID Number CAD000160578

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
RECOLOGY HAY RD
8439 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4719
U.S. EPA ID Number CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 5418 DENSBESTE JOB NUMBER: 08100818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Mike Quezada Agent Per U.P.R.R. Signature: [signature] Month 4 Day 27 Year 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: 32 OAK
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: CRISTINO JACINTO Signature: [signature] Month 7 Day 16 Year 12 1:40 PM
Transporter 2 Printed/Typed Name: Signature: Month Day Year

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator) Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: [signature] Signature: [signature] Month 7 Day 16 Year 12

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

9-BLC-0 6 10498 (Rev. 9/09) TRANSPORTER #1

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number: NA	2. Page 1 of 1	3. Emergency Response Phone: 800-338-1477	4. Waste Tracking Number: 82920

5. Generator's Name and Mailing Address:
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
Generator's Phone: 916-789-5184

Generator's Site Address (if different than mailing address):
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

6. Transporter 1 Company Name: DENBESTE TRANSPORTATION, INC ANAYA Trucking
U.S. EPA ID Number: CAD980513692 CHR000160595

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address:
RECOLOGY HAY RD
6426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4718
U.S. EPA ID Number: CADS82042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	18	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
WASTE PROFILE NUMBER: 6418 DENBESTE JOB NUMBER: D810818
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Noe Quezada
Signature:
Month: 7 Day: 10 Year: 12

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: GUSTAVO PACHECO
Signature: GUSTAVO PACHECO
Month: 7 Day: 10 Year: 12

Transporter 2 Printed/Typed Name
Signature
Month: Day: Year:

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name:
Signature:
Month: 7 Day: 10 Year: 12

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

169-BLC-O 8 10495 (Rev. 9/09)

TRANSPORTER #1

12

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number: N/A	2. Page 1 of 1	3. Emergency Response Phone: 800-939-1477	4. Waste Tracking Number: WH82920

GENERATOR

5. Generator's Name and Mailing Address:
UNION PACIFIC RAILROAD
10031 FOOTHILLS BLVD.
ROSEVILLE, CA 95747 USA
916-789-5184

Generator's Site Address (if different than mailing address):
2 FOURTH STREET - SMART RAIL SITE
SANTA ROSA, CA 95404 USA

Generator's Phone:

6. Transporter 1 Company Name: BAY TRANSPORTATION SOLUTIONS LLC
DENBESTE TRANSPORTATION INC
U.S. EPA ID Number: CAR000249938

7. Transporter 2 Company Name:
U.S. EPA ID Number:

8. Designated Facility Name and Site Address:
RECOLOGY HAY RD
6426 HAY RD
VACAVILLE, CA 95687 USA
Facility's Phone: 707-678-4719
U.S. EPA ID Number: CAD982042475

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS SOILS	1	DT	19	Y	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information:
WASTE PROFILE NUMBER: 5419 DENBESTE JOB NUMBER: DB10018
WEAR ALL APPROPRIATE PPE WHEN HANDLING MATERIAL

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Noe Quezada Agent for UPRR
Signature:
Month: 7 Day: 10 Year: 12

INT'L

15. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: CLARENCE M. BOOKLY
Signature:
Month: 7 Day: 10 Year: 12

Transporter 2 Printed/Typed Name:
Signature:
Month: Day: Year:

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator):
U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name:
Signature:
Month: 7 Day: 10 Year: 12

169-BLC-D 6 10498 (Rev. 9/09)

TRANSPORTER #1

☒ **Keller Canyon Sanitary Landfill**
901 Bailey Road
Pittsburg, CA 94565
Phone (925) 458-9800
Fax (925) 458-9991

☐ **Coffin Butte Landfill**
28972 Coffin Butte Road
Corvallis, OR 97330
Phone (541) 745-2016
Fax (541) 745-3826

☐ **Ox Mountain Sanitary Landfill**
12310 San Mateo Road
Half Moon Bay, CA 94019
Phone (650) 726-1819
Fax (650) 726-9183

☐ **Newby Island Sanitary Landfill**
1601 Dixon Landing Road
Milpitas, CA 95035
Phone (408) 945-2800
Fax (408) 262-2871

☐ **Forward Landfill**
9999 S. Austin Road
Manteca, CA 95336
Phone (209) 982-4298
Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD
MAILING ADDRESS: 10031 FOOTHILLS BLVD
CITY, STATE, ZIP: ROSEVILLE, CA 95747
PHONE: 916 789 5184
CONTACT PERSON: JIM DIEL
SIGNATURE OF AUTHORIZED AGENT / TITLE: * Agent for U.P.R.R.
DATE: 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☒ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.
– 746869

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☐ HARD HAT
☐ TY-VEK ☐ SAFETY VEST

SPECIAL HANDLING PROCEDURES: SWIC# 4212 1118254

RECEIVING FACILITY

TRANSPORTER: J. PEREZ TRUCKING ~~DENBESTE TRANSPORTATION INC.~~
ADDRESS: 810 DENBESTE CT. SUITE 107
CITY, STATE, ZIP: WINDSOR, CA 95492
PHONE: 800-938-1477
SIGNATURE OF AUTHORIZED AGENT OR DRIVER: * Javier Chavez
DATE: 7/11/12

NOTES:
VEHICLE LICENSE NUMBER: 9D64342
TRUCK NUMBER: C4

☒ END DUMP ☐ BOTTOM DUMP ☐ TRANSFER
☐ ROLL-OFF(S) ☐ FLAT-BED ☐ VAN ☐ DRUMS
135.14

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT: *
DATE: 7-11-12

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☐ SOIL	✓	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		135.14
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615961

☑ Keller Canyon Sanitary Landfill	☐ Coffin Butte Landfill	☐ Ox Mountain Sanitary Landfill	☐ Newby Island Sanitary Landfill	☐ Forward Landfill
901 Bailey Road Pittsburg, CA 94565 Phone (925) 458-9800 Fax (925) 458-9891	28972 Coffin Butte Road Corvallis, OR 97330 Phone (541) 745-2018 Fax (541) 745-3826	12310 San Mateo Road Half Moon Bay, CA 94019 Phone (650) 726-1619 Fax (650) 726-9183	1601 Dixon Landing Road Milpitas, CA 95035 Phone (408) 945-2800 Fax (408) 262-2871	9999 S. Austin Road Manteca, CA 95336 Phone (209) 982-4298 Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD

MAILING ADDRESS: 10031 FOOTHILLS BLVD

CITY, STATE, ZIP: ROSEVILLE, CA 95747

PHONE: 916.789.5184

CONTACT PERSON: JIMI DIEL

SIGNATURE OF AUTHORIZED AGENT / TITLE: *[signature] Mgr. Ren. U.R.R.P. | DATE: 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:

- ☐ DISPOSAL
- ☐ CONSTRUCTION
- ☐ DEBRIS
- ☐ SPECIAL WASTE
- ☐ SLUDGE
- ☐ WOOD
- ☒ OTHER

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.: – 166804

REQUIRED PERSONAL PROTECTIVE EQUIPMENT

☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT ☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES: Swich # 4212 1118254

RECEIVING FACILITY

TRANSPORTER: STANDARD DISPOSAL SERVICE INC

ADDRESS: 3257 South Townsend Dr

~~210 DEHARITE CT SUITE 102~~

CITY, STATE, ZIP: WINDSOR, CA 95492 Rocklin Ca

PHONE: ~~800 838 1477~~

SIGNATURE OF AUTHORIZED AGENT OR DRIVER: *Daniel Gomez | DATE: 7/11/12

NOTES:

VEHICLE LICENSE NUMBER	TRUCK NUMBER
9007540	69

END DUMP	BOTTOM DUMP	TRANSFER
☒	☐	491.510

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐	☐

Tick. 42

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS:

FACILITY TICKET NUMBER:

SIGNATURE OF AUTHORIZED AGENT: * | DATE: 7-11-12

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☒ SOIL	✓	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		Tick 42
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615962

☒ Keller Canyon Sanitary Landfill	☐ Coffin Butte Landfill	☐ Ox Mountain Sanitary Landfill	☐ Newby Island Sanitary Landfill	☐ Forward Landfill
901 Bailey Road Pittsburg, CA 94565 Phone (925) 458-9800 Fax (925) 458-9891	28972 Coffin Butte Road Corvallis, OR 97330 Phone (541) 745-2018 Fax (541) 745-3826	12310 San Mateo Road Half Moon Bay, CA 94019 Phone (650) 726-1819 Fax (650) 726-9183	1601 Dixon Landing Road Milpitas, CA 95035 Phone (408) 945-2600 Fax (408) 262-2871	9999 S. Austin Road Manteca, CA 95336 Phone (209) 982-4298 Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD

MAILING ADDRESS: 1003T FOOTHILLS BLVD

CITY, STATE, ZIP: ROSEVILLE, CA 95747

PHONE: 916.789.5184

CONTACT PERSON: JIM DIEL

SIGNATURE OF AUTHORIZED AGENT / TITLE: Agent for U.P.R.R. | DATE: 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
- ☐ DISPOSAL
- ☐ CONSTRUCTION
- ☐ DEBRIS
- ☐ SPECIAL WASTE
- ☐ SLUDGE
- ☐ WOOD
- ☒ OTHER

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.: — 716960

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
- ☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
- ☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES: SWIC #42121 18254

RECEIVING FACILITY

TRANSPORTER: J & H Consulting ~~DENBESTE TRANSPORTATION INC~~

ADDRESS: 245 GIRARD ST SANTA PAULA CA 93060 ~~810 DENBESTE CT. SUITE 107~~

CITY, STATE, ZIP: ~~WINDSOR, CA 95492~~

PHONE: ~~800-838-1477~~ 805-691-3775

SIGNATURE OF AUTHORIZED AGENT OR DRIVER | DATE: 7/11/12

NOTES: | VEHICLE LICENSE NUMBER: 9024975 | TRUCK NUMBER: 203

END DUMP	BOTTOM DUMP	TRANSFER
☐	☐	☐

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐	☐ 959.79

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☒ SOIL	20	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		104.79
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT | DATE: 7-11-12

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615963

☒ Keller Canyon Sanitary Landfill	☐ Coffin Butte Landfill	☐ Ox Mountain Landfill	☐ Newby Island Sanitary Landfill	☐ Forward Landfill
901 Bailey Road Pittsburg, CA 94565 Phone (925) 458-9800 Fax (925) 458-9891	28972 Coffin Butte Road Corvallis, OR 97330 Phone (541) 745-2018 Fax (541) 745-3826	12310 San Mateo Road Half Moon Bay, CA 94019 Phone (650) 726-1819 Fax (650) 726-9183	1601 Dixon Landing Road Milpitas, CA 95035 Phone (408) 945-2800 Fax (408) 262-2871	9999 S. Austin Road Manteca, CA 95336 Phone (209) 982-4298 Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD

MAILING ADDRESS: 10031 FOOTHILLS BLVD

CITY, STATE, ZIP: ROSEVILLE, CA 95747

PHONE: 916 789 5184

CONTACT PERSON: JIM DIEL

SIGNATURE OF AUTHORIZED AGENT / TITLE: Agent for UPRR — DATE: 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:

- ☐ DISPOSAL
- ☐ CONSTRUCTION
- ☐ DEBRIS
- ☐ SPECIAL WASTE
- ☐ SLUDGE
- ☐ WOOD
- ☒ OTHER

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.: – 346792

REQUIRED PERSONAL PROTECTIVE EQUIPMENT

☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT

☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES: PROFIG 42121118265H

RECEIVING FACILITY

TRANSPORTER: ~~DEMARTE TRANSPORTATION INC.~~ WAH

ADDRESS: ~~810 REDWOOD CT. SUITE 107~~ 130 E. SYRUSS

CITY, STATE, ZIP: ~~WINDSOR, CA 95492~~ TURLOCK, CA 95380

PHONE: ~~800 938 1477~~

SIGNATURE OF AUTHORIZED AGENT OR DRIVER: [signature] — DATE: 7-11-12

NOTES:

VEHICLE LICENSE NUMBER	TRUCK NUMBER
9834792	W2

END DUMP	BOTTOM DUMP	TRANSFER	
☒	☐	☐	
ROLL-OFF(S)	**FLAT-BED**	**VAN**	**DRUMS**
☐	☐	☐	☐

903.63

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT: [signature] — DATE: 7-11-12

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☐ SOIL		
☐ CONSTRUCTION DEBRIS	✓	
☐ NON-FRIABLE ASBESTOS		903.63
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615964

☒ Keller Canyon Sanitary Landfill	☐ Coffin Butte Landfill	☐ Ox Mountain Sanitary Landfill	☐ Newby Island Sanitary Landfill	☐ Forward Landfill
901 Bailey Road Pittsburg, CA 94565 Phone (925) 458-9800 Fax (925) 458-9891	29972 Coffin Butte Road Corvallis, OR 97330 Phone (541) 745-2018 Fax (541) 745-3826	12310 San Mateo Road Half Moon Bay, CA 94019 Phone (650) 726-1819 Fax (650) 726-9183	1601 Dixon Landing Road Milpitas, CA 95035 Phone (408) 945-2800 Fax (408) 262-2871	9999 S. Austin Road Manteca, CA 95336 Phone (209) 982-4298 Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD
MAILING ADDRESS: 10031 FOOTHILLS BLVD
CITY, STATE, ZIP: ROSEVILLE, CA 95747
PHONE: 916.789.5184
CONTACT PERSON: JIM DIEL
SIGNATURE OF AUTHORIZED AGENT / TITLE: *[signature] V.P. RQ. Agent
DATE: 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☒ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.: – [illegible]

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES: SWC# 4212 | 18254

RECEIVING FACILITY

TRANSPORTER: [illegible]
DENBESTE TRANSPORTATION INC
ADDRESS: [illegible]
810 DUNBESTE CT, SUITE 107
CITY, STATE, ZIP: WINDSOR, CA 95492
PHONE: 707.836.9250
800-828-1477
SIGNATURE OF AUTHORIZED AGENT OR DRIVER: *[signature]
DATE: 7-11-12

NOTES:
VEHICLE LICENSE NUMBER: 2095753
TRUCK NUMBER: 25

END DUMP ☒ BOTTOM DUMP ☐ TRANSFER ☐
ROLL-OFF(S) ☐ FLAT-BED ☐ VAN / 55 GAL DRUMS ☐ 1.59.84

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT: *[signature]
DATE: 7-11-12

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☐ SOIL	✓	
☐ CONSTRUCTION DEBRIS		100.84
☐ NON-FRIABLE ASBESTOS		1.59.84
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615965

☒ **Keller Canyon Sanitary Landfill**
901 Bailey Road
Pittsburg, CA 94565
Phone (925) 458-9800
Fax (925) 458-9891

☐ **Coffin Butte Landfill**
28972 Coffin Butte Road
Corvallis, OR 97330
Phone (541) 745-2018
Fax (541) 745-3826

☐ **Ox Mountain Sanitary Landfill**
12310 San Mateo Road
Half Moon Bay, CA 94019
Phone (650) 726-1819
Fax (650) 726-9163

☐ **Newby Island Sanitary Landfill**
1601 Dixon Landing Road
Milpitas, CA 95035
Phone (408) 945-2800
Fax (408) 262-2871

☐ **Forward Landfill**
9999 S. Austin Road
Manteca, CA 95336
Phone (209) 982-4298
Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD
MAILING ADDRESS: 10031 FOOTHILLS BLVD
CITY, STATE, ZIP: ROSEVILLE, CA 95747
PHONE: 916 789 5184
CONTACT PERSON: JIM DIEL
SIGNATURE OF AUTHORIZED AGENT / TITLE: * Agent Rep. VP — DATE: 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☒ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.
– 76892

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES: Swic # 421211 18254

RECEIVING FACILITY

TRANSPORTER: [illegible]
ADDRESS: [illegible]
CITY, STATE, ZIP: [illegible]
PHONE: [illegible]
SIGNATURE OF AUTHORIZED AGENT OR DRIVER: * [signature] — DATE: 7-11-12

NOTES:
VEHICLE LICENSE NUMBER: 9392715
TRUCK NUMBER: 423

END DUMP ☒ BOTTOM DUMP ☐ TRANSFER ☐
ROLL-OFF(S) ☐ FLAT-BED ☐ VAN ☐ DRUMS ☐
434.66

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT: * [signature] — DATE: 7-11-12

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☒ SOIL	20	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		434.66
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615966

☒ Keller Canyon Sanitary Landfill	☐ Coffin Butte Landfill	☒ Ox Mountain Sanitary Landfill	☐ Newby Island Sanitary Landfill	☒ Forward Landfill
901 Bailey Road Pittsburg, CA 94565 Phone (925) 458-9800 Fax (925) 458-9891	28972 Coffin Butte Road Corvallis, OR 97330 Phone (541) 745-2018 Fax (541) 745-3826	12610 San Mateo Road Half Moon Bay, CA 94019 Phone (650) 726-1819 Fax (650) 726-9183	1601 Dixon Landing Road Milpitas, CA 95035 Phone (408) 946-2800 Fax (408) 262-2871	9999 S. Austin Road Manteca, CA 95336 Phone (209) 982-4298 Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD

MAILING ADDRESS: 10031 FOOTHILLS BLVD

CITY, STATE, ZIP: ROSEVILLE, CA 95747

PHONE: 916.789.5184

CONTACT PERSON: JIM DIEL

SIGNATURE OF AUTHORIZED AGENT / TITLE: Agent for UPRR — DATE: 7-11-12

GENERATOR CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:

- ☐ DISPOSAL
- ☐ CONSTRUCTION
- ☐ DEBRIS
- ☐ SPECIAL WASTE
- ☐ SLUDGE
- ☐ WOOD
- ☒ OTHER

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.

– 158800

REQUIRED PERSONAL PROTECTIVE EQUIPMENT

☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT

☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES: Swic # 4212 1118254

RECEIVING FACILITY

TRANSPORTER: ~~DRAIN SITE TRANSPORTATION INC.~~ F. SALAS Mike

ADDRESS: ~~810 DENBESTH CT. SUITE 107~~ 2196 Versalt Way

CITY, STATE, ZIP: ~~WINDSOR, CA 95492~~ Stockton CA 95206

PHONE: ~~1-800-938-1477~~ (209) 495-7851

SIGNATURE OF AUTHORIZED AGENT OR DRIVER: — DATE: 7/11/12

NOTES:

VEHICLE LICENSE NUMBER	TRUCK NUMBER
9E75939	368

END DUMP	BOTTOM DUMP	TRANSFER
☒	☐	☐

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐	☐

468.20

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT — DATE: 7/11/12

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☒ SOIL	20	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		468.20
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615967

☒ Keller Canyon Sanitary Landfill	☐ Coffin Butte Landfill	☒ Ox Mountain Sanitary Landfill	☐ Newby Island Sanitary Landfill	☐ Forward Landfill
901 Bailey Road Pittsburg, CA 94565 Phone (925) 458-9800 Fax (925) 458-9891	28972 Coffin Butte Road Corvallis, OR 97330 Phone (541) 745-2018 Fax (541) 745-3826	12310 San Mateo Road Half Moon Bay, CA 94019 Phone (650) 726-1819 Fax (650) 726-9183	1601 Dixon Landing Road Milpitas, CA 95035 Phone (408) 945-2800 Fax (408) 262-2871	9999 S. Austin Road Manteca, CA 95336 Phone (209) 982-4298 Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR
UNION PACIFIC RAILROAD

MAILING ADDRESS
10031 FOOTHILLS BLVD

CITY, STATE, ZIP
ROSEVILLE, CA 95747

PHONE
916 789 5184

CONTACT PERSON
JIM DIEL

SIGNATURE OF AUTHORIZED AGENT / TITLE — **DATE**
* Agent for U.P.R.R. — 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☒ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY
SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.
— 36869

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES
Swic # 42121 18254

RECEIVING FACILITY

TRANSPORTER
~~DENBESTE TRANSPORTATION INC~~ Scott Denbeste

ADDRESS
~~810 DENBESTE CT NORTH 107~~ La Monde

CITY, STATE, ZIP
~~WINDSOR, CA 95492~~ Livermore Ca

PHONE
~~800 828 1477~~ 1 562 328 8783

SIGNATURE OF AUTHORIZED AGENT OR DRIVER — **DATE**
* — 7-11-12

NOTES:

VEHICLE LICENSE NUMBER	TRUCK NUMBER
9561363	721

END DUMP	BOTTOM DUMP	TRANSFER
☒	☐	☐

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐ 1.74	☐

482.24

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT — **DATE**
* — 7-11-12

CUBIC YARDS
20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☒ SOIL	20	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		482.24
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615968

☒ Keller Canyon Sanitary Landfill
901 Bailey Road
Pittsburg, CA 94565
Phone (925) 458-9800
Fax (925) 458-9891

☐ Coffin Butte Landfill
28972 Coffin Butte Road
Corvallis, OR 97330
Phone (541) 745-2018
Fax (541) 745-3826

☐ Ox Mountain Sanitary Landfill
12310 San Mateo Road
Half Moon Bay, CA 94019
Phone (650) 726-1819
Fax (650) 726-9183

☐ Newby Island Sanitary Landfill
1601 Dixon Landing Road
Milpitas, CA 95035
Phone (408) 945-2600
Fax (408) 262-2871

☐ Forward Landfill
9999 S. Austin Road
Manteca, CA 95336
Phone (209) 982-4298
Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD
MAILING ADDRESS: 10031 FOOTHILLS BLVD
CITY, STATE, ZIP: ROSEVILLE, CA 95747
PHONE: 916.789.5184
CONTACT PERSON: JIM DILL
SIGNATURE OF AUTHORIZED AGENT / TITLE: *[signature] Agent for UPRR
DATE: 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE
☐ DISPOSAL
☒ CONSTRUCTION
☐ DEBRIS
☐ SPECIAL WASTE
☐ SLUDGE
☐ WOOD
☒ OTHER

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA ~~95404~~

WASTE ACCEPTANCE NO.
– 246262

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES:
Swic # 421211 8254

RECEIVING FACILITY

TRANSPORTER: ~~ALAND TRUCKING~~ DENBESTE TRANSPORTATION INC
ADDRESS: ~~1777 WINDSOR ST~~ 810 DENBESTE CT. SUITE 107 MANTECA CA
CITY, STATE, ZIP: ~~95370~~ WINDSOR CA 95492
PHONE: ~~559-583-6848~~ 800-838-1477
SIGNATURE OF AUTHORIZED AGENT OR DRIVER: *[signature]
DATE: 7-11-12

NOTES:
VEHICLE LICENSE NUMBER: 9D50946
TRUCK NUMBER: 61

END DUMP ☒ | BOTTOM DUMP ☐ | TRANSFER ☐
ROLL-OFF(S) ☐ | FLAT-BED ☐ | VAN ☐ 4001.17 | DRUMS ☐

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT: *[signature]
DATE: 7-11-12

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☒ SOIL	20	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		4001.17
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615969

☒ **Keller Canyon Sanitary Landfill**
901 Bailey Road
Pittsburg, CA 94565
Phone (925) 458-9800
Fax (925) 458-9891

☐ **Coffin Butte Landfill**
28972 Coffin Butte Road
Corvallis, OR 97330
Phone (541) 745-2018
Fax (541) 745-3826

☐ **Ox Mountain Sanitary Landfill**
12310 San Mateo Road
Half Moon Bay, CA 94019
Phone (650) 726-1819
Fax (650) 726-9183

☐ **Newby Island Sanitary Landfill**
1601 Dixon Landing Road
Milpitas, CA 95035
Phone (408) 945-2800
Fax (408) 262-2871

☐ **Forward Landfill**
9999 S. Austin Road
Manteca, CA 95336
Phone (209) 982-4298
Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR
UNION PACIFIC RAILROAD

MAILING ADDRESS
10031 FOOTHILLS BLVD

CITY, STATE, ZIP
ROSEVILLE, CA 95747

PHONE
916 789 5184

CONTACT PERSON
JIM DIEL

SIGNATURE OF AUTHORIZED AGENT / TITLE | DATE
* Agent Rec. U.P.R.R. | 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, If the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☒ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY
SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.
– ~~746869~~ 42121118254

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES:

RECEIVING FACILITY

TRANSPORTER
~~PACIFIC TRANSPORTATION~~ [illegible]

ADDRESS
~~810 DEARBORN SUITE 107~~

CITY, STATE, ZIP
~~WILDOSOR, CA 95492~~

PHONE
~~(916) 634-1477~~

SIGNATURE OF AUTHORIZED AGENT OR DRIVER | DATE
* | 7-11-12

NOTES:

VEHICLE LICENSE NUMBER	TRUCK NUMBER
9E21140	B-1

END DUMP	BOTTOM DUMP	TRANSFER
☒	☐	☐

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐	☐

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT | DATE
* | 7-11-12

CUBIC YARDS
20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☐ SOIL		
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615970

☐ **Keller Canyon Sanitary Landfill**
901 Bailey Road
Pittsburg, CA 94565
Phone (925) 458-9800
Fax (925) 458-9891

☐ **Coffin Butte Landfill**
28972 Coffin Butte Road
Corvallis, OR 97330
Phone (541) 745-2018
Fax (541) 745-3826

☐ **Ox Mountain Sanitary Landfill**
12310 San Mateo Road
Half Moon Bay, CA 94019
Phone (650) 726-1819
Fax (650) 726-9183

☐ **Newby Island Sanitary Landfill**
1601 Dixon Landing Road
Milpitas, CA 95035
Phone (408) 945-2800
Fax (408) 262-2971

☐ **Forward Landfill**
9999 S. Austin Road
Manteca, CA 95336
Phone (209) 982-4298
Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR: UNION PACIFIC RAILROAD
MAILING ADDRESS: 1003T FOOTHILLS BLVD
CITY, STATE, ZIP: ROSEVILLE, CA 95747
PHONE: 916.789.5184
CONTACT PERSON: JIM DIEL
SIGNATURE OF AUTHORIZED AGENT / TITLE: * [signature] | DATE: 7/1/12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☒ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY: SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

TRANSPORTER: DENBESTE TRANSPORTATION INC. WAH
ADDRESS: 810 DENBESTE CT. SUITE 107
CITY, STATE, ZIP: WINDSOR, CA 95492
PHONE: 800-938-1477 209 678569
SIGNATURE OF AUTHORIZED AGENT OR DRIVER: * [signature] | DATE: 7-11-12

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS:
FACILITY TICKET NUMBER:
SIGNATURE OF AUTHORIZED AGENT: * [signature] | DATE: 7-11-12

WASTE ACCEPTANCE NO.: ~~746869~~ 4212118254

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES:

RECEIVING FACILITY

NOTES: VEHICLE LICENSE NUMBER: 9B34792 | TRUCK NUMBER: W2

END DUMP	BOTTOM DUMP	TRANSFER
☒	☐	☐

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐	☐

9B3.63

CUBIC YARDS: 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☐ SOIL	✓	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		9B3.63
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:30 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615977

☒ Keller Canyon Sanitary Landfill	☐ Coffin Butte Landfill	☐ Ox Mountain Sanitary Landfill	☐ Newby Island Sanitary Landfill	☐ Forward Landfill
901 Bailey Road Pittsburg, CA 94565 Phone (925) 458-9800 Fax (925) 458-9891	28972 Coffin Butte Road Corvallis, OR 97330 Phone (541) 745-2018 Fax (541) 745-3826	12310 San Mateo Road Half Moon Bay, CA 94019 Phone (650) 726-1819 Fax (650) 726-9183	1601 Dixon Landing Road Milpitas, CA 95035 Phone (408) 945-2800 Fax (408) 262-2671	9999 S. Austin Road Manteca, CA 95336 Phone (209) 982-4298 Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR
UNION PACIFIC RAILROAD

MAILING ADDRESS
10031 FOOTHILLS BLVD

CITY, STATE, ZIP
ROSEVILLE, CA 95747

PHONE
916 789 5184

CONTACT PERSON
JIM DIEL

SIGNATURE OF AUTHORIZED AGENT / TITLE | **DATE**
* Jim Diel / Agent for UPRR. | 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations. Also, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☒ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY
SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.
~~716965~~ 42121182254

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES:

RECEIVING FACILITY

TRANSPORTER L & H Consulting
~~DENBESTE TRANSPORTATION INC~~
ADDRESS 215 QUAIL CT
~~810 PENDEBETT CT SUITE 102~~
CITY, STATE, ZIP SANTA PAULA, CA 93060
~~WINDSOR, CA 95492~~
PHONE 805-647-5775
~~800-888-4477~~

SIGNATURE OF AUTHORIZED AGENT OR DRIVER | **DATE**
* | 7/11/12

NOTES:

VEHICLE LICENSE NUMBER	TRUCK NUMBER
9024975	703

END DUMP	BOTTOM DUMP	TRANSFER
☒	☐	☐

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐	☐

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT | **DATE**
* | 7-11-12

CUBIC YARDS 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☒ SOIL	X	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		11.10
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615978

☒ Keller Canyon Sanitary Landfill
901 Bailey Road
Pittsburg, CA 94565
Phone (925) 458-9800
Fax (925) 458-9891

☐ Coffin Butte Landfill
28972 Coffin Butte Road
Corvallis, OR 97330
Phone (541) 745-2018
Fax (541) 745-3826

☐ Ox Mountain Sanitary Landfill
12310 San Mateo Road
Half Moon Bay, CA 94019
Phone (650) 726-1819
Fax (650) 726-9183

☐ Newby Island Sanitary Landfill
1601 Dixon Landing Road
Milpitas, CA 95035
Phone (408) 945-2800
Fax (408) 262-2871

☐ Forward Landfill
9999 S. Austin Road
Manteca, CA 95336
Phone (209) 982-4298
Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR
UNION PACIFIC RAILROAD

MAILING ADDRESS
10031 FOOTHILLS BLVD

CITY, STATE, ZIP
ROSEVILLE, CA 95747

PHONE
916.789.5184

CONTACT PERSON
JIM DIBL

SIGNATURE OF AUTHORIZED AGENT / TITLE | DATE
*[signature] Agent for UPRR | 7-11-12

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations. AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL ☐ SLUDGE
☐ CONSTRUCTION ☐ WOOD
☐ DEBRIS ☐ OTHER
☐ SPECIAL WASTE

GENERATING FACILITY
SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.
~~110803~~ 42121118235

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES:

RECEIVING FACILITY

TRANSPORTER
~~DENBESTE TRANSPORTATION INC~~ Perez Trucking

ADDRESS
~~810 DENBESTE CT. SUITE 107~~

CITY, STATE, ZIP
WINDSOR, CA 95492

PHONE
800-838-1477

SIGNATURE OF AUTHORIZED AGENT OR DRIVER | DATE
*Daniel Gromer | 7/11/12

NOTES:

VEHICLE LICENSE NUMBER	TRUCK NUMBER
9D07540	69

END DUMP	BOTTOM DUMP	TRANSFER
☒	☐	☐

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐	☐

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT | DATE
* | 7-11-12

CUBIC YARDS
20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☐ SOIL	—	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615979

☒ **Keller Canyon Sanitary Landfill**
901 Bailey Road
Pittsburg, CA 94565
Phone (925) 458-9800
Fax (925) 458-9891

☐ **Coffin Butte Landfill**
28972 Coffin Butte Road
Corvallis, OR 97330
Phone (541) 745-2018
Fax (541) 745-3826

☒ **Ox Mountain Sanitary Landfill**
12310 San Mateo Road
Half Moon Bay, CA 94019
Phone (650) 726-1819
Fax (650) 726-9183

☐ **Newby Island Sanitary Landfill**
1601 Dixon Landing Road
Milpitas, CA 95035
Phone (408) 945-2800
Fax (408) 262-2871

☐ **Forward Landfill**
9999 S. Austin Road
Manteca, CA 95336
Phone (209) 982-4298
Fax (209) 982-1009

NON-HAZARDOUS WASTE MANIFEST

GENERATOR
UNION PACIFIC RAILROAD

MAILING ADDRESS
10031 FOOTHILLS BLVD

CITY, STATE, ZIP
ROSEVILLE, CA 95747

PHONE
916 789 5184

CONTACT PERSON
JIM DIEL

SIGNATURE OF AUTHORIZED AGENT / TITLE | **DATE**
*

GENERATOR'S CERTIFICATION: I hereby certify that the above named material is not a hazardous waste as defined by 40 CFR Part 261 or title 22 of the California code of regulations, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations; AND, if the waste is a treatment residue of a previously restricted hazardous waste subject to the Land Disposal Restrictions, I certify and warrant that the waste has been treated in accordance with the requirements of 40 CFR Part 268 and is no longer a hazardous waste as defined by 40 CFR Part 261.

WASTE TYPE:
☐ DISPOSAL
☐ CONSTRUCTION
☐ DEBRIS
☐ SPECIAL WASTE
☐ SLUDGE
☐ WOOD
☒ OTHER

GENERATING FACILITY
SMART SITE, 2 FOURTH STREET, SANTA ROSA, CA 95404

WASTE ACCEPTANCE NO.
- 4212 110254

REQUIRED PERSONAL PROTECTIVE EQUIPMENT
☐ GLOVES ☐ GOGGLES ☐ RESPIRATOR ☒ HARD HAT
☐ TY-VEK ☒ SAFETY VEST

SPECIAL HANDLING PROCEDURES:

RECEIVING FACILITY

TRANSPORTER DENREST TRANSPORTATION INC
ADDRESS 810 DENREST CT SUITE 107
CITY, STATE, ZIP WINDSOR, CA 95492
PHONE
SIGNATURE OF AUTHORIZED AGENT OR DRIVER | **DATE**
* Travis C Gault | 7/11/12

NOTES:

VEHICLE LICENSE NUMBER	TRUCK NUMBER
9DG4242	64

END DUMP	BOTTOM DUMP	TRANSFER
☒	☐	☐

ROLL-OFF(S)	FLAT-BED	VAN	DRUMS
☐	☐	☐	☐

I hereby certify that the above named material has been accepted and to the best of my knowledge the foregoing is true and accurate.

REMARKS

FACILITY TICKET NUMBER

SIGNATURE OF AUTHORIZED AGENT | **DATE**
* | 7-11-12

CUBIC YARDS 20

DISPOSAL METHOD: (TO BE COMPLETED BY LANDFILL)

	DISPOSE	OTHER
☒ SOIL	☒	
☐ CONSTRUCTION DEBRIS		
☐ NON-FRIABLE ASBESTOS		
☐ WOOD		
☐ ASH		
☐ SPECIAL OTHER		

SCHEDULING MUST BE MADE PRIOR TO 3:00 P.M. THE DAY PRIOR TO EXPECTED ARRIVAL • ANY UNSCHEDULED LOADS ARE SUBJECT TO REFUSAL UPON ARRIVAL. ONGOING DAILY DELIVERIES MUST BE SCHEDULED WITH THE LANDFILL THE DAY BEFORE.

TRANSPORTER COPY

MANIFEST # 615980

UST Removal Report

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California
North Coast Regional Water Quality Control Board
Case No. 1TSR196

Antea Group Project No. UPR8248
January 24, 2012

Prepared for:
Joan Fleck
North Coast Regional Water Quality Control Board
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

Prepared by:
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312 Piercy Road
San Jose, California 95138
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UST Removal Report

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board Case No. 1TSR196

1.0 INTRODUCTION

Antea™Group has prepared this *UST Removal Report* for the North Coast Regional Water Quality Control Board (RWQCB) in response to their February 4 and July 22, 2011 agency letters (**Appendix A**). The purpose of this report is to summarize UST removal and excavation field activities conducted at the site.

1.1 Site Description

Currently, the site is vacant with no operations. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the 3 West Third Street and 60 West Sixth Street Warehouses, to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties (**Figure 1**).

1.2 Site History

This site has remained vacant and generally unused since the late 1960's. Consultants have conducted environmental investigation and remediation efforts at the site since 1987. Former operations at the site included the use of aboveground storage tanks (ASTs) and underground storage tanks (USTs), the main line track system that occupied the eastern side of the property, several associated railroad spurs and siding, a turntable, warehouses, and freight houses. A Sanborn Fire Insurance map dated 1885 indicates the Santa Rosa Woolen Mills was located in the northwestern portion of the site until approximately 1906 (EBA, 2009a). **Appendix B** includes a history of environmental investigations and remedial activities conducted at the site. **Figure 2** shows the locations of historic borings and wells at the site.

1.3 Geologic and Hydrogeologic Setting

1.3.1 Regional Geology

The site is centrally located within the Santa Rosa Plain, which is part of the Coast Range Geomorphic Province of northern California. The Coast Range Geomorphic Province is characterized as a series of northwest trending elongated ridges and valleys that are a result of folding and faulting. The Santa Rosa Plain consists of alluvial fan deposits of Pleistocene and Holocene age. The alluvial fan deposits form a nearly continuous blanket over the Santa Rosa Plain and consist of poorly sorted coarse sand and gravel, moderately sorted fine sand and silt, and silty clay. The region has been mapped as having basement materials that underlie the alluvial fan deposits. The

basement materials consist of marine sedimentary rocks of the Miocene Age Wilson Grove Formation. Portions of the Wilson Grove Formation are overlain by younger continental sedimentary rocks of the Pliocene-Pleistocene Age Glen Ellen Formation (EBA, 2008b).

1.3.2 Site Geology and Hydrogeology

The geology of the project site is characterized by shallow rocky fill in the upper one to two feet below ground surface (bgs) that is underlain by sandy silt and clayey sediments containing varying amounts of angular to sub-rounded gravel. These finer-grained sediments extend to approximately 20 feet bgs, and are underlain by a laterally continuous sandy coarse-grained unit extending to at least 25 feet bgs, the maximum depth explored at the project site to date (EBA, 2008b).

The hydrogeology of the project site is likely controlled by gradational lenses of sediments separated by clayey layers. A thin laterally extensive sandy unit overlays a similarly laterally extensive clayey bed between 13 and 15 feet bgs. The more impervious clay units likely act as confining layers and inhibit the downward vertical migration of fluids. Based on this observation, the resulting perched groundwater in the upper permeable sand unit at 15 feet bgs has historically been independently sampled from the deeper water-bearing zone that is present at approximately 20 to 25 feet bgs (EBA, 2008). The predominant groundwater flow direction is approximately west-southwest across the project site towards Santa Rosa Creek (approximately 160 feet beyond the western side of the property). Therefore, the eastern portion of the project site is considered up gradient relative to the western portion (EBA, 2008b).

2.0 UST REMOVAL AND EXCAVATION

2.1 Scope of Work

In their agency letters (**Appendix A**), the RWQCB directed UPRR to remove the oil UST under permit from the Santa Rosa Fire Department (SRFD). The RWQCB also stated "If evidence of a discharge is revealed at the time of tank removal, contaminated soil must be removed from this area and depending upon the degree of the discharge, the impact to water quality may need to be investigated and remediated".

During the initial day-lighting activities of the oil UST, an additional 500-gallon UST containing oil was discovered adjacent and west of the known tank. UPRR's direct-bill contractor United Pumping Service, Inc. (UPS) evacuated, cleaned, and removed the second UST in conjunction with the known UST. **Section 2.4** contains details on the removal of the second UST.

2.2 Pre-Field Activities

Prior to initiation of field activities, Antea Group produced a Health and Safety Plan (HASP) in accordance with Title 8, Section 5192 of the California Code of Regulations. UPS obtained a UST removal permit for the original oil

UST prior to field activities. UPS obtained the UST removal permit for the second unknown UST during field activities. **Appendix C** includes copies of both UST removal permits.

2.3 Utility Clearance

UPS contacted Underground Service Alert (USA) North to mark the site for subsurface utilities. Additionally, Antea Group and UPS verified the locations of all previously known utilities (sewer and water) prior to subsurface work. **Figure 2** depicts the locations of these utilities.

2.4 UST Removals and Excavation

On November 1, 2011, Antea Group and UPS arrived on-site and located the single-walled steel 550-gallon oil UST. The UST was located approximately 55 feet east of the center on the adjoining warehouse building (60 West Sixth Street). While day lighting the original known UST (UST No. 1), UPS and Antea Group discovered an additional 500-gallon single-walled steel UST (UST No. 2) located approximately two feet west of the original UST. **Figure 3A** depicts the configuration of the USTs. UST No. 1 was empty, but UST No. 2 contained what appeared to be oil. UPS emptied UST No. 2 using a vacuum truck and collected a sample of the contents. Laboratory analytical reports (**Appendix D**) confirmed the contents of UST No. 2 to be primarily motor oil range hydrocarbons. Upon completion of evacuation activities, the USTs were fully day lighted, cut open and cleaned, and prepped with chain harnesses for removal.

UPS removed both USTs on November 2, 2011 under the direct observation of the Santa Rosa Fire Department (SRFD) and RWQCB. A Certified Industrial Hygienist (CIH) certified the tanks were clean, and UPS placed approximately 25 pounds of dry ice in each tank. Antea Group observed several 0.25-inch holes and numerous "pin-sized" holes on the northern end of UST No. 1 upon removal. Antea Group observed UST No. 2 to be in good condition, and did not observe any holes in the tank. UPS and Antea Group did not observe any markings or placards which indicated the tanks' age or origin. After removal of the tank, Antea Group observed visual soil staining in the bottom of the tank pit at approximately 4 feet bgs, particularly near the northern end of the USTs. UPS deepened the excavation to approximately 5 feet bgs. As directed by the SRFD, Antea Group then collected soil samples beneath the northern and southern ends of each tank, and from each sidewall. **Figure 3A** depicts the excavation limits and soil sampling locations on November 2, 2011. **Section 2.5** includes details regarding the soil sampling procedures and analyses.

UPS, under the direction of Antea Group, performed additional soil excavation on November 3, 2011 based on visual observation of stained soil. At approximately 12 feet bgs, the excavation activities appeared complete due to the lack of visual staining on the sidewalls and excavation bottom. Antea Group directed UPS to lower the excavation an additional 1-foot bgs to ensure the continuation of "clean" soil. At approximately 13 feet bgs, Antea Group observed what appeared to be heavily impacted soils judging by discoloration and a strong hydrocarbon odor. Antea Group directed UPS to begin removing the impacted soil by excavating deeper. At approximately 15

feet bgs, UPS encountered what appeared to be the capillary fringe, and was directed by Antea Group to stop excavating further. Soils encountered during excavation were primarily silty sand above the capillary fringe, and clayey sand and clay at the capillary fringe.

Upon completion of excavation activities, it did not appear the northern extent and vertical extent of impacted soil had been defined. At the conclusion of excavation activities, approximately 1 foot of groundwater was present in the bottom of the excavation. Antea Group observed the groundwater to have separate phase hydrocarbons (SPH) on the surface. Under the direction of SRFD and RWQCB, Antea Group collected a sample of the groundwater. **Section 2.6** includes details regarding groundwater sampling procedures and analyses. Antea Group also collected soil samples from each sidewall at approximately the halfway depth of the wall and at the soil-groundwater interface. **Figure 3B** depicts the final excavation limits and soil sampling locations on November 3, 2011.

On November 4, 2011, Antea Group and UPS returned to the site. Antea Group did not observe a significant rise in groundwater elevation within the excavation. UPS removed approximately 500 gallons of groundwater and SPH from the excavation using a vacuum truck. UPS then backfilled the excavation using clean large cobbles to stabilize to bottom portion of the excavation. The remaining portions of the excavation were backfilled with pea gravel and Class II backfill. On November 16, 2011, UPS removed the stockpiles of impacted soil from the site. **Section 2.7** includes details regarding the soil stockpiles, removal, and disposal.

2.5 Soil Sampling

As stated in **Section 2.4**, Antea Group collected soil samples from beneath each end of the tanks and from the sidewalls of the excavation. In accordance with the SRFD UST removal permits, Antea Group collected the samples using the United States Environmental Protection Agency (EPA) method 5035 with Encore® sampling devices. Antea Group also collected soil in a 16-ounce glass jar at each location for the analysis of metals. Soil samples retained for laboratory analysis were labeled, placed on ice, and recorded on the chain of custody form. Antea Group submitted all soil samples to Test America, Inc. (Test America), a California-certified analytical laboratory (No. 2496). The laboratory analyzed the tank and sidewall samples collected on November 2, 2011 for the following:

- Gasoline Range Organics (GRO), carbon chain range C_5 – C_{12}, by California LUFT method;
- Diesel Range Organics (DRO), carbon chain range C_{10} – C_{28}, and Motor Oil Range Organics (MORO), carbon chain range C_{24} – C_{36}, by EPA Method 8015B with Silica Gel Cleanup;
- Volatile Organic Compounds (VOCs) by EPA Method 8260B;
- Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270C SIM; and

- Total metals cadmium, chromium, nickel, lead, and zinc by EPA Method 6010B.

The laboratory also analyzed samples collected on November 3, 2011 for the following:

- Total metals antimony, arsenic, barium, beryllium, copper, molybdenum, selenium, silver, and thallium by EPA Method 6010B; and
- Total mercury by EPA Method 7470A.

Antea Group also collected composite soil samples from the excavated soil stockpiles for analysis of the same constituents as the tanks and sidewall samples noted above. Based on the initial analytical results for total chromium, the laboratory analyzed two of these composite samples for Soluble Threshold Limit Concentrations (STLC) for chromium. **Appendix D** contains the certified laboratory analytical reports. **Table 1** summarizes the laboratory analytical results. Antea Group further discusses these results in **Section 2.8**.

2.6 Grab Groundwater Sampling

Approximately 1 foot of groundwater was present in the bottom of the excavation following soil removal activities. Under the direction of the RWQCB, Antea Group collected a grab groundwater sample from the excavation by lowering a disposable polyethylene bailer from the ground surface to the groundwater. Antea Group then decanted the groundwater into laboratory-supplied sampling containers. The grab groundwater sample was labeled, placed on ice, and recorded on a chain of custody form. Antea Group submitted the sample to Test America, a California-certified analytical laboratory (No. 2496). The laboratory analyzed the grab groundwater sample collected on November 3, 2011 for the following:

- GRO, carbon chain range C_5 – C_{12}, by California LUFT method;
- DRO, carbon chain range C_{10} – C_{28}, and MORO, carbon chain range C_{24} – C_{36}, by EPA Method 8015B with Silica Gel Cleanup;
- VOCs by EPA Method 8260B;
- Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270C;
- PAHs by EPA Method 8270C SIM;
- Total metals cadmium, chromium, nickel, lead, zinc, antimony, arsenic, barium, beryllium, copper, molybdenum, selenium, silver, and thallium by EPA Method 6010B; and
- Dissolved metals cadmium, chromium, nickel, lead, and zinc by EPA Method 6010B.

Appendix D contains the certified laboratory analytical reports. **Table 2** summarizes the laboratory analytical results. Antea Group further discusses these results in **Section 2.8**.

2.7 Disposal of Investigation Derived Waste

UPS pumped approximately 120 gallons of oil from the 500-gallon tank on November 1, 2011, and an additional 750 gallons of oily water were generated during tank cleaning. Approximately 500 gallons of oily groundwater was pumped from the excavation cavity on November 3, 2011. All liquid waste shipped as Non-RCRA Hazardous Waste to Demenno Kerdoon in Compton, California.

UPS stockpiled excavated soil on plastic sheeting adjacent, covered the soil stockpiles with plastic sheeting secured by sandbags, and placed straw waddles around the based of the stockpiles. The stockpiles were temporarily stored on-site, pending receipt of analytical results and waste characterization. UPS then transported the stockpiled soil off-site on November 16, 2011. A total of 213.03 tons of waste soil were generated during excavation activities. **Appendix D** includes the certified laboratory analytical reports for the waste characterization samples. **Table 1** includes the waste sampling analytical results. **Appendix E** includes copies of waste manifests. Additionally, the two USTs were transported to West Coast Metals in Windsor, CA for destruction/ recycling. The certificate of tank destruction/recycling is also included in **Appendix E**.

2.8 Analytical Results and Interpretation

Antea Group collected 16 soil samples and one grab groundwater sample from within the excavation. Additionally, Antea Group collected three composite soil samples from the stockpiles for waste characterization and disposal purposes. **Figures 3A and 3B** depict the locations of the excavation soil samples. Conestoga-Rovers and Associates (CRA) performed a complete data quality assessment and validation of the laboratory reports for soil and groundwater samples. **Appendix D** includes the certified laboratory analytical reports, CRA's lab report validation and COCs. **Tables 1 and 2** summarize the soil and groundwater sample analytical results from the excavation activities.

2.8.1 Soil Sampling Analytical Results and Interpretation

The analytical results from soil samples collected on November 2 and 3, 2011 are summarized in **Table 1.**

Samples collected on November 2, 2011 were from depths of 5-5.5 feet bgs. The soil sample analytical data from November 2, 2011 indicate the presence of impacted soil beneath the northern end of UST No. 1 and both ends of UST No. 2. Soil analytical data from the northern and western sidewalls also indicated the presence of impacted soil. Data shows that sample T2N, collected from 5 feet bgs, contained the maximum concentration of MORO (1,600 milligrams per kilogram [mg/kg]). In the shallow soil samples collected on November 2, 2011, DRO was detected at a maximum concentration of 300 mg/kg. GRO, VOCs, and PAHs were not reported above the laboratory reporting limit (LRL) in any of these samples. The locations of these sampling points were subsequently excavated on November 3, 2011.

The samples collected on November 3, 2011 (after additional excavation activities) did not report concentrations of GRO and MORO above the LRL. DRO was reported in several of these samples, ranging from 1.0 mg/kg in sample EWA (collected from 7 feet bgs) to 560 mg/kg (sample NWB, collected from approximately 15 feet bgs). Sample NWB was the only sample collected following further excavation that exceeded the San Francisco Bay RWQCB DRO Environmental Screening Levels (ESL) of 83 mg/kg where groundwater is a current or potential source of drinking water. The only VOC reported above the LRL was tetrachloroethene (0.0059 mg/kg in SWB at 15 feet bgs). This reported concentration did not exceed the ESL of 0.37 mg/kg. PAHs anthracene (0.015 mg/kg), chrysene (0.012 mg/kg to 0.023 mg/kg), fluorene (0.0054 mg/kg), phenanthrene (0.019 mg/kg to 0.023 mg/kg), and pyrene (0.0073 mg/kg to 0.021 mg/kg) were reported above the LRLs in the samples collected from NWB and SWB at 15 feet bgs. Naphthalene was reported in sample WWB at a concentration of 0.0052 mg/kg. The reported concentrations of PAHs did not exceed any of their respective ESLs for shallow or deep soil with residential land use. Only the reported concentrations of metals arsenic (4.0 mg/kg to 6.2 mg/kg) and vanadium (37 mg/kg to 62 mg/kg) exceeded ESLs (**Table 1**). However, the USGS reports background concentrations of arsenic and vanadium in the site vicinity at approximately 4.1 mg/kg and 70 mg/kg which are consistent with reported concentrations onsite (USGS 1984).

Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears any release from the removed USTs only affected the immediate soils surrounding the USTs. In general, the soil samples collected on November 3, 2011 after additional excavation reported concentrations below the LRLs or significantly less than those reported from the November 2, 2011 samples (**Table 1**). However, there were two exceptions to this trend: sidewall samples NWB and SWB collected at 15 feet bgs. These samples reported VOCs and PAHs not reported in any other soil samples collected during the investigation. Since these samples were collected at the soil-water interface, Antea Group believes soil impact observed at these depths is due to impacted groundwater originating from outside of the excavation. This conclusion is supported by the fact that the groundwater sample collected from the excavation reported these PAHs and VOCs above the LRLs (**Section 2.8.2**). Laboratory data for the contents of UST No. 1 (removed October 2008) could not be located. Although the contents of UST No. 2 were not analyzed for PAH's, data shows that the contents of UST No. 2 did not contain VOCs.

2.8.2 Grab Groundwater Analytical Results and Interpretation

Table 2 summarizes the analytical results of the one grab groundwater sample collected from the excavation. As stated in **Section 2.4**, Antea Group observed separate phase hydrocarbons on the water encountered within the excavation. Laboratory analytical results show the groundwater is impacted by MORO (6,700 micrograms per liter [µg/L]), DRO (12,000 µg/L), acetone (50 µg/L), tetrachloroethene (1.2 µg/L), phenathrene (1.3 µg/L), chrysene (0.41 µg/L), pyrene (0.32 µg/L), and dissolved metals chromium (12 µg/L) and nickel (27 µg/L). Antea Group compared the reported concentrations of petroleum hydrocarbons, VOCs, and SVOCs to the ESLs for groundwater that is a current or potential source of drinking water:

Constituent	Reported Concentration (ug/L)	ESL (ug/L)
MORO	6700	100
DRO	12000	100
Acetone	50	1500
Tetrachloroethene	1.2	5.0
Phenathrene	1.3	4.6
Chrysene	0.41	0.35
Pyrene	0.32	2.0
Dissolved Chromium	12	50
Dissolved Nickel	27	8.2

As noted above, the reported concentration of MORO, DRO, chrysene, and dissolved nickel exceeded their respective ESLs.

Data from the initial soil sampling conducted on November 2, 2011 (**Section 2.8.1** and **Table 1**) did not report concentrations of VOCs or PAHs above the reporting limits. Two soil samples from the November 3, 2011 sampling event did contain reported concentrations of VOCs and PAHs, but these samples were collected from the capillary fringe and the reported concentrations may be attributed to groundwater trapped within the pore space of the soil during laboratory analysis (**Section 2.8.1**). Soils exhibiting staining were removed from excavation prior to additional excavation into the capillary fringe, where the deeper samples were collected. Following this additional excavation, MORO was not detected soil samples, and the highest DRO concentration was detected in NWB (at 15 feet bgs). All other post-excavation samples with DRO detections were below the ESL. Therefore, groundwater affected by VOCs and PAHs appears to be the result of a release from outside of the excavation area (**Appendix B**). Because metals are naturally occurring and/or may have been a product of a previous release, Antea Group cannot determine at this time if the reported concentrations of dissolved metals are due to the removed USTs.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based on information contained in this report, Antea Group makes the following conclusions:

- UPS and Antea Group removed two 500-gallon USTs from the site. UPS evacuated and disposed of the contents of UST No. 2 (oil).
- UPS excavated and disposed of approximately 213.03 tons of impacted soil surrounding the USTs, and pumped approximately 500 gallons of oil impacted groundwater from the excavation.
- Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears that a release from the removed USTs only affected the immediate soils surrounding the USTs. Sidewall samples NWB and SWB collected at 15 feet bgs reported concentrations of VOCs and PAHs not found in any other samples collected. However, from the available data, soil VOCs and PAHs impacts appear to be the result of impacted groundwater within the capillary fringe, originating from outside of the excavated area, and not due to a release from the USTs.
- Metal concentrations in soil samples appear to be consistent with background levels.
- Laboratory analytical reports indicate groundwater observed in the excavation is impacted by petroleum hydrocarbons, VOCs, and PAHs.

4.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



Lia N. Holden
Senior Project Manager
California Registered Professional Geologist No. 8584

cc: GeoTracker (upload)
Marita Petersen, Fire Inspector I, City of Santa Rosa Fire Department, 2373 Cercadian Way, Santa Rosa, CA, 95407

5.0 REFERENCES

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Figures

Figure 1 Site Location Map
Figure 2 Site Plan
Figure 3A November 2, 2011 Sampling Map
Figure 3B November 3, 2011 Sampling Map





North

0 1000 2000 FT

SCALE

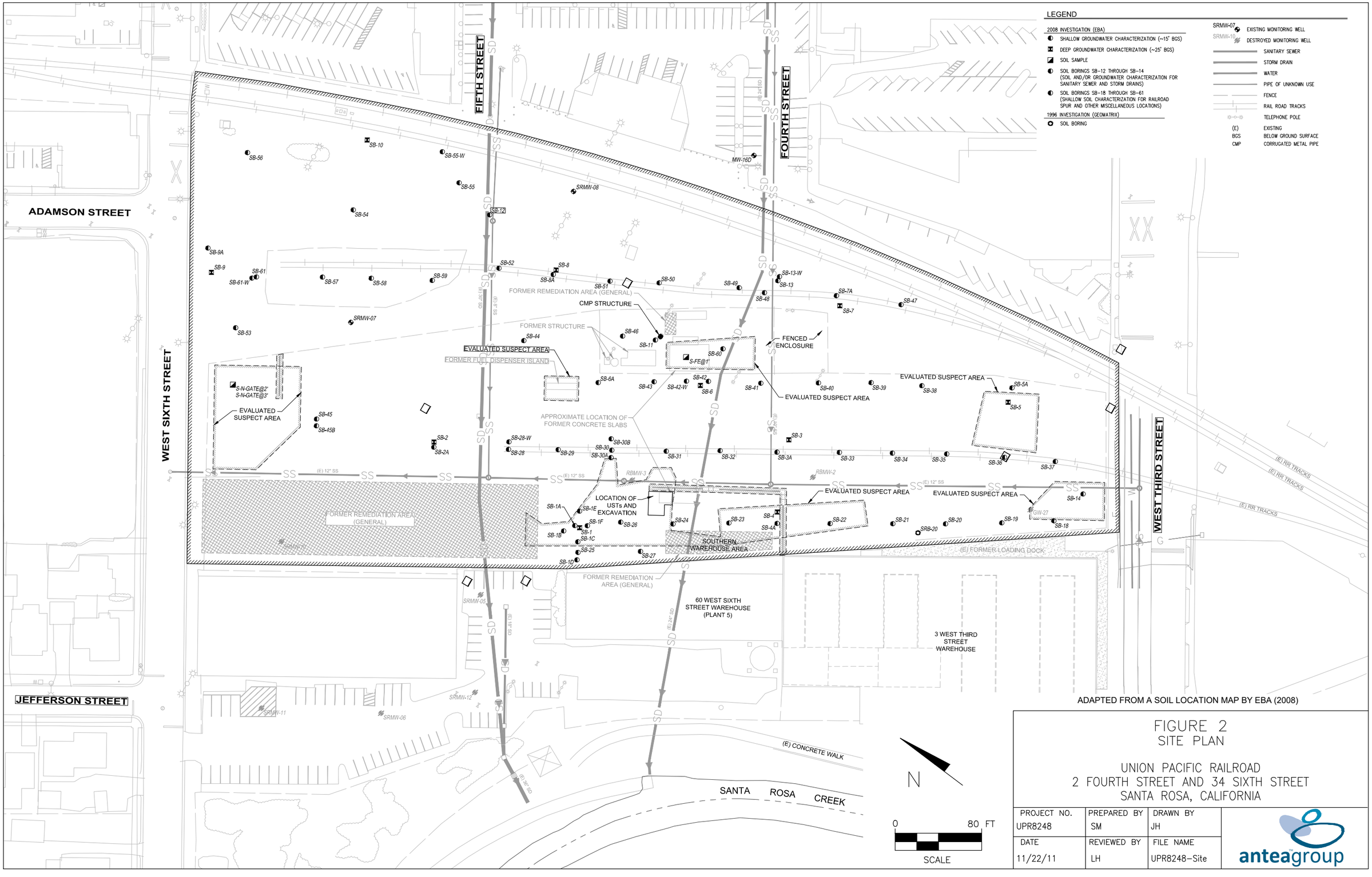
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup

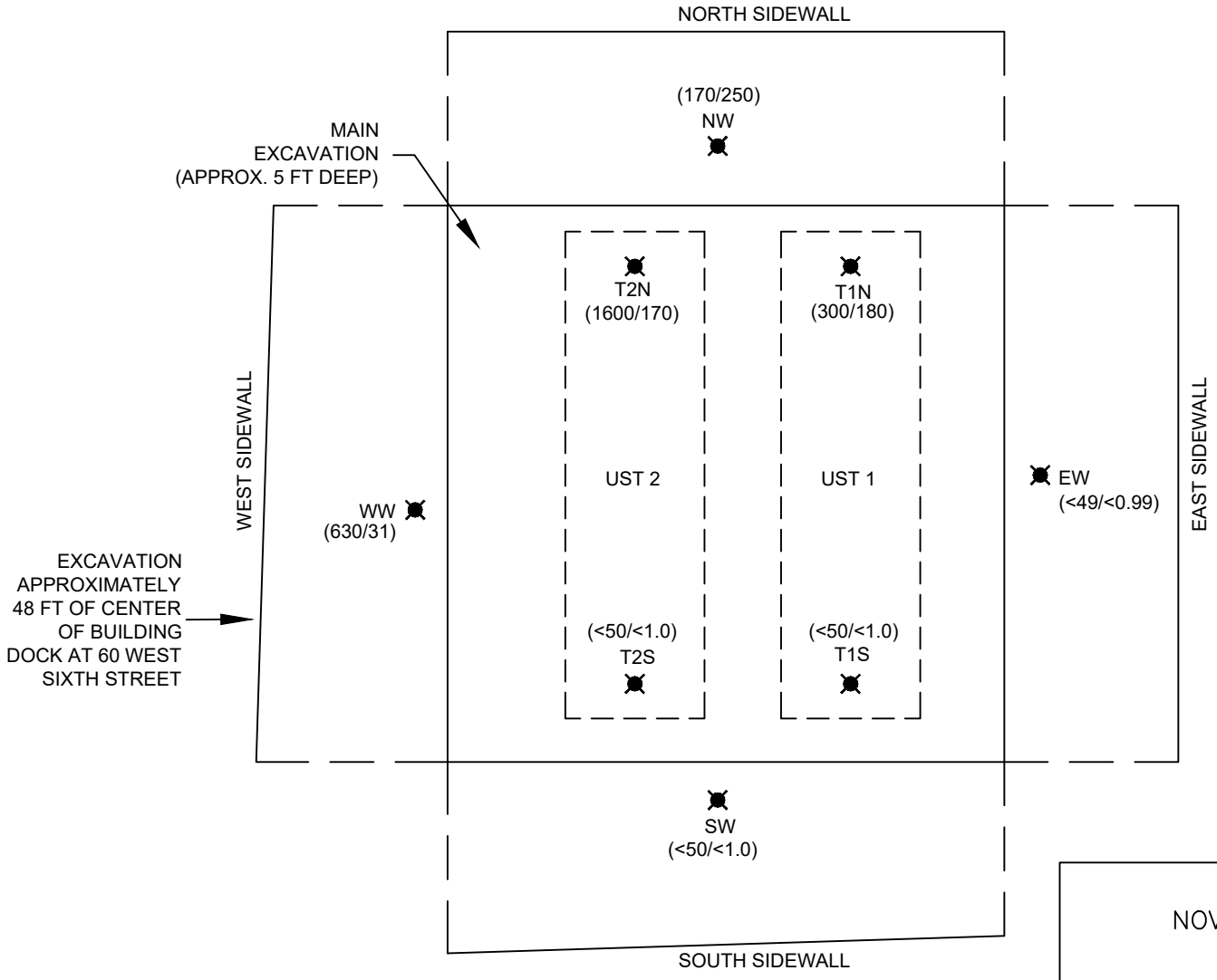


ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
UPR8248	SM	JH	
DATE	REVIEWED BY	FILE NAME	
11/22/11	LH	UPR8248-Site	anteagroup



LEGEND

SOIL SAMPLE LOCATION

(<49/<0.99) MORO / DRO CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/kg)

NOTE: TANK SIZES NOT TO SCALE

MORO = MOTOR OIL RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
<1.0 = LESS THAN LABORATORY INDICATED REPORTING LIMITS

N

0 5 FT

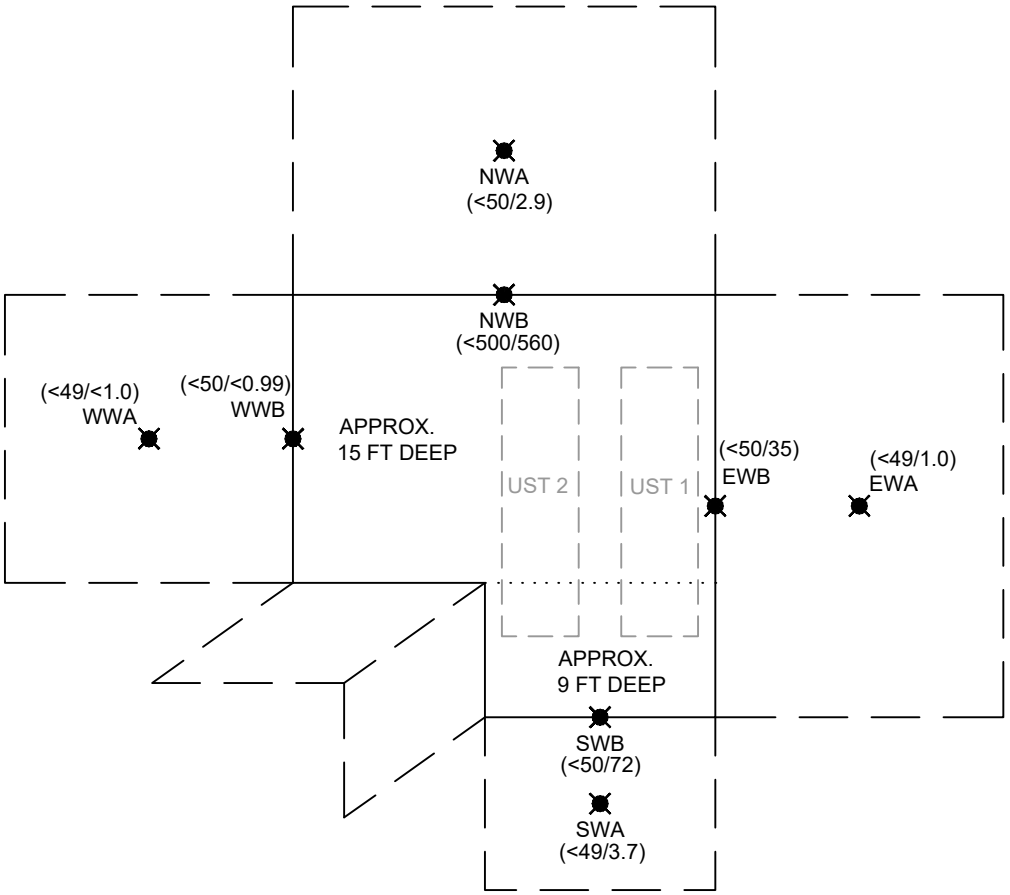
APPROX. SCALE

FIGURE 3A
NOVEMBER 2, 2011 SAMPLING MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-Excav

anteagroup



LEGEND

- SOIL SAMPLE LOCATION
- (<49/1.0) MORO / DRO CONCENTRATION IN MILLIGRAMS PER KILOGRAM (mg/kg)

NOTE: TANK SIZES NOT TO SCALE

MORO = MOTOR OIL RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
<1.0 = LESS THAN LABORATORY INDICATED REPORTING LIMITS

N

0 10 FT

APPROX. SCALE

FIGURE 3B
NOVEMBER 3, 2011 SAMPLING MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-Excav

anteagroup

Tables

Table 1 Soil Sampling Analytical Data
Table 2 Groundwater Sampling Analytical Data

Table 1
Soil Sampling Analytical Data
Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

Field Point	Sample Name	Sample Date	Sample Time	Sample Depth (feet bgs)	MORO[1] (mg/kg)	DRO[1] (mg/Kg)	GRO[2] (mg/Kg)	VOCs[2] (mg/kg)	PAHs[3] (mg/kg)	Total Cadmium[4] (mg/kg)	Total Chromium[4] (mg/kg)	STLC Chromium[4] (mg/L)	Total Nickel[4] (mg/kg)	Total Lead[4] (mg/kg)	Total Zinc[4] (mg/kg)	Total Mercury[5] (mg/kg)	Other Total Metals[4] (mg/kg)	Comments
Excavation Samples																		
T1N	SO-2344-T1N(5)-021111	11/2/2011	13:35	5.0	**180**	**300**	<0.36	All <LRL	All <0.025	<0.48	**98**	--	**140**	**6.3**	**180**	--	--	Tank #1
T1S	SO-2344-T1S(5.5)-021111	11/2/2011	13:45	5.5	<50	<1.0	<0.28	All <LRL	All <0.005	<0.46	**110**	--	**150**	**7.0**	**74**	--	--	Tank #1
T2N	SO-2344-T2N(5)-021111	11/2/2011	13:55	5.0	**1600**	**170**	<0.26	All <LRL	All <0.050	<0.48	**90**	--	**130**	**7.7**	**52**	--	--	Tank #2
T2S	SO-2344-T2S(5.5)-021111	11/2/2011	14:05	5.5	**85**	**76**	<0.24	All <LRL	All <0.005	<0.48	**92**	--	**140**	**7.1**	**55**	--	--	Tank #2
NW	SO-2344-NW(5)-021111	11/2/2011	14:15	5.0	**170**	**250**	<0.25	All <LRL	All <0.025	<0.47	**91**	--	**140**	**6.3**	**57**	--	--	
WW	SO-2344-WW(5)-021111	11/2/2011	14:20	5.0	**630**	**31**	<0.28	All <LRL	All <0.25	<0.49	**80**	--	**140**	**5.3**	**47**	--	--	
EW	SO-2344-EW(5)-021111	11/2/2011	14:35	5.0	<49	<0.99	<0.26	All <LRL	All <0.005	<0.48	**88**	--	**140**	**5.4**	**54**	--	--	
SW	SO-2344-SW(5.5)-021111	11/2/2011	14:45	5.5	<50	<1.0	<0.26	All <LRL	All <0.005	<0.49	**87**	--	**140**	**6.8**	**64**	--	--	
NWA	SO-2344-NWA(8)-031111	11/3/2011	15:15	8.0	<50	**2.9**	<0.26	All <LRL	All <0.0099	<0.48	**85**	--	**150**	**19**	**53**	**0.061**	**Barium (180), Vanadium (54), Arsenic (5.4), Copper (28), and Cobalt (18)**	
NWB	SO-2344-NWB(15)-031111	11/3/2011	15:05	15.0	<500	**560**	<0.36	All <LRL	**Chrysene (0.023), Fluorene (0.0054), Phenanthrene(0.019), and Pyrene (0.021)**	<0.50	**93**	--	**150**	**14**	**56**	**0.070**	**Barium (190), Vanadium (56), Arsenic (6.0), Copper (32), and Cobalt (20)**	Collected at soil-groundwater interface
WWA	SO-2344-WWA(7)-031111	11/3/2011	14:40	7.0	<49	<0.99	<0.28	All <LRL	All <0.0049	<0.50	**89**	--	**140**	**5.8**	**50**	**0.051**	**Barium (170), Vanadium (59), Arsenic (6.2), Copper (28), and Cobalt (18)**	
WWB	SO-2344-WWB(15)-031111	11/3/2011	14:30	15.0	<50	<1.0	<0.25	All <LRL	**Napthalene (0.0052)**	<0.49	**100**	--	**100**	**6.3**	**44**	**0.038**	**Barium (140), Vanadium (48), Arsenic (4.0), Copper (20), and Cobalt (12)**	Collected at soil-groundwater interface
EWA	SO-2344-EWA(7)-031111	11/3/2011	15:35	7.0	<49	**1.0**	<0.25	All <LRL	All <0.0050	<0.48	**110**	--	**150**	**6.6**	**52**	**0.064**	**Barium (170), Vanadium (58), Arsenic (5.3), Copper (28), and Cobalt (18)**	
EWB	SO-2344-EWB(15)-031111	11/3/2011	14:20	15.0	<50	**35**	<0.26	All <LRL	All <0.0050	<0.49	**74**	--	**150**	**6.3**	**43**	**0.053**	**Barium (200), Vanadium (44), Arsenic (4.0), Copper (23), and Cobalt (29)**	Collected at soil-groundwater interface
SWA	SO-2344-SWA(7)-031111	11/3/2011	15:35	7.0	<49	**3.7**	<0.25	All <LRL	All <0.0050	<0.49	**98**	--	**150**	**12**	**63**	**0.089**	**Barium (190), Vanadium (62), Arsenic (5.9), Copper (32), and Cobalt (22)**	
SWB	SO-2344-SWB(15)-031111	11/3/2011	14:50	15.0	<50	**72**	<0.22	**Tetrachloroethene (0.0059)**	**Anthracene (0.014), Chrysene (0.012), Phenanthrene (0.023), and Pyrene (0.0073)**	<0.48	**84**	--	**91**	**5.2**	**39**	**0.032**	**Barium (160), Vanadium (37), Copper (21), and Cobalt (8.5)**	Collected at soil-groundwater interface
Waste Composite Samples																		
WestSP	SO-2344-WestSP(Comp)-021111	11/2/2011	14:50	--	**690**	**800**	<0.25	All <LRL	--	<0.50	**83**	--	**120**	**40**	**86**	--	--	
Waste1	SO-2344-Waste1(Comp)-031111	11/3/2011	16:00	--	<49	**4.9**	<0.24	All <LRL	All <0.0050	<0.45	**90**	<0.25	**130**	**12**	**50**	**0.052**	**Antimony (15), Barium (180), Vanadium (55), Arsenic (5.5), Copper (34), and Cobalt (17)**	
Waste2	SO-2344-Waste2(Comp)-031111	11/3/2011	16:00	--	**94**	**110**	<0.25	All <LRL	All <0.0049	<0.48	**92**	<0.25	**140**	**10**	**58**	**0.077**	**Barium (200), Vanadium (56), Arsenic (5.8), Copper (30), and Cobalt (19)**	
Residential ESL (shallow/deep)	--	--	--	--	370/5000	83	83	Tetrachloroethene (0.37/0.7)	Anthracene (2.8*), Chrysene (23*), Phenanthrene (11*), and Pyrene (85*), Fluorene (8.9*), Napthalene (1.3/3.4)	1.7/390	1000/2500	NA	150/260	200/750	600/2500	1.3/580	Antimony (6.3/310), Barium (750/2,500), Vanadium (16/770), Arsenic (0.39/150), Copper (230/2500), and Cobalt (400/940)	
Commercial/Ind ESL (shallow/deep)	--	--	--	--	2500/5000	83	83	Tetrachloroethene (0.7*)	Anthracene (2.8*), Chrysene (23*), Phenanthrene (11*), and Pyrene (85*), Fluorene (8.9*), Napthalene (2.8/3.4)	7.4/390	2500/5000	NA	150/260	750/750	600/2500	10/580	Antimony (40/310), Barium (1,500/2,600), Vanadium (200/770), Arsenic (1.6/150), Copper (230/5000), and Cobalt (400/940)	

Notes:
< - Denotes less than the Laboratory Reporting Limit (LRL)
mg/kg - milligrams per kilogram
mg/L - Millilgrams per Liter
bgs - Below Ground Surface
Bold - Reported concentration exceeded the LRL
EPA - Environmnetal; Protection Agency
ESL - San Francisco Bay RWQCB Environmental Screening Levels
* - ESL is the same for shallow and deep soils

Analytical Notes
1 - Analyzed by EPA Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8260B and/or CA LUFT Method
3 - Analyzed by EPA Method 8270C SIM
4 - Analyzed by EPA Method 6010
5 - Analyzed by EPA Method 7471A

Analyte Definitions:
MORO - Motor Oil Range Organics
DRO - Diesel range organics
GRO - Gasoline range organics
VOCs - Volatile Organic Compounds
SVOCs - Semi-Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons

Table 2
Groundwater Sampling Analytical Data
Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

Field Point	Sample Name	Sample Date	Sample Time	Sample Depth (feet bgs)	MORO[1] (ug/L)	DRO[1] (ug/L)	GRO[2] (ug/L)	VOCs[2] (ug/L)	SVOCs[3] (ug/L)	PAHs[4] (ug/L)	Dissolved Metals[5] (ug/L)	Total Metals[5] (ug/L)	Comments
Water1	WG-2344-Water-031111	11/3/2011	14:00	Approx 15 feet	**6700**	**12000**	<50	**Acetone (50) and Tetrachloethene (1.2)**	All <LRL	**Phenanthrene (1.3), Chrysene (0.41), and Pyrene (0.32)**	**Chromium (12) and Nickel(27)**	**Barium (250), Chromium (80), Cobalt (11), Copper (33), Lead (25), Nickel (110), Vanadium (53), and Zinc (56)**	Sample collected from excavation
Residential	--	--	--	--	100	100	100	Acetone (1,500) and Tetrachloethene (5)	NA	Phenanthrene (4.6), Chrysene (0.35), and Pyrene (2.0)	Chromium (50) and Nickel(8.2)	Barium (1,000), Chromium (50), Cobalt (3), Copper (3.1), Lead (2.5), Nickel (8.2), Vanadium (15), and Zinc (81)	
Commercial/Ind	--	--	--	--	100	100	100	Acetone (1500) and Tetrachloethene (5)	NA	Phenanthrene (4.6), Chrysene (0.35), and Pyrene (2.0)	Chromium (50) and Nickel(8.2)	Barium (1,000), Chromium (50), Cobalt (3), Copper (3.1), Lead (2.5), Nickel (8.2), Vanadium (15), and Zinc (81)	

Notes:
< - Denotes less than the Laboratory Reporting Limit (LRL)
ug/L - Micrograms per Liter
bgs - Below Ground Surface
Bold - Reported concentration exceeded the LRL
EPA - Environmnetal; Protection Agency

Analytical Notes
1 - Analyzed by EPA Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8260B and/or CA LUFT Method
3 - Analyzed by EPA Method 8270C
4 - Analyzed by EPA Method 8270C SIM
5 - Analyzed by EPA Method 6010

Analyte Definitions:
MORO - Motor Oil Range Organics
DRO - Diesel range organics
GRO - Gasoline range organics
VOCs - Volatile Organic Compounds
SVOCs - Semi-Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons

Appendix A

RWQCB Agency Letters dated February 4 and July 22, 2011

California Regional Water Quality Control Board
North Coast Region
Geoffrey M. Hales, Chairman

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown, Jr.,
Governor

February 4, 2011

Mr. Mike Grant
Union Pacific Railroad
Manager Environmental Site Remediation
1408 Middle Harbor Road
Oakland, CA 94607

Sonoma Marin Area Rail Transit
c/o Mr. John Nemeth
750 Lindaro Street, Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: Case Status
File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case No. 1TSR196

On January 16, 2009, the Southern Pacific Transportation Company case was reopened as a result of new discoveries reported in the November 2008 ***Report of Findings Sonoma-Marin Area Rail Transit Property*** and the January 7, 2009 ***Additional Information*** document prepared by EBA Engineering on behalf of Railroad Square Associates, LLC. The discoveries included an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and shallow soil impacts.

Following receipt of this information, Regional Water Board staff requested that Union Pacific Railroad (UPR) and Sonoma Marin Area Rail Transit (SMART) remove the UST and submit two plans; a soil groundwater management plan to address shallow soil impacts and a work plan to address soil and groundwater impacts in the SB-1 area. The Railroad Square Associates LLC responded with the submittal of the ***Soil and Groundwater Management Plan*** and the ***Soil Excavation Work Plan*** on August 10, 2009 and October 14, 2009, respectively. For the record, Railroad Square Associates LLC is not a responsible party.

Subsequent written requests regarding tank removal were directed to UPR and SMART on May 27, 2009 and October 30, 2009. As of this date, efforts to remove the tank under permit from the Santa Rosa Fire Department have not been made.

This matter was discussed during the January 20, 2011 meeting held at the Carlile-Macy office in Santa Rosa including the relationship of land development

and completion of the environmental work. In summary, completion of the environmental work is critical for these reasons:

- Underground storage tank removal and excavation work plan implementation are required by law and regulation;
- Land development at the former railroad yard is dependent on the completion of the environmental work; and
- Some of the heavy hydrocarbon groundwater impacts beneath land to the west are likely the result of on site migration. Therefore, source removal work at the site is essential for water quality protection and to provide information regarding sources of groundwater impacts beneath other properties.

Two years have passed since the January 2009 letter, which is a generous amount of time to allow Union Pacific and SMART to resolve their legal interpretations regarding environmental liability issues. However, as I explained during our recent meeting, when progress is not made within a reasonable time frame, a compliance schedule must be established by the regulatory agencies. Proposed land development elevates the priority of a case.

Therefore, within 30-days of issuance of this letter, a written commitment and schedule is needed regarding your plans for tank removal and excavation work plan implementation. For your information, on January 31, 2011, I made another referral to Santa Rosa Fire Department to the attention of Mr. Mark McCormick (Interim Fire Chief) for enforcement of tank closure regulations.

I look forward to receipt of your written commitment and schedule followed by the timely removal of the underground storage tank. If you have any questions or would like to meet again to discuss this case, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Original signed by
Joan Fleck
Engineering Geologist

110204_JEF_SMART

cc:

Santa Rosa Fire Department (GBuckheit@srcity.org)
Mr. Paul Nelson (pnelson@ebagroup.com)
Rob Krantz, Property Manager, SMART District Office, 750 Lindaro Street, Suite 200, San Rafael, CA 94901 (rkrantz@sonomamarintrain.org)
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404

Mr. Richard Devine, Devine & Gong, Inc. 100 Bush Street, Suite 600, San Francisco, CA 94104-3703 (rdevine@devinegong.com)
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, Ca 94109
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514
Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100
Ms. Joan Thomas, Real Estate Assistant (jthomas@sonomamarintrain.org)
Mr. John Nemeth (jnemeth@sonomamarintrain.org)
Ms. Lisa Pheatt, County Counsel (lpheatt@sonoma-county.org)

California Regional Water Quality Control Board
North Coast Region
Geoffrey M. Hales, Chairman

www.waterboards.ca.gov/northcoast
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Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown Jr.,
Governor

July 22, 2011

Sonoma Marin Area Rail Transit
c/o Mr. John Nemeth
750 Lindaro Street, Suite 200
San Rafael, CA 94901

Dear Mr. Nemeth:

Subject: Clarification of Regional Water Board staff letter of February 4, 2011
File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case No. 1TSR196

This letter serves as a written follow up of our July 13, 2011 phone conversation regarding the Regional Water Board staff letter dated February 4, 2011. In response to your request for clarification regarding the remaining work to be completed at the 3rd Street Property, I offer the following information:

Remaining work to be completed includes the:

1. Removal of the oil underground storage tank under permit from the Santa Rosa Fire Department.

   If evidence of a discharge is revealed at the time of tank removal, contaminated soil must be removed from this area and depending upon the degree of the discharge, the impact to water quality may need to be investigated and remediated. As stated in the February 4, 2011 letter, heavy hydrocarbon impacts to groundwater exist on and off site to the west and the tank may be a contributing source.

2. Removal of known shallow contaminated soil impacts.
3. Removal of shallow contaminated soil impacts encountered during property development.
4. Proper management of soil and groundwater during property development.

   A plan has been submitted to address these items, which is the August 2009 ***Soil and Groundwater Management Plan*** (SGMP) prepared by EBA Engineering on behalf of Railroad Square Associates LLC, who is not a responsible party.

Implementation of the soil and groundwater management plan will be a condition of property development and grading permit issuance. Implementation of the plan by someone other than EBA will require the identification of the licensed professional who will be in responsible charge of the project. Responsible parties may also submit their own SGMP.

5. Removal of impacted soil contamination in the area of B-1.

   Evidence of a surface discharge in the area of B-1 was reported in the November 2008 ***Report of Findings*** prepared by EBA Engineering. A plan has been submitted for the excavation of impacted soil in this area, which is the October 2009 ***Soil Excavation Work Plan*** prepared by EBA Engineering on behalf of the Railroad Square Associates LLC.

   The proposed scope of work must be implemented as soon as possible and prior to property development. Implementation of the plan by someone other than EBA will require the identification of the licensed professional who will be in responsible charge of the project. Responsible parties may also submit their own soil excavation work plan.

   Ground water impacts exist in the area of B-1. The extent will need to be defined and the impacts remediated.

If you have any questions or require further clarification, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Original signed by

Joan Fleck
Engineering Geologist

110722_JEF_SMART

cc:

Mr. James Diel, Union Pacific Railroad,9451 Atkinson Street, Suite 100, Roseville, CA 95747
Santa Rosa Fire Department (GBuckheit@srcity.org)
Mr. Paul Nelson (pnelson@ebagroup.com)
Rob Krantz, Property Manager, SMART District Office, 750 Lindaro Street, Suite 200, San Rafael, CA 94901 (rkrantz@sonomamarintrain.org)
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Richard Devine, Devine & Gong, Inc. 100 Bush Street, Suite 600, San Francisco, CA 94104-3703 (rdevine@devinegong.com)
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite

101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, Ca 94109
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Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100
Ms. Joan Thomas, Real Estate Assistant (jthomas@sonomamarintrain.org)
Mr. John Nemeth (jnemeth@sonomamarintrain.org)
Ms. Lisa Pheatt, County Counsel (lpheatt@sonoma-county.org)

Appendix B

Previous Investigation and Site History Summary

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

Over the history of environmental activities at the site, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by Environmental Protection Agency (EPA) method 8015B or 8260B. Antea Group uses the designation GRO for total petroleum hydrocarbons as gasoline within the C_5 to C_{10} carbon range, DRO for total petroleum hydrocarbons as diesel within the C_{10} to C_{28} carbon range, and RRO for total petroleum hydrocarbons as residual range organics (oil) within the C_{24} to C_{40} carbon range.

Terms from previous reports may include total recoverable petroleum hydrocarbons (TRPH), total purgeable petroleum hydrocarbons (TPPH) for GRO, total extractable petroleum hydrocarbons (TEPH) for DRO, and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific historical terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO. Antea Group has left the original designation when summarizing historic data and the current designations when applied to recent investigations and summary discussions.

SITE HISTORY

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site. These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs (Industrial Compliance [IC], 1992).

In April 1990, the North Coast Regional Water Quality Control Board (RWQCB) drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (MW-2 and MW-3). Monitoring well MW-3 was located approximately 100 feet down gradient (to the southwest) of the former fuel oil UST. Based on information presented in a July 1992 report by IC, analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1. However, oil and grease was present in the soil sample collected from boring B-1 at 12 feet bgs at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PAHs). Soil samples collected at depths of 6 and 16 feet below ground surface (bgs) from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively. No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3 (Geomatrix Consultants, Inc. [Geomatrix], 2000).

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes

(BTEX compounds), or PAHs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX compounds were detected in the grab groundwater sample collected from IC-B6 (Geomatrix, 2000).

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995. In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHmo), PAHs, metals, and volatile organic compounds (VOCs). Soil samples collected for analyses of TPHd, PAHs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHmo at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHmo at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHmo was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHmo was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs (Geomatrix, 2000).

PAHs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure. Concentrations of PAHs detected at this time are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PAH concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)4 in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs. No TPHd, TPHmo, or VOCs were detected in groundwater above laboratory reporting limits. The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These items, which are the focus of the work described herein, include additional evaluation of historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations (Geomatrix, 2000).

In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An up-gradient, single-screen monitoring well was installed on the eastern portion of the property in vicinity of the main line railroad tracks.

Extensive investigative activities were performed in 2002 on the northwest area of the project site at the historical location of the Santa Rosa Woolen Mills Facility. Soil samples collected as part of an investigation within this area reported significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former above ground fuel storage tank (AST), and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons. From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil (EBA, 2008b).

In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed, whereupon the excavation was advanced to a total depth of approximately 18 feet bgs. A significant amount of free-phase petroleum hydrocarbon product was encountered on the groundwater surface during the excavation activities. The product and water was subsequently pumped, treated, and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently terminated due to concerns of structure stability. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in the excavation sidewalls and groundwater in this area (EBA, 2008b).

Excavation activities in the northwestern portion of the property also included the removal off a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 350 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths below first encountered groundwater, which was encountered at approximately 19 feet bgs. The maximum depth attained by the excavation was approximately 22 feet bgs. Impacted groundwater encountered within the excavation pit, which included free-phase petroleum hydrocarbon product, was subsequently removed using pumps, treated, and disposed of to the sanitary sewer (EBA, 2008b).

Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area. Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the “southern warehouse area” (EBA, 2008b).

Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in a monitoring well identified as SRMW-13 located in the northwest corner of the property. In addition, the fuel oxygenate methyl tert-butyl ether (MTBE) was detected in SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored (EBA, 2008b).

The RWQCB issued a *No Further Action* (NFA) letter for the previous case at the site on August 31, 2007. In 2008, Sonoma Marin Area Rail Transit District (SMART) granted an option to purchase the site, formerly owned by Northwestern Pacific Railroad Authority (NWRPA) to New Railroad Square Associates, LLC for transit-oriented development purposes. In anticipation of property ownership for the site, New Railroad Square Associates, LLC (with consent from SMART) contracted the services of EBA Engineering (EBA) to perform environmental assessment activities. EBA's November 2008 *Comprehensive Report on Findings* concluded that on-site hazardous materials presently exist at various locations on the property. These materials include an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and impacted shallow soil across the site. The RWQCB reopened the environmental case for the site on January 16, 2009 based on EBA's findings.

SENSISTIVE RECEPTORS

Geomatrix performed a well survey in 2000. Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which is fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use (Geomatrix, 2003).

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site. Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically down-gradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately up gradient and two approximately down gradient. Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use (Geomatrix, 2003).

Information about the possible presence of an additional water producing well located near the site was provided by the RWQCB. This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek; its actual location has not been field-verified. At this time the well is not in

use, and based on a conversation with the site redeveloper, the well will not be used in the future and will be appropriately destroyed (Geomatrix, 2003).

Appendix C

UST Removal Permits

City of Santa Rosa

FAX COVER SHEET

DATE: 11-29-11

PLEASE DELIVER THE FOLLOWING 2 PAGES (INCLUDING COVER SHEET) TO:

NAME: Nicole - United Pumping

FAX#: 626-336-7734

FROM: Judy Tapparo

DEPT: Santa Rosa Fire

FAX#: (707) 543-3520

PLEASE CALL OUR BUSINESS OFFICE AT (707)543-3500 IF YOU HAVE ANY QUESTIONS.

THANK YOU.

COMMENTS:

The 2nd tank was added to the original permit.

Call with any questions.

Judy
707-543-4547

Fire Department
2373 Circadian Way • Santa Rosa, CA 95407
Phone: (707) 543-3500 • Fax: (707) 543-3520
www.srcity.org

11/29/2011 18:43 7075433520 SANTA ROSA FIRE DEPT PAGE 01/02

City of Santa Rosa

PERMIT

Santa Rosa Fire Department
2373 Circadian Way
Santa Rosa, CA 95407

Date: 11/29/2011

Permit For:

UST REMOVAL - 1 550-GALLON UST - 2 4TH ST AND 24 6TH ST - ANOTHER TANK DISCOVERED AND PULLED 11/1/11 - ALSO 550 GALLON TANK

U.F.C. Section(s): 1844.105.8.h.1

Permittee: UNITED PUMPING SERVICE INC

PERMIT INFORMATION

Address:	2 4th St SR	Permit No:	F11-0305
Total Fees:	$1,488.90	Approved Date:	08/23/2011
Date Issued:	08/23/2011	Date Expires:	05/01/2012

A permit shall not take the place of any license required by law.

A permit issued under the Fire Code shall continue until revoked or for such a period of time as designated therein at the time of issuance. A permit shall not be transferable and any change in use, occupancy, operation or ownership shall require a new permit.

By: Marita Petersen /jat
Santa Rosa Fire Department

THIS PERMIT MUST AT ALL TIMES BE KEPT POSTED ON THE PREMISES.

Required Inspections:

Item: 00822 UST REMOVAL
11/02/2011 By: MDP Action: AC Time Exp: 04:00 Comments: TWO UST TANKS REMOVED. CONFIRMATION SOIL SAMPLES OBTAINED. OK TO BACKFILL, HOWEVER FURTHER EXCAVATION MAY BE REQUIRED PENDING LAB ANALYSIS.
Item: 00860 SPILL/RELEASE/PROP 65
Item: 00899 HAZMAT FINAL
11/03/2011 By: MDP Action: PAC Time Exp: 02:30 Comments: FURTHER EXCAVATION AND WATER/SOIL SAMPLES OBTAINED.

Attn: Pam Heintz Fax 626-336-7734

City of Santa Rosa

PERMIT

Santa Rosa Fire Department
2373 Circadian Way
Santa Rosa, CA 95407

Date: 08/23/2011

Permit For:
UST REMOVAL - 1 550-GALLON UST - 2 4TH ST AND 24 6TH ST

U.F.C. Section(s): 1844.105.8.h.1

Permittee: UNITED PUMPING SERVICE INC

PERMIT INFORMATION

Address:	2 4th St SR	Permit No:	F11-0305
Total Fees:	$1,031.10	Approved Date:	08/23/2011
Date Issued:	08/23/2011	Date Expires:	02/19/2012

A permit shall not take the place of any license required by law.

A permit issued under the Fire Code shall continue until revoked or for such a period of time as designated therein at the time of issuance. A permit shall not be transferable and any change in use, occupancy, operation or ownership shall require a new permit.

By: M Petersen /jat
Santa Rosa Fire Department

THIS PERMIT MUST AT ALL TIMES BE KEPT POSTED ON THE PREMISES.

Required Inspections:
Item: 00822 UST REMOVAL
Item: 00832 HOIST/SUMP REMOVAL
Item: 00860 SPILL/RELEASE/PROP 65

2373 Circadian Way
Santa Rosa, CA 95407
Phone: (707) 543-3500
Fax: (707) 543-3520
www.SantaRosaFD.com

HAZARDOUS MATERIALS PLAN REVIEW
A CERTIFIED UNIFIED PROGRAM AGENCY
C.U.P.A.

Project: SMART Site
Address: 2 Fourth Street & 24 Sixth Street, Santa Rosa
Type of Review: UST Removal
Permit Number: F11-0305
Review Number: 2
Reviewed by: Marita Petersen (mpetersen@srcity.org) – 707-543-3548
Date: August 22, 2011

THIS PERMIT HAS BEEN REVIEWED AND DETERMINED TO BE:

(X) **APPROVED** w/conditions

NOTE: Please review the comments and make corrections, changes and/or additions as required. Approval of this plan does not approve any omission or deviation from the applicable regulations. Final approval is subject to field inspection. Approved plans shall be on site and available for review at all times.

Item #	Code Section	Comments	Correction
1		Santa Rosa Fire Department must be on site to witness tank/piping removal and soil sampling. The following analytical must be performed (at a minimum) for all samples samples: TPHg, TPHd, TPHmo, BTEX, MTBE, LUFT 5Metals. EPA method 5035("EnCore" type) sampling is required in accordance with the North Coast Regional Water Quality Control Board.	
2		State Water Resources Control Board Form: *Tank Certificate of Compliance* (one per tank)	Provide day of removal
3		During over excavation activities, if contamination is found to exist beyond the scope of this work plan, the City protocol will be followed to clean the site to the extent feasible or to non-detect. This may involve areas that are not within the scope of the contract of UST removal. A separate soil remediation permit will be required.	
4		Authorization must be received from the Fire Department Inspector prior to backfill. Backfill will be based upon field conditions and analytical results once received by Santa Rosa Fire Department.	

5		A final tank removal/sampling/remediation report must be submitted to the Fire Department for review and approval. The report must contain, in part, analytical data, site plan and manifests for soil and/or groundwater.	
6		A required fire extinguisher must be on site and shall bear a current State Fire Marshal service tag. The fire extinguisher must have a minimum rating of 3A40BC. **Provide on Site.**	
7		A Santa Rosa Fire Department Inspector must be scheduled for all inspections listed on the permit. Log on to www.velocityhall.com to schedule inspections online **or** Call the Selectron Automated Request System at (707) 543-3006 to schedule each inspection no more than 48 hours in advance. Submit any and all test reports to the SRFD for review and approval within 30 days of test.	

Inspector (*signature*)

8/22/11
Date

Appendix D

Certified Laboratory Analytical Reports

CONESTOGA-ROVERS & ASSOCIATES

20818 44th Avenue West, Suite 190
Lynnwood, WA 98036
Telephone: (425) 563-6515 Fax: (425) 563-6599
www.CRAworld.com

MEMORANDUM

TO: Lia Holden

REF. NO.: 058324-2344

FROM: Jeffrey Cloud/bjw/211-NF

DATE: December 28, 2011

C.C.: Steve Meninger, Jesse Orth, Julie Lidstone

E-Mail and Hard Copy if Requested

RE: Data Quality Assessment and Validation of Reports J38467 & J38506
UST Tank Pull
CA-2 Fourth Street and 34 Sixth Street
Santa Rosa, CA
November 2011

INTRODUCTION

The following details a quality assessment and validation of the analytical data resulting from the November 2011, collection of soil and water samples in Santa Rosa, CA. Samples were submitted to Test America Laboratories (TA), in Pleasanton, CA, and analyzed for the following:

Parameter	*Methodology*
Volatile Organic Compounds (VOCs)	SW846 8260B
Semi-Volatile Organic Compounds (SVOCs)	SW846 8270C SIM
Gasoline Range Organics (GRO)	CA LUFT GC/MS
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	SW846 8015B
Metals	SW846 6010B
Mercury	SW846 7470A/7471A

The analytical results are summarized in Tables 1A and 1B. The QC criteria used to assess the data were established by the methods and with the following guidance documents:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", USEPA 540/R-99/008, October 1999

ii) "USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Review", USEPA 540/R-94/013, February 1994

These guidelines are collectively referred to as "Guidelines" in this memorandum.

SAMPLE QUANTITATION

The laboratory did not report any detected concentrations below the laboratory's practical quantitation limit (PQL)/report limit (RL).

SAMPLE PRESERVATION AND HOLDING TIMES

Sample holding time periods and preservation requirements are summarized in the analytical methods. All sample extractions and/or analyses were performed within the specified holding times.

All samples were properly preserved and cooled after collection.

METHOD BLANK SAMPLES

Method blank samples are prepared from a purified sample matrix and are processed concurrently with investigative samples to assess the presence and the magnitude of sample contamination introduced during sample analysis. Method blank samples are analyzed at a minimum frequency of one per analytical batch and target analytes should be non-detect.

Method blanks were analyzed at the recommended frequency and all results were non-detect for the compounds of interest.

SURROGATE COMPOUNDS – ORGANIC ANALYSES

Individual sample performance for organic analyses was monitored by assessing the results of surrogate compound percent recoveries. Surrogate percent recoveries are reviewed against the laboratory developed control limits provided in the analytical report.

All surrogate recoveries met the method criteria, demonstrating acceptable analytical efficiency for these analyses with a few exceptions. All samples with surrogate recoveries outside of the acceptable limits were diluted greater than or equal to five times. The sample results would not have been impacted, no qualification of the data was deemed necessary.

LABORATORY CONTROL SAMPLE (LCS)

The LCS analysis serves as a monitor of the overall performance in all steps of the sample analysis and are analyzed with each sample batch. The LCS percent recoveries were evaluated against method and laboratory established control limits.

Laboratory control samples (LCS) were analyzed in duplicate for all parameters. All recoveries were within required control limits showing adequate analytical accuracy and precision with one exception. Several sample results were qualified as estimated (See Table 2).

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

To assess the long term accuracy and precision of the analytical methods on various matrices, MS/MSD percent recoveries and relative percent differences (RPD) of the concentrations were determined. The

organic MS/MSD percent recovery and RPD control limits are established by the laboratory. The inorganic control limits are defined by the methods and the "Guidelines", which require recoveries between 75 to 125 percent with RPDs less than 20 percent for water samples and 30 percent for soil samples.

Matrix spikes (MS) were prepared and analyzed in duplicate for VOCs, DRO/ORO, metals and mercury. All recoveries were within required control limits showing adequate analytical accuracy and precision with a few exceptions. One sample result was qualified as estimated (See Table 3). Precision for SVOCs was determined to be acceptable based on LCS/LCSD recoveries.

FIELD QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

No field QA/QC samples were submitted to the laboratory for analysis.

OVERALL ASSESSMENT

The data were found to exhibit acceptable levels of accuracy and precision, based on the provided information, and may be used with the qualifications noted.

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	EW (5)	EWA (7)	EWB (15)	NW (5)	NWA (8)
	Sample ID:	SO-2344-EW (5)-021111	SO-EWA (7)-031111	SO-EWB(15)-031111	SO-2344-NW (5)-021111	SO-2344-NWA(8)-031111
	Sample Date:	11/2/2011	11/3/2011	11/3/2011	11/2/2011	11/3/2011
	Sample Depth:	5 ft BGS	7 ft BGS	15 ft BGS	5 ft BGS	8 ft BGS
Parameters	*Units*					
Volatile Organic Compounds						
1,1,1,2-Tetrachloroethane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,1,1-Trichloroethane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,1,2,2-Tetrachloroethane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,1,2-Trichloroethane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,1-Dichloroethane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,1-Dichloroethene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,1-Dichloropropene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2,3-Trichlorobenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2,3-Trichloropropane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2,4-Trichlorobenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2,4-Trimethylbenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2-Dichlorobenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2-Dichloroethane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,2-Dichloropropane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,3,5-Trimethylbenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,3-Dichlorobenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,3-Dichloropropane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
1,4-Dichlorobenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
2,2-Dichloropropane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	<52	<50	<52	<51	<51
2-Chlorotoluene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
2-Hexanone	µg/kg	<52	<50	<52	<51	<51
2-Nitropropane	µg/kg	-	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
4-Chlorotoluene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	<52	<50	<52	<51	<51
Acetone	µg/kg	<52	<50	<52	<51	<51
Benzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*EW (5)*	*EWA (7)*	*EWB (15)*	*NW (5)*	*NWA (8)*
	Sample ID:	*SO-2344-EW (5)-021111*	*SO-EWA (7)-031111*	*SO-EWB(15)-031111*	*SO-2344-NW (5)-021111*	*SO-2344-NWA(8)-031111*
	Sample Date:	*11/2/2011*	*11/3/2011*	*11/3/2011*	*11/2/2011*	*11/3/2011*
	Sample Depth:	*5 ft BGS*	*7 ft BGS*	*15 ft BGS*	*5 ft BGS*	*8 ft BGS*
Parameters	*Units*					
Volatile Organic Compounds (Cont'd.)						
Bromobenzene	µg/kg	<5.2	<5.0 UJ	<5.2 UJ	<5.1	<5.1 UJ
Bromodichloromethane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Bromoform	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Bromomethane (Methyl bromide)	µg/kg	<10	<10	<10	<10	<10
Carbon disulfide	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Carbon tetrachloride	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Chlorobenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Chlorobromomethane	µg/kg	<21	<20	<21	<20	<20
Chloroethane	µg/kg	<10	<10	<10	<10	<10
Chloroform (Trichloromethane)	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Chloromethane (Methyl chloride)	µg/kg	<10	<10	<10	<10	<10
cis-1,2-Dichloroethene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
cis-1,3-Dichloropropene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Cymene (p-Isopropyltoluene)	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Dibromochloromethane	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Dibromomethane	µg/kg	<10	<10	<10	<10	<10
Dichlorodifluoromethane (CFC-12)	µg/kg	<10	<10	<10	<10	<10
Ethylbenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Hexachlorobutadiene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Hexachloroethane	µg/kg	-	-	-	-	-
Isopropyl benzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Methyl tert butyl ether (MTBE)	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Methylene chloride	µg/kg	<10	<10	<10	<10	<10
Naphthalene	µg/kg	<10	<10	<10	<10	<10
N-Butylbenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
N-Propylbenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Styrene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
tert-Butylbenzene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Tetrachloroethene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Toluene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*EW (5)*	*EWA (7)*	*EWB (15)*	*NW (5)*	*NWA (8)*
	Sample ID:	*SO-2344-EW (5)-021111*	*SO-EWA (7)-031111*	*SO-EWB(15)-031111*	*SO-2344-NW (5)-021111*	*SO-2344-NWA(8)-031111*
	Sample Date:	*11/2/2011*	*11/3/2011*	*11/3/2011*	*11/2/2011*	*11/3/2011*
	Sample Depth:	*5 ft BGS*	*7 ft BGS*	*15 ft BGS*	*5 ft BGS*	*8 ft BGS*
Parameters	***Units***					
Volatile Organic Compounds (Cont'd.)						
trans-1,2-Dichloroethene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
trans-1,3-Dichloropropene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Trichloroethene	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Trichlorofluoromethane (CFC-11)	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Trifluorotrichloroethane (Freon 113)	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Vinyl acetate	µg/kg	<52	<50	<52	<51	<51
Vinyl chloride	µg/kg	<5.2	<5.0	<5.2	<5.1	<5.1
Xylenes (total)	µg/kg	<10	<10	<10	<10	<10
Semi-volatile Organic Compounds - SIM						
Acenaphthene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Acenaphthylene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Anthracene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Benzo(a)anthracene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Benzo(a)pyrene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Benzo(b)fluoranthene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Benzo(g,h,i)perylene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Benzo(k)fluoranthene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Chrysene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Dibenz(a,h)anthracene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Fluoranthene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Fluorene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Indeno(1,2,3-cd)pyrene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Naphthalene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Phenanthrene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Pyrene	µg/kg	<5.0	<5.0	<5.0	<25	<9.9
Metals						
Antimony	mg/kg	-	<1.9	<2.0	-	<1.9
Arsenic	mg/kg	-	5.3	4.0	-	5.4

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*EW (5)*	*EWA (7)*	*EWB (15)*	*NW (5)*	*NWA (8)*
	Sample ID:	*SO-2344-EW (5)-021111*	*SO-EWA (7)-031111*	*SO-EWB(15)-031111*	*SO-2344-NW (5)-021111*	*SO-2344-NWA(8)-031111*
	Sample Date:	*11/2/2011*	*11/3/2011*	*11/3/2011*	*11/2/2011*	*11/3/2011*
	Sample Depth:	*5 ft BGS*	*7 ft BGS*	*15 ft BGS*	*5 ft BGS*	*8 ft BGS*
Parameters	*Units*					
Metals (Cont'd)						
Barium	mg/kg	-	170	200	-	180
Beryllium	mg/kg	-	<0.38	<0.39	-	<0.38
Cadmium	mg/kg	<0.48	<0.48	<0.49	<0.47	<0.48
Chromium	mg/kg	88	110	74	91	85
Cobalt	mg/kg	-	18	29	-	18
Copper	mg/kg	-	28	23	-	28
Lead	mg/kg	5.4	6.6	6.3	6.3	19
Mercury	mg/kg	-	0.064	0.053	-	0.061
Molybdenum	mg/kg	-	<1.9	<2.0	-	<1.9
Nickel	mg/kg	140	150	150	140	150
Selenium	mg/kg	-	<3.8	<3.9	-	<3.8
Silver	mg/kg	-	<0.96	<0.98	-	<0.96
Thallium	mg/kg	-	<1.9	<2.0	-	<1.9
Vanadium	mg/kg	-	58	44	-	54
Zinc	mg/kg	54	52	43	57	53
Metals - STLC						
Chromium	mg/L	-	-	-	-	-
Petroleum Products						
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	<260	<250	<260	<250	<260
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	<0.99	1.0	35	250	2.9
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<49	<49	<50	170	<50

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*NWB (15)*	*SW (5)*	*SWA (7)*	*SWB (15)*
	Sample ID:	*SO-2344-NWB(15)-031111*	*SO-2344-SW (5.5)-021111*	*SO-2344-SWA(7)-031111*	*SO-2344-SWB(15)-031111*
	Sample Date:	*11/3/2011*	*11/2/2011*	*11/3/2011*	*11/3/2011*
	Sample Depth:	*15 ft BGS*	*5.5 ft BGS*	*7 ft BGS*	*15 ft BGS*
Parameters	*Units*				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,1,1-Trichloroethane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,1,2,2-Tetrachloroethane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,1,2-Trichloroethane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,1-Dichloroethane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,1-Dichloroethene	µg/kg	<7.2	<5.3	<4.9	<4.4
1,1-Dichloropropene	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2,3-Trichlorobenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2,3-Trichloropropane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2,4-Trichlorobenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2,4-Trimethylbenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2-Dichlorobenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2-Dichloroethane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,2-Dichloropropane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,3,5-Trimethylbenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
1,3-Dichlorobenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
1,3-Dichloropropane	µg/kg	<7.2	<5.3	<4.9	<4.4
1,4-Dichlorobenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
2,2-Dichloropropane	µg/kg	<7.2	<5.3	<4.9	<4.4
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	<72	<53	<49	<44
2-Chlorotoluene	µg/kg	<7.2	<5.3	<4.9	<4.4
2-Hexanone	µg/kg	<72	<53	<49	<44
2-Nitropropane	µg/kg	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	µg/kg	<7.2	<5.3	<4.9	<4.4
4-Chlorotoluene	µg/kg	<7.2	<5.3	<4.9	<4.4
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	<72	<53	<49	<44
Acetone	µg/kg	<72	<53	<49	<44
Benzene	µg/kg	<7.2	<5.3	<4.9	<4.4

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*NWB (15)*	*SW (5)*	*SWA (7)*	*SWB (15)*
	Sample ID:	*SO-2344-NWB(15)-031111*	*SO-2344-SW (5.5)-021111*	*SO-2344-SWA(7)-031111*	*SO-2344-SWB(15)-031111*
	Sample Date:	*11/3/2011*	*11/2/2011*	*11/3/2011*	*11/3/2011*
	Sample Depth:	*15 ft BGS*	*5.5 ft BGS*	*7 ft BGS*	*15 ft BGS*
Parameters	*Units*				
Volatile Organic Compounds (Cont'd.)					
Bromobenzene	µg/kg	<7.2	<5.3	<4.9 UJ	<4.4 UJ
Bromodichloromethane	µg/kg	<7.2	<5.3	<4.9	<4.4
Bromoform	µg/kg	<7.2	<5.3	<4.9	<4.4
Bromomethane (Methyl bromide)	µg/kg	<14	<11	<9.8	<8.9
Carbon disulfide	µg/kg	<7.2	<5.3	<4.9	<4.4
Carbon tetrachloride	µg/kg	<7.2	<5.3	<4.9	<4.4
Chlorobenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
Chlorobromomethane	µg/kg	<29	<21	<20	<18
Chloroethane	µg/kg	<14	<11	<9.8	<8.9
Chloroform (Trichloromethane)	µg/kg	<7.2	<5.3	<4.9	<4.4
Chloromethane (Methyl chloride)	µg/kg	<14	<11	<9.8	<8.9
cis-1,2-Dichloroethene	µg/kg	<7.2	<5.3	<4.9	<4.4
cis-1,3-Dichloropropene	µg/kg	<7.2	<5.3	<4.9	<4.4
Cymene (p-Isopropyltoluene)	µg/kg	<7.2	<5.3	<4.9	<4.4
Dibromochloromethane	µg/kg	<7.2	<5.3	<4.9	<4.4
Dibromomethane	µg/kg	<14	<11	<9.8	<8.9
Dichlorodifluoromethane (CFC-12)	µg/kg	<14	<11	<9.8	<8.9
Ethylbenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
Hexachlorobutadiene	µg/kg	<7.2	<5.3	<4.9	<4.4
Hexachloroethane	µg/kg	-	-	-	-
Isopropyl benzene	µg/kg	<7.2	<5.3	<4.9	<4.4
Methyl tert butyl ether (MTBE)	µg/kg	<7.2	<5.3	<4.9	<4.4
Methylene chloride	µg/kg	<14	<11	<9.8	<8.9
Naphthalene	µg/kg	<14	<11	<9.8	<8.9
N-Butylbenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
N-Propylbenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
Styrene	µg/kg	<7.2	<5.3	<4.9	<4.4
tert-Butylbenzene	µg/kg	<7.2	<5.3	<4.9	<4.4
Tetrachloroethene	µg/kg	<7.2	<5.3	<4.9	5.9
Toluene	µg/kg	<7.2	<5.3	<4.9	<4.4

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*NWB (15)*	*SW (5)*	*SWA (7)*	*SWB (15)*
	Sample ID:	*SO-2344-NWB(15)-031111*	*SO-2344-SW (5.5)-021111*	*SO-2344-SWA(7)-031111*	*SO-2344-SWB(15)-031111*
	Sample Date:	*11/3/2011*	*11/2/2011*	*11/3/2011*	*11/3/2011*
	Sample Depth:	*15 ft BGS*	*5.5 ft BGS*	*7 ft BGS*	*15 ft BGS*
Parameters	***Units***				
Volatile Organic Compounds (Cont'd.)					
trans-1,2-Dichloroethene	µg/kg	<7.2	<5.3	<4.9	<4.4
trans-1,3-Dichloropropene	µg/kg	<7.2	<5.3	<4.9	<4.4
Trichloroethene	µg/kg	<7.2	<5.3	<4.9	<4.4
Trichlorofluoromethane (CFC-11)	µg/kg	<7.2	<5.3	<4.9	<4.4
Trifluorotrichloroethane (Freon 113)	µg/kg	<7.2	<5.3	<4.9	<4.4
Vinyl acetate	µg/kg	<72	<53	<49	<44
Vinyl chloride	µg/kg	<7.2	<5.3	<4.9	<4.4
Xylenes (total)	µg/kg	<14	<11	<9.8	<8.9
Semi-volatile Organic Compounds - SIM					
Acenaphthene	µg/kg	<5.0	<5.0	<5.0	<5.0
Acenaphthylene	µg/kg	<5.0	<5.0	<5.0	<5.0
Anthracene	µg/kg	<5.0	<5.0	<5.0	14
Benzo(a)anthracene	µg/kg	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	µg/kg	<5.0	<5.0	<5.0	<5.0
Benzo(b)fluoranthene	µg/kg	<5.0	<5.0	<5.0	<5.0
Benzo(g,h,i)perylene	µg/kg	<5.0	<5.0	<5.0	<5.0
Benzo(k)fluoranthene	µg/kg	<5.0	<5.0	<5.0	<5.0
Chrysene	µg/kg	23	<5.0	<5.0	12
Dibenz(a,h)anthracene	µg/kg	<5.0	<5.0	<5.0	<5.0
Fluoranthene	µg/kg	<5.0	<5.0	<5.0	<5.0
Fluorene	µg/kg	5.4	<5.0	<5.0	<5.0
Indeno(1,2,3-cd)pyrene	µg/kg	<5.0	<5.0	<5.0	<5.0
Naphthalene	µg/kg	<5.0	<5.0	<5.0	<5.0
Phenanthrene	µg/kg	19	<5.0	<5.0	23
Pyrene	µg/kg	21	<5.0	<5.0	7.3
Metals					
Antimony	mg/kg	<2.0	-	<2.0	<1.9
Arsenic	mg/kg	6.0	-	5.9	<3.8

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*NWB (15)*	*SW (5)*	*SWA (7)*	*SWB (15)*
	Sample ID:	*SO-2344-NWB(15)-031111*	*SO-2344-SW (5.5)-021111*	*SO-2344-SWA(7)-031111*	*SO-2344-SWB(15)-031111*
	Sample Date:	*11/3/2011*	*11/2/2011*	*11/3/2011*	*11/3/2011*
	Sample Depth:	*15 ft BGS*	*5.5 ft BGS*	*7 ft BGS*	*15 ft BGS*
Parameters	*Units*				
Metals (Cont'd)					
Barium	mg/kg	190	-	190	160
Beryllium	mg/kg	<0.40	-	<0.39	<0.38
Cadmium	mg/kg	<0.50	<0.49	<0.49	<0.48
Chromium	mg/kg	93	87	98	84
Cobalt	mg/kg	20	-	22	8.5
Copper	mg/kg	32	-	32	21
Lead	mg/kg	14	6.8	12	5.2
Mercury	mg/kg	0.070	-	0.089	0.032
Molybdenum	mg/kg	<2.0	-	<2.0	<1.9
Nickel	mg/kg	150	140	150	91
Selenium	mg/kg	<4.0	-	<3.9	<3.8
Silver	mg/kg	<1.0	-	<0.98	<0.96
Thallium	mg/kg	<2.0	-	<2.0	<1.9
Vanadium	mg/kg	56	-	62	37
Zinc	mg/kg	56	64	63	39
Metals - STLC					
Chromium	mg/L	-	-	-	-
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	<360	<260	<250	<220
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	560	<1.0	3.7	72
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<500	<50	<49	<50

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*T1N (5)*	*T1S (5.5)*	*T2N (5)*	*T2S (5.5)*
	Sample ID:	*SO-2344-T1N (5)-021111*	*SO-2344-T1S (5.5)-021111*	*SO-2344-T2N (5)-021111*	*SO-2344-T2S (5.5)-021111*
	Sample Date:	*11/2/2011*	*11/2/2011*	*11/2/2011*	*11/2/2011*
	Sample Depth:	*5 ft BGS*	*5.5 ft BGS*	*5 ft BGS*	*5.5 ft BGS*
Parameters	*Units*				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,1,1-Trichloroethane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,1,2,2-Tetrachloroethane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,1,2-Trichloroethane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,1-Dichloroethane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,1-Dichloroethene	µg/kg	<7.2	<5.6	<5.1	<4.8
1,1-Dichloropropene	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2,3-Trichlorobenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2,3-Trichloropropane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2,4-Trichlorobenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2,4-Trimethylbenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2-Dichlorobenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2-Dichloroethane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,2-Dichloropropane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,3,5-Trimethylbenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
1,3-Dichlorobenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
1,3-Dichloropropane	µg/kg	<7.2	<5.6	<5.1	<4.8
1,4-Dichlorobenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
2,2-Dichloropropane	µg/kg	<7.2	<5.6	<5.1	<4.8
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	<72	<56	<51	<48
2-Chlorotoluene	µg/kg	<7.2	<5.6	<5.1	<4.8
2-Hexanone	µg/kg	<72	<56	<51	<48
2-Nitropropane	µg/kg	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	µg/kg	<7.2	<5.6	<5.1	<4.8
4-Chlorotoluene	µg/kg	<7.2	<5.6	<5.1	<4.8
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	<72	<56	<51	<48
Acetone	µg/kg	<72	<56	<51	<48
Benzene	µg/kg	<7.2	<5.6	<5.1	<4.8

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*T1N (5)*	*T1S (5.5)*	*T2N (5)*	*T2S (5.5)*
	Sample ID:	*SO-2344-T1N (5)-021111*	*SO-2344-T1S (5.5)-021111*	*SO-2344-T2N (5)-021111*	*SO-2344-T2S (5.5)-021111*
	Sample Date:	*11/2/2011*	*11/2/2011*	*11/2/2011*	*11/2/2011*
	Sample Depth:	*5 ft BGS*	*5.5 ft BGS*	*5 ft BGS*	*5.5 ft BGS*
Parameters	*Units*				
Volatile Organic Compounds (Cont'd.)					
Bromobenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
Bromodichloromethane	µg/kg	<7.2	<5.6	<5.1	<4.8
Bromoform	µg/kg	<7.2	<5.6	<5.1	<4.8
Bromomethane (Methyl bromide)	µg/kg	<14	<11	<10	<9.7
Carbon disulfide	µg/kg	<7.2	<5.6	<5.1	<4.8
Carbon tetrachloride	µg/kg	<7.2	<5.6	<5.1	<4.8
Chlorobenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
Chlorobromomethane	µg/kg	<29	<22	<21	<19
Chloroethane	µg/kg	<14	<11	<10	<9.7
Chloroform (Trichloromethane)	µg/kg	<7.2	<5.6	<5.1	<4.8
Chloromethane (Methyl chloride)	µg/kg	<14	<11	<10	<9.7
cis-1,2-Dichloroethene	µg/kg	<7.2	<5.6	<5.1	<4.8
cis-1,3-Dichloropropene	µg/kg	<7.2	<5.6	<5.1	<4.8
Cymene (p-Isopropyltoluene)	µg/kg	<7.2	<5.6	<5.1	<4.8
Dibromochloromethane	µg/kg	<7.2	<5.6	<5.1	<4.8
Dibromomethane	µg/kg	<14	<11	<10	<9.7
Dichlorodifluoromethane (CFC-12)	µg/kg	<14	<11	<10	<9.7
Ethylbenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
Hexachlorobutadiene	µg/kg	<7.2	<5.6	<5.1	<4.8
Hexachloroethane	µg/kg	-	-	-	-
Isopropyl benzene	µg/kg	<7.2	<5.6	<5.1	<4.8
Methyl tert butyl ether (MTBE)	µg/kg	<7.2	<5.6	<5.1	<4.8
Methylene chloride	µg/kg	<14	<11	<10	<9.7
Naphthalene	µg/kg	<14	<11	<10	<9.7
N-Butylbenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
N-Propylbenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
Styrene	µg/kg	<7.2	<5.6	<5.1	<4.8
tert-Butylbenzene	µg/kg	<7.2	<5.6	<5.1	<4.8
Tetrachloroethene	µg/kg	<7.2	<5.6	<5.1	<4.8
Toluene	µg/kg	<7.2	<5.6	<5.1	<4.8

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*T1N (5)*	*T1S (5.5)*	*T2N (5)*	*T2S (5.5)*
	Sample ID:	*SO-2344-T1N (5)-021111*	*SO-2344-T1S (5.5)-021111*	*SO-2344-T2N (5)-021111*	*SO-2344-T2S (5.5)-021111*
	Sample Date:	*11/2/2011*	*11/2/2011*	*11/2/2011*	*11/2/2011*
	Sample Depth:	*5 ft BGS*	*5.5 ft BGS*	*5 ft BGS*	*5.5 ft BGS*
Parameters	*Units*				
Volatile Organic Compounds (Cont'd.)					
trans-1,2-Dichloroethene	µg/kg	<7.2	<5.6	<5.1	<4.8
trans-1,3-Dichloropropene	µg/kg	<7.2	<5.6	<5.1	<4.8
Trichloroethene	µg/kg	<7.2	<5.6	<5.1	<4.8
Trichlorofluoromethane (CFC-11)	µg/kg	<7.2	<5.6	<5.1	<4.8
Trifluorotrichloroethane (Freon 113)	µg/kg	<7.2	<5.6	<5.1	<4.8
Vinyl acetate	µg/kg	<72	<56	<51	<48
Vinyl chloride	µg/kg	<7.2	<5.6	<5.1	<4.8
Xylenes (total)	µg/kg	<14	<11	<10	<9.7
Semi-volatile Organic Compounds - SIM					
Acenaphthene	µg/kg	<25	<5.0	<50	<5.0
Acenaphthylene	µg/kg	<25	<5.0	<50	<5.0
Anthracene	µg/kg	<25	<5.0	<50	<5.0
Benzo(a)anthracene	µg/kg	<25	<5.0	<50	<5.0
Benzo(a)pyrene	µg/kg	<25	<5.0	<50	<5.0
Benzo(b)fluoranthene	µg/kg	<25	<5.0	<50	<5.0
Benzo(g,h,i)perylene	µg/kg	<25	<5.0	<50	<5.0
Benzo(k)fluoranthene	µg/kg	<25	<5.0	<50	<5.0
Chrysene	µg/kg	<25	<5.0	<50	<5.0
Dibenz(a,h)anthracene	µg/kg	<25	<5.0	<50	<5.0
Fluoranthene	µg/kg	<25	<5.0	<50	<5.0
Fluorene	µg/kg	<25	<5.0	<50	<5.0
Indeno(1,2,3-cd)pyrene	µg/kg	<25	<5.0	<50	<5.0
Naphthalene	µg/kg	<25	<5.0	<50	<5.0
Phenanthrene	µg/kg	<25	<5.0	<50	<5.0
Pyrene	µg/kg	<25	<5.0	<50	<5.0
Metals					
Antimony	mg/kg	-	-	-	-
Arsenic	mg/kg	-	-	-	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*T1N (5)*	*T1S (5.5)*	*T2N (5)*	*T2S (5.5)*
	Sample ID:	*SO-2344-T1N (5)-021111*	*SO-2344-T1S (5.5)-021111*	*SO-2344-T2N (5)-021111*	*SO-2344-T2S (5.5)-021111*
	Sample Date:	*11/2/2011*	*11/2/2011*	*11/2/2011*	*11/2/2011*
	Sample Depth:	*5 ft BGS*	*5.5 ft BGS*	*5 ft BGS*	*5.5 ft BGS*
Parameters	*Units*				
Metals (Cont'd)					
Barium	mg/kg	-	-	-	-
Beryllium	mg/kg	-	-	-	-
Cadmium	mg/kg	<0.48	<0.46	<0.48	<0.48
Chromium	mg/kg	98	110	90	92
Cobalt	mg/kg	-	-	-	-
Copper	mg/kg	-	-	-	-
Lead	mg/kg	6.3	7.0	7.7	7.1
Mercury	mg/kg	-	-	-	-
Molybdenum	mg/kg	-	-	-	-
Nickel	mg/kg	140	150	130	140
Selenium	mg/kg	-	-	-	-
Silver	mg/kg	-	-	-	-
Thallium	mg/kg	-	-	-	-
Vanadium	mg/kg	-	-	-	-
Zinc	mg/kg	180	74	52	55
Metals - STLC					
Chromium	mg/L	-	-	-	-
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	<360	<280	<260	<240
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	300	<1.0	170	76
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	180	<50	1600	85

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*WW (5)*	*WWA (7)*	*WWB (15)*	*FILL (COMP)*
	Sample ID:	*SO-2344-WW (5)-021111*	*SO-2344-WWA(7)-031111*	*SO-2344-WWB(15)-031111*	*SO-2344-FILL (COMP)-021111*
	Sample Date:	*11/2/2011*	*11/3/2011*	*11/3/2011*	*11/2/2011*
	Sample Depth:	*5 ft BGS*	*7 ft BGS*	*15 ft BGS*	*-*
Parameters	*Units*				
Volatile Organic Compounds					
1,1,1,2-Tetrachloroethane	µg/kg	<5.6	<5.7	<5.1	-
1,1,1-Trichloroethane	µg/kg	<5.6	<5.7	<5.1	-
1,1,2,2-Tetrachloroethane	µg/kg	<5.6	<5.7	<5.1	-
1,1,2-Trichloroethane	µg/kg	<5.6	<5.7	<5.1	-
1,1-Dichloroethane	µg/kg	<5.6	<5.7	<5.1	-
1,1-Dichloroethene	µg/kg	<5.6	<5.7	<5.1	-
1,1-Dichloropropene	µg/kg	<5.6	<5.7	<5.1	-
1,2,3-Trichlorobenzene	µg/kg	<5.6	<5.7	<5.1	-
1,2,3-Trichloropropane	µg/kg	<5.6	<5.7	<5.1	-
1,2,4-Trichlorobenzene	µg/kg	<5.6	<5.7	<5.1	-
1,2,4-Trimethylbenzene	µg/kg	<5.6	<5.7	<5.1	-
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	<5.6	<5.7	<5.1	-
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	<5.6	<5.7	<5.1	-
1,2-Dichlorobenzene	µg/kg	<5.6	<5.7	<5.1	-
1,2-Dichloroethane	µg/kg	<5.6	<5.7	<5.1	-
1,2-Dichloropropane	µg/kg	<5.6	<5.7	<5.1	-
1,3,5-Trimethylbenzene	µg/kg	<5.6	<5.7	<5.1	-
1,3-Dichlorobenzene	µg/kg	<5.6	<5.7	<5.1	-
1,3-Dichloropropane	µg/kg	<5.6	<5.7	<5.1	-
1,4-Dichlorobenzene	µg/kg	<5.6	<5.7	<5.1	-
2,2-Dichloropropane	µg/kg	<5.6	<5.7	<5.1	-
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	<56	<57	<51	-
2-Chlorotoluene	µg/kg	<5.6	<5.7	<5.1	-
2-Hexanone	µg/kg	<56	<57	<51	-
2-Nitropropane	µg/kg	-	-	-	-
2-Phenylbutane (sec-Butylbenzene)	µg/kg	<5.6	<5.7	<5.1	-
4-Chlorotoluene	µg/kg	<5.6	<5.7	<5.1	-
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	<56	<57	<51	-
Acetone	µg/kg	<56	<57	<51	-
Benzene	µg/kg	<5.6	<5.7	<5.1	<5.0

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*WW (5)*	*WWA (7)*	*WWB (15)*	*FILL (COMP)*
	Sample ID:	*SO-2344-WW (5)-021111*	*SO-2344-WWA(7)-031111*	*SO-2344-WWB(15)-031111*	*SO-2344-FILL (COMP)-021111*
	Sample Date:	*11/2/2011*	*11/3/2011*	*11/3/2011*	*11/2/2011*
	Sample Depth:	*5 ft BGS*	*7 ft BGS*	*15 ft BGS*	*-*
Parameters	*Units*				
Volatile Organic Compounds (Cont'd.)					
Bromobenzene	µg/kg	<5.6	<5.7 UJ	<5.1 UJ	-
Bromodichloromethane	µg/kg	<5.6	<5.7	<5.1	-
Bromoform	µg/kg	<5.6	<5.7	<5.1	-
Bromomethane (Methyl bromide)	µg/kg	<11	<11	<10	-
Carbon disulfide	µg/kg	<5.6	<5.7	<5.1	-
Carbon tetrachloride	µg/kg	<5.6	<5.7	<5.1	-
Chlorobenzene	µg/kg	<5.6	<5.7	<5.1	-
Chlorobromomethane	µg/kg	<23	<23	<20	-
Chloroethane	µg/kg	<11	<11	<10	-
Chloroform (Trichloromethane)	µg/kg	<5.6	<5.7	<5.1	-
Chloromethane (Methyl chloride)	µg/kg	<11	<11	<10	-
cis-1,2-Dichloroethene	µg/kg	<5.6	<5.7	<5.1	-
cis-1,3-Dichloropropene	µg/kg	<5.6	<5.7	<5.1	-
Cymene (p-Isopropyltoluene)	µg/kg	<5.6	<5.7	<5.1	-
Dibromochloromethane	µg/kg	<5.6	<5.7	<5.1	-
Dibromomethane	µg/kg	<11	<11	<10	-
Dichlorodifluoromethane (CFC-12)	µg/kg	<11	<11	<10	-
Ethylbenzene	µg/kg	<5.6	<5.7	<5.1	<5.0
Hexachlorobutadiene	µg/kg	<5.6	<5.7	<5.1	-
Hexachloroethane	µg/kg	-	-	-	-
Isopropyl benzene	µg/kg	<5.6	<5.7	<5.1	-
Methyl tert butyl ether (MTBE)	µg/kg	<5.6	<5.7	<5.1	<5.0
Methylene chloride	µg/kg	<11	<11	<10	-
Naphthalene	µg/kg	<11	<11	<10	-
N-Butylbenzene	µg/kg	<5.6	<5.7	<5.1	-
N-Propylbenzene	µg/kg	<5.6	<5.7	<5.1	-
Styrene	µg/kg	<5.6	<5.7	<5.1	-
tert-Butylbenzene	µg/kg	<5.6	<5.7	<5.1	-
Tetrachloroethene	µg/kg	<5.6	<5.7	<5.1	-
Toluene	µg/kg	<5.6	<5.7	<5.1	<5.0

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*WW (5)*	*WWA (7)*	*WWB (15)*	*FILL (COMP)*
	Sample ID:	*SO-2344-WW (5)-021111*	*SO-2344-WWA(7)-031111*	*SO-2344-WWB(15)-031111*	*SO-2344-FILL (COMP)-021111*
	Sample Date:	*11/2/2011*	*11/3/2011*	*11/3/2011*	*11/2/2011*
	Sample Depth:	*5 ft BGS*	*7 ft BGS*	*15 ft BGS*	*-*
Parameters	***Units***				
Volatile Organic Compounds (Cont'd.)					
trans-1,2-Dichloroethene	µg/kg	<5.6	<5.7	<5.1	-
trans-1,3-Dichloropropene	µg/kg	<5.6	<5.7	<5.1	-
Trichloroethene	µg/kg	<5.6	<5.7	<5.1	-
Trichlorofluoromethane (CFC-11)	µg/kg	<5.6	<5.7	<5.1	-
Trifluorotrichloroethane (Freon 113)	µg/kg	<5.6	<5.7	<5.1	-
Vinyl acetate	µg/kg	<56	<57	<51	-
Vinyl chloride	µg/kg	<5.6	<5.7	<5.1	-
Xylenes (total)	µg/kg	<11	<11	<10	<9.9
Semi-volatile Organic Compounds - SIM					
Acenaphthene	µg/kg	<250	<4.9	<5.0	-
Acenaphthylene	µg/kg	<250	<4.9	<5.0	-
Anthracene	µg/kg	<250	<4.9	<5.0	-
Benzo(a)anthracene	µg/kg	<250	<4.9	<5.0	-
Benzo(a)pyrene	µg/kg	<250	<4.9	<5.0	-
Benzo(b)fluoranthene	µg/kg	<250	<4.9	<5.0	-
Benzo(g,h,i)perylene	µg/kg	<250	<4.9	<5.0	-
Benzo(k)fluoranthene	µg/kg	<250	<4.9	<5.0	-
Chrysene	µg/kg	<250	<4.9	<5.0	-
Dibenz(a,h)anthracene	µg/kg	<250	<4.9	<5.0	-
Fluoranthene	µg/kg	<250	<4.9	<5.0	-
Fluorene	µg/kg	<250	<4.9	<5.0	-
Indeno(1,2,3-cd)pyrene	µg/kg	<250	<4.9	<5.0	-
Naphthalene	µg/kg	<250	<4.9	5.2	-
Phenanthrene	µg/kg	<250	<4.9	<5.0	-
Pyrene	µg/kg	<250	<4.9	<5.0	-
Metals					
Antimony	mg/kg	-	<2.0	<1.9	-
Arsenic	mg/kg	-	6.2	4.0	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*WW (5)*	*WWA (7)*	*WWB (15)*	*FILL (COMP)*
	Sample ID:	*SO-2344-WW (5)-021111*	*SO-2344-WWA(7)-031111*	*SO-2344-WWB(15)-031111*	*SO-2344-FILL (COMP)-021111*
	Sample Date:	*11/2/2011*	*11/3/2011*	*11/3/2011*	*11/2/2011*
	Sample Depth:	*5 ft BGS*	*7 ft BGS*	*15 ft BGS*	*-*
Parameters	***Units***				
Metals (Cont'd)					
Barium	mg/kg	-	170	140	-
Beryllium	mg/kg	-	<0.40	<0.39	-
Cadmium	mg/kg	<0.49	<0.50	<0.49	-
Chromium	mg/kg	80	89	100	-
Cobalt	mg/kg	-	18	12	-
Copper	mg/kg	-	28	20	-
Lead	mg/kg	5.3	5.8	6.3	-
Mercury	mg/kg	-	0.051	0.038	-
Molybdenum	mg/kg	-	<2.0	<1.9	-
Nickel	mg/kg	140	140	100	-
Selenium	mg/kg	-	<4.0	<3.9	-
Silver	mg/kg	-	<1.0	<0.97	-
Thallium	mg/kg	-	<2.0	<1.9	-
Vanadium	mg/kg	-	59	48	-
Zinc	mg/kg	47	50	44	-
Metals - STLC					
Chromium	mg/L	-	-	-	-
Petroleum Products					
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	<280	<280	<250	<250
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	31	<0.99	<1.0	19
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	630	<49	<50	<50

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*WASTE 1 (COMP)*	*WASTE 2 (COMP)*	*WESTSP-(COMP)*
	Sample ID:	*SO-2344-WASTE 1 (COMP)-031111*	*SO-2344-WASTE 2 (COMP)-031111*	*SO-2344-WESTSP-(COMP)-021111*
	Sample Date:	*11/3/2011*	*11/3/2011*	*11/2/2011*
	Sample Depth:	*-*	*-*	*-*
Parameters	*Units*			
Volatile Organic Compounds				
1,1,1,2-Tetrachloroethane	µg/kg	<4.8	<5.0	<4.7
1,1,1-Trichloroethane	µg/kg	<4.8	<5.0	<4.7
1,1,2,2-Tetrachloroethane	µg/kg	<4.8	<5.0	<4.7
1,1,2-Trichloroethane	µg/kg	<4.8	<5.0	<4.7
1,1-Dichloroethane	µg/kg	<4.8	<5.0	<4.7
1,1-Dichloroethene	µg/kg	<4.8	<5.0	<4.7
1,1-Dichloropropene	µg/kg	<4.8	<5.0	<4.7
1,2,3-Trichlorobenzene	µg/kg	<4.8	<5.0	<4.7
1,2,3-Trichloropropane	µg/kg	<4.8	<5.0	<4.7
1,2,4-Trichlorobenzene	µg/kg	<4.8	<5.0	<4.7
1,2,4-Trimethylbenzene	µg/kg	<4.8	<5.0	<4.7
1,2-Dibromo-3-chloropropane (DBCP)	µg/kg	<4.8	<5.0	<4.7
1,2-Dibromoethane (Ethylene dibromide)	µg/kg	<4.8	<5.0	<4.7
1,2-Dichlorobenzene	µg/kg	<4.8	<5.0	<4.7
1,2-Dichloroethane	µg/kg	<4.8	<5.0	<4.7
1,2-Dichloropropane	µg/kg	<4.8	<5.0	<4.7
1,3,5-Trimethylbenzene	µg/kg	<4.8	<5.0	<4.7
1,3-Dichlorobenzene	µg/kg	<4.8	<5.0	<4.7
1,3-Dichloropropane	µg/kg	<4.8	<5.0	<4.7
1,4-Dichlorobenzene	µg/kg	<4.8	<5.0	<4.7
2,2-Dichloropropane	µg/kg	<4.8	<5.0	<4.7
2-Butanone (Methyl ethyl ketone) (MEK)	µg/kg	<48	<50	<47
2-Chlorotoluene	µg/kg	<4.8	<5.0	<4.7
2-Hexanone	µg/kg	<48	<50	<47
2-Nitropropane	µg/kg	-	-	<4.7
2-Phenylbutane (sec-Butylbenzene)	µg/kg	<4.8	<5.0	<4.7
4-Chlorotoluene	µg/kg	<4.8	<5.0	<4.7
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/kg	<48	<50	<47
Acetone	µg/kg	<48	<50	<47
Benzene	µg/kg	<4.8	<5.0	<4.7

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*WASTE 1 (COMP)*	*WASTE 2 (COMP)*	*WESTSP-(COMP)*
	Sample ID:	*SO-2344-WASTE 1 (COMP)-031111*	*SO-2344-WASTE 2 (COMP)-031111*	*SO-2344-WESTSP-(COMP)-021111*
	Sample Date:	*11/3/2011*	*11/3/2011*	*11/2/2011*
	Sample Depth:	*-*	*-*	*-*
Parameters	*Units*			
Volatile Organic Compounds (Cont'd.)				
Bromobenzene	µg/kg	<4.8	<5.0	<4.7
Bromodichloromethane	µg/kg	<4.8	<5.0	<4.7
Bromoform	µg/kg	<4.8	<5.0	<4.7
Bromomethane (Methyl bromide)	µg/kg	<9.6	<10	<9.5
Carbon disulfide	µg/kg	<4.8	<5.0	<4.7
Carbon tetrachloride	µg/kg	<4.8	<5.0	<4.7
Chlorobenzene	µg/kg	<4.8	<5.0	<4.7
Chlorobromomethane	µg/kg	<19	<20	<19
Chloroethane	µg/kg	<9.6	<10	<9.5
Chloroform (Trichloromethane)	µg/kg	<4.8	<5.0	<4.7
Chloromethane (Methyl chloride)	µg/kg	<9.6	<10	<9.5
cis-1,2-Dichloroethene	µg/kg	<4.8	<5.0	<4.7
cis-1,3-Dichloropropene	µg/kg	<4.8	<5.0	<4.7
Cymene (p-Isopropyltoluene)	µg/kg	<4.8	<5.0	<4.7
Dibromochloromethane	µg/kg	<4.8	<5.0	<4.7
Dibromomethane	µg/kg	<9.6	<10	<9.5
Dichlorodifluoromethane (CFC-12)	µg/kg	<9.6	<10	<9.5
Ethylbenzene	µg/kg	<4.8	<5.0	<4.7
Hexachlorobutadiene	µg/kg	<4.8	<5.0	<4.7
Hexachloroethane	µg/kg	-	-	<4.7
Isopropyl benzene	µg/kg	<4.8	<5.0	<4.7
Methyl tert butyl ether (MTBE)	µg/kg	<4.8	<5.0	<4.7
Methylene chloride	µg/kg	<9.6	<10	<9.5
Naphthalene	µg/kg	<9.6	<10	<9.5
N-Butylbenzene	µg/kg	<4.8	<5.0	<4.7
N-Propylbenzene	µg/kg	<4.8	<5.0	<4.7
Styrene	µg/kg	<4.8	<5.0	<4.7
tert-Butylbenzene	µg/kg	<4.8	<5.0	<4.7
Tetrachloroethene	µg/kg	<4.8	<5.0	<4.7
Toluene	µg/kg	<4.8	<5.0	<4.7

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*WASTE 1 (COMP)*	*WASTE 2 (COMP)*	*WESTSP-(COMP)*
	Sample ID:	*SO-2344-WASTE 1 (COMP)-031111*	*SO-2344-WASTE 2 (COMP)-031111*	*SO-2344-WESTSP-(COMP)-021111*
	Sample Date:	*11/3/2011*	*11/3/2011*	*11/2/2011*
	Sample Depth:	*-*	*-*	*-*
Parameters	*Units*			
Volatile Organic Compounds (Cont'd.)				
trans-1,2-Dichloroethene	µg/kg	<4.8	<5.0	<4.7
trans-1,3-Dichloropropene	µg/kg	<4.8	<5.0	<4.7
Trichloroethene	µg/kg	<4.8	<5.0	<4.7
Trichlorofluoromethane (CFC-11)	µg/kg	<4.8	<5.0	<4.7
Trifluorotrichloroethane (Freon 113)	µg/kg	<4.8	<5.0	<4.7
Vinyl acetate	µg/kg	<48	<50	<47
Vinyl chloride	µg/kg	<4.8	<5.0	<4.7
Xylenes (total)	µg/kg	<9.6	<10	<9.5
Semi-volatile Organic Compounds - SIM				
Acenaphthene	µg/kg	<5.0	<4.9	-
Acenaphthylene	µg/kg	<5.0	<4.9	-
Anthracene	µg/kg	<5.0	<4.9	-
Benzo(a)anthracene	µg/kg	<5.0	<4.9	-
Benzo(a)pyrene	µg/kg	<5.0	<4.9	-
Benzo(b)fluoranthene	µg/kg	<5.0	<4.9	-
Benzo(g,h,i)perylene	µg/kg	<5.0	<4.9	-
Benzo(k)fluoranthene	µg/kg	<5.0	<4.9	-
Chrysene	µg/kg	<5.0	<4.9	-
Dibenz(a,h)anthracene	µg/kg	<5.0	<4.9	-
Fluoranthene	µg/kg	<5.0	<4.9	-
Fluorene	µg/kg	<5.0	<4.9	-
Indeno(1,2,3-cd)pyrene	µg/kg	<5.0	<4.9	-
Naphthalene	µg/kg	<5.0	<4.9	-
Phenanthrene	µg/kg	<5.0	<4.9	-
Pyrene	µg/kg	<5.0	<4.9	-
Metals				
Antimony	mg/kg	15	<1.9	-
Arsenic	mg/kg	5.5	5.8	-

TABLE 1A

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	*WASTE 1 (COMP)*	*WASTE 2 (COMP)*	*WESTSP-(COMP)*
	Sample ID:	*SO-2344-WASTE 1 (COMP)-031111*	*SO-2344-WASTE 2 (COMP)-031111*	*SO-2344-WESTSP-(COMP)-021111*
	Sample Date:	*11/3/2011*	*11/3/2011*	*11/2/2011*
	Sample Depth:	*-*	*-*	*-*
Parameters	*Units*			
Metals (Cont'd)				
Barium	mg/kg	180	200	-
Beryllium	mg/kg	<0.36	<0.38	-
Cadmium	mg/kg	<0.45	<0.48	<0.50
Chromium	mg/kg	90	92	83
Cobalt	mg/kg	17	19	-
Copper	mg/kg	34	30	-
Lead	mg/kg	12	10	40
Mercury	mg/kg	0.052	0.077	-
Molybdenum	mg/kg	<1.8	<1.9	-
Nickel	mg/kg	130	140	120
Selenium	mg/kg	<3.6	<3.8	-
Silver	mg/kg	<0.91	<0.95	-
Thallium	mg/kg	<1.8	<1.9	-
Vanadium	mg/kg	55	56	-
Zinc	mg/kg	50	58	86
Metals - STLC				
Chromium	mg/L	<0.25	<0.25	-
Petroleum Products				
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/kg	<240	<250	<240
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	4.9 J	110	800
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<49	94	690

Notes:

- Not analyzed.
J - Estimated.
UJ - Not detected, estimated reporting limit.

TABLE 1B

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

		Sample Location:	*Tank Pit*
		Sample ID:	*WG-2344-WATER-031111*
		Sample Date:	*11/3/2011*
Parameters	*Units*		
Volatile Organic Compounds			
1,1,1,2-Tetrachloroethane	µg/L	<0.50	
1,1,1-Trichloroethane	µg/L	<0.50	
1,1,2,2-Tetrachloroethane	µg/L	<0.50	
1,1,2-Trichloroethane	µg/L	<0.50	
1,1-Dichloroethane	µg/L	<0.50	
1,1-Dichloroethene	µg/L	<0.50	
1,1-Dichloropropene	µg/L	<0.50	
1,2,3-Trichlorobenzene	µg/L	<1.0	
1,2,3-Trichloropropane	µg/L	<0.50	
1,2,4-Trichlorobenzene	µg/L	<1.0	
1,2,4-Trimethylbenzene	µg/L	<0.50	
1,2-Dibromo-3-chloropropane (DBCP)	µg/L	<1.0	
1,2-Dibromoethane (Ethylene dibromide)	µg/L	<0.50	
1,2-Dichlorobenzene	µg/L	<0.50	
1,2-Dichloroethane	µg/L	<0.50	
1,2-Dichloropropane	µg/L	<0.50	
1,3,5-Trimethylbenzene	µg/L	<0.50	
1,3-Dichlorobenzene	µg/L	<0.50	
1,3-Dichloropropane	µg/L	<1.0	
1,4-Dichlorobenzene	µg/L	<0.50	
2,2-Dichloropropane	µg/L	<0.50	
2-Butanone (Methyl ethyl ketone) (MEK)	µg/L	<50	
2-Chlorotoluene	µg/L	<0.50	
2-Hexanone	µg/L	<50	
2-Phenylbutane (sec-Butylbenzene)	µg/L	<1.0	
4-Chlorotoluene	µg/L	<0.50	
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)	µg/L	<50	
Acetone	µg/L	50	
Benzene	µg/L	<0.50	
Bromobenzene	µg/L	<1.0	
Bromodichloromethane	µg/L	<0.50	
Bromoform	µg/L	<1.0	
Bromomethane (Methyl bromide)	µg/L	<1.0	
Carbon disulfide	µg/L	<5.0	
Carbon tetrachloride	µg/L	<0.50	
Chlorobenzene	µg/L	<0.50	
Chlorobromomethane	µg/L	<1.0	
Chloroethane	µg/L	<1.0	
Chloroform (Trichloromethane)	µg/L	<1.0	
Chloromethane (Methyl chloride)	µg/L	<1.0	
cis-1,2-Dichloroethene	µg/L	<0.50	
cis-1,3-Dichloropropene	µg/L	<0.50	
Cymene (p-Isopropyltoluene)	µg/L	<1.0	
Dibromochloromethane	µg/L	<0.50	
Dibromomethane	µg/L	<0.50	

TABLE 1B

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

	Sample Location:	***Tank Pit***
	Sample ID:	***WG-2344-WATER-031111***
	Sample Date:	***11/3/2011***
Parameters	***Units***	
Volatile Organic Compounds (Cont'd.)		
Dichlorodifluoromethane (CFC-12)	µg/L	<0.50
Ethylbenzene	µg/L	<0.50
Hexachlorobutadiene	µg/L	<1.0
Isopropyl benzene	µg/L	<0.50
Methyl tert butyl ether (MTBE)	µg/L	<0.50
Methylene chloride	µg/L	<5.0
Naphthalene	µg/L	<1.0
N-Butylbenzene	µg/L	<1.0
N-Propylbenzene	µg/L	<1.0
Styrene	µg/L	<0.50
tert-Butylbenzene	µg/L	<1.0
Tetrachloroethene	µg/L	1.2
Toluene	µg/L	<0.50
trans-1,2-Dichloroethene	µg/L	<0.50
trans-1,3-Dichloropropene	µg/L	<0.50
Trichloroethene	µg/L	<0.50
Trichlorofluoromethane (CFC-11)	µg/L	<1.0
Trifluorotrichloroethane (Freon 113)	µg/L	<0.50
Vinyl acetate	µg/L	<10
Vinyl chloride	µg/L	<0.50
Xylenes (total)	µg/L	<1.0
Semi-volatile Organic Compounds		
1,2,4-Trichlorobenzene	µg/L	<2.1
1,2-Dichlorobenzene	µg/L	<2.1
1,3-Dichlorobenzene	µg/L	<2.1
1,4-Dichlorobenzene	µg/L	<2.1
2,4,5-Trichlorophenol	µg/L	<4.2
2,4,6-Trichlorophenol	µg/L	<2.1
2,4-Dichlorophenol	µg/L	<5.2
2,4-Dimethylphenol	µg/L	<3.1
2,4-Dinitrophenol	µg/L	<10
2,4-Dinitrotoluene	µg/L	<4.2
2,6-Dinitrotoluene	µg/L	<5.2
2-Chloronaphthalene	µg/L	<4.2
2-Chlorophenol	µg/L	<4.2
2-Methylnaphthalene	µg/L	<2.1
2-Methylphenol	µg/L	<4.2
2-Nitroaniline	µg/L	<10
2-Nitrophenol	µg/L	<2.1
3,3'-Dichlorobenzidine	µg/L	<5.2
3-Nitroaniline	µg/L	<5.2
4,6-Dinitro-2-methylphenol	µg/L	<10
4-Bromophenyl phenyl ether	µg/L	<5.2
4-Chloro-3-methylphenol	µg/L	<5.2

TABLE 1B

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

		Sample Location:	*Tank Pit*
		Sample ID:	*WG-2344-WATER-031111*
		Sample Date:	*11/3/2011*
Parameters	*Units*		
Semi-volatile Organic Compounds (Cont'd.)			
4-Chloroaniline	µg/L	<2.1	
4-Chlorophenyl phenyl ether	µg/L	<5.2	
4-Methylphenol	µg/L	<8.3	
4-Nitroaniline	µg/L	<10	
4-Nitrophenol	µg/L	<10	
Acenaphthene	µg/L	<2.1	
Acenaphthylene	µg/L	<4.2	
Anthracene	µg/L	<2.1	
Azobenzene	µg/L	<2.1	
Benzo(a)anthracene	µg/L	<5.2	
Benzo(a)pyrene	µg/L	<2.1	
Benzo(b)fluoranthene	µg/L	<2.1	
Benzo(g,h,i)perylene	µg/L	<2.1	
Benzo(k)fluoranthene	µg/L	<2.1	
Benzoic acid	µg/L	<10	
Benzyl alcohol	µg/L	<5.2	
bis(2-Chloroethoxy)methane	µg/L	<5.2	
bis(2-Chloroethyl)ether	µg/L	<2.1	
bis(2-Ethylhexyl)phthalate (DEHP)	µg/L	<10	
Butyl benzylphthalate (BBP)	µg/L	<5.2	
Chrysene	µg/L	<2.1	
Dibenz(a,h)anthracene	µg/L	<2.1	
Dibenzofuran	µg/L	<4.2	
Diethyl phthalate	µg/L	<5.2	
Dimethyl phthalate	µg/L	<5.2	
Di-n-butylphthalate (DBP)	µg/L	<5.2	
Di-n-octyl phthalate (DnOP)	µg/L	<5.2	
Fluoranthene	µg/L	<2.1	
Fluorene	µg/L	<4.2	
Hexachlorobenzene	µg/L	<2.1	
Hexachlorobutadiene	µg/L	<2.1	
Hexachlorocyclopentadiene	µg/L	<5.2	
Hexachloroethane	µg/L	<2.1	
Indeno(1,2,3-cd)pyrene	µg/L	<2.1	
Isophorone	µg/L	<4.2	
Naphthalene	µg/L	<2.1	
Nitrobenzene	µg/L	<2.1	
N-Nitrosodi-n-propylamine	µg/L	<2.1	
N-Nitrosodiphenylamine	µg/L	<2.1	
Pentachlorophenol	µg/L	<10	
Phenanthrene	µg/L	<2.1	
Phenol	µg/L	<2.1	
Pyrene	µg/L	<2.1	

TABLE 1B

ANALYTICAL RESULTS SUMMARY
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

		Sample Location:	***Tank Pit***
		Sample ID:	***WG-2344-WATER-031111***
		Sample Date:	***11/3/2011***
Parameters	***Units***		
Semi-volatile Organic Compounds - SIM			
Acenaphthene	µg/L		<0.11
Acenaphthylene	µg/L		<0.11
Anthracene	µg/L		<0.11
Benzo(a)anthracene	µg/L		<0.11
Benzo(a)pyrene	µg/L		<0.11
Benzo(b)fluoranthene	µg/L		<0.11
Benzo(g,h,i)perylene	µg/L		<0.11
Benzo(k)fluoranthene	µg/L		<0.11
Chrysene	µg/L		0.41
Dibenz(a,h)anthracene	µg/L		<0.11
Fluoranthene	µg/L		<0.11
Fluorene	µg/L		<0.11
Indeno(1,2,3-cd)pyrene	µg/L		<0.11
Naphthalene	µg/L		<0.11
Phenanthrene	µg/L		1.3
Pyrene	µg/L		0.32
Metals			
Antimony	mg/L		<0.010
Arsenic	mg/L		<0.010
Barium	mg/L		0.25
Beryllium	mg/L		<0.0020
Cadmium	mg/L		<0.0025
Cadmium (dissolved)	mg/L		<0.0020
Chromium	mg/L		0.080
Chromium Total (dissolved)	mg/L		0.012
Cobalt	mg/L		0.011
Copper	mg/L		0.033
Lead	mg/L		0.025
Lead (dissolved)	mg/L		<0.0050
Mercury	mg/L		<0.00020
Molybdenum	mg/L		<0.010
Nickel	mg/L		0.11
Nickel (dissolved)	mg/L		0.027
Selenium	mg/L		<0.020
Silver	mg/L		<0.0050
Thallium	mg/L		<0.010
Vanadium	mg/L		0.053
Zinc	mg/L		0.056
Zinc (dissolved)	mg/L		<0.020
Petroleum Products			
Total Petroleum Hydrocarbons (C5-C12) GRO	µg/L		<50
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L		12000
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L		6700

TABLE 2

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

Parameter	*Compound*	*LCS Date*	*Associated Sample ID*	*LCS %Rec*	*LCSD %Rec*	*RPD (percent)*	*Control Limits*		*Qualified Sample Results*		*Units*
							%Rec	*%RPD*			
SW8260EN	Bromobenzene	11/4/2011	SO-2344-NWA(8)-031111	87	92	4	88-120	20	5.1	UJ	µg/kg
SW8260EN	Bromobenzene	11/4/2011	SO-2344-SWA(7)-031111	87	92	4	88-120	20	4.9	UJ	µg/kg
SW8260EN	Bromobenzene	11/4/2011	SO-2344-SWB(15)-031111	87	92	4	88-120	20	4.4	UJ	µg/kg
SW8260EN	Bromobenzene	11/4/2011	SO-2344-WWA(7)-031111	87	92	4	88-120	20	5.7	UJ	µg/kg
SW8260EN	Bromobenzene	11/4/2011	SO-2344-WWB(15)-031111	87	92	4	88-120	20	5.1	UJ	µg/kg
SW8260EN	Bromobenzene	11/4/2011	SO-EWA (7)-031111	87	92	4	88-120	20	5.0	UJ	µg/kg
SW8260EN	Bromobenzene	11/4/2011	SO-EWB(15)-031111	87	92	4	88-120	20	5.2	UJ	µg/kg

Notes:

LCS Laboratory Control Sample.
LCSD Laboratory Control Sample Duplicate.
RPD Relative Percent Difference.
UJ Not detected, estimated reporting limit.

TABLE 3

QUALIFIED SAMPLE RESULTS DUE TO OUTLYING MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERIES
UST TANK PULL
CA-2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
NOVEMBER 2011

Parameter	*Associated Sample ID*	*Analyte*	*MS Recovery (percent)*	*MSD Recovery (percent)*	*RPD*	*Control Limits*		*Qualified Sample Result*		*Units*
						Recovery (percent)	*RPD (percent)*			
SW8015D	SO-2344-WASTE 1 (COMP)-031111	Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	72	55	23	50-150	20	4.9	J	mg/kg

Notes:

MS Matrix Spike.
MSD Matrix Spike Duplicate.
RPD Relative Percent Difference.
J Estimated.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-38467-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
11/7/2011 4:33:51 PM

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-38467-1

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-38467-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
Method 8260B: Internal standard responses were outside of acceptance limits for the following sample: SO-2344-WW (5)-021111 (720-38467-3). The result was confirmed by re-analysis.

Method 8260B: Internal standard responses were outside of acceptance limits for the following sample 720-38467-7. The sample shows evidence of matrix interference; confirmed by re-analysis.

No other analytical or quality issues were noted.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-NW (5)-021111 (720-38467-2), SO-2344-T1N (5)-021111 (720-38467-9), SO-2344-T2N (5)-021111 (720-38467-7), SO-2344-WW (5)-021111 (720-38467-3). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

GC Semi VOA
Method 8015B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: SO-2344-WW (5) -021111 (720-38467-3), SO-2344-T2N (5)-021111 (720-38467-7), SO-2344-WESTSP-(COMP)-021111 (720-38467-10).

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-NW (5)-021111 — Lab Sample ID: 720-38467-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	250		2.0		mg/Kg	2		8015B	Silica Gel Clean
Motor Oil Range Organics [C24-C36]	170		99		mg/Kg	2		8015B	Silica Gel Clean
Chromium	91		1.9		mg/Kg	4		6010B	Total/NA
Nickel	140		1.9		mg/Kg	4		6010B	Total/NA
Lead	6.3		1.9		mg/Kg	4		6010B	Total/NA
Zinc	57		5.7		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-WW (5)-021111 — Lab Sample ID: 720-38467-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	31		9.9		mg/Kg	10		8015B	Silica Gel Clean
Motor Oil Range Organics [C24-C36]	630		490		mg/Kg	10		8015B	Silica Gel Clean
Chromium	80		1.9		mg/Kg	4		6010B	Total/NA
Nickel	140		1.9		mg/Kg	4		6010B	Total/NA
Lead	5.3		1.9		mg/Kg	4		6010B	Total/NA
Zinc	47		5.8		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-EW (5)-021111 — Lab Sample ID: 720-38467-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	88		1.9		mg/Kg	4		6010B	Total/NA
Nickel	140		1.9		mg/Kg	4		6010B	Total/NA
Lead	5.4		1.9		mg/Kg	4		6010B	Total/NA
Zinc	54		5.8		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-SW (5.5)-021111 — Lab Sample ID: 720-38467-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	87		2.0		mg/Kg	4		6010B	Total/NA
Nickel	140		2.0		mg/Kg	4		6010B	Total/NA
Lead	6.8		2.0		mg/Kg	4		6010B	Total/NA
Zinc	64		5.9		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-T2S (5.5)-021111 — Lab Sample ID: 720-38467-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	76		1.0		mg/Kg	1		8015B	Silica Gel Clean
Motor Oil Range Organics [C24-C36]	85		50		mg/Kg	1		8015B	Silica Gel Clean
Chromium	92		1.9		mg/Kg	4		6010B	Total/NA
Nickel	140		1.9		mg/Kg	4		6010B	Total/NA
Lead	7.1		1.9		mg/Kg	4		6010B	Total/NA
Zinc	55		5.8		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-T2N (5)-021111 — Lab Sample ID: 720-38467-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	170		9.9		mg/Kg	10		8015B	Silica Gel Clean
Motor Oil Range Organics [C24-C36]	1600		490		mg/Kg	10		8015B	Silica Gel Clean
Chromium	90		1.9		mg/Kg	4		6010B	Total/NA
Nickel	130		1.9		mg/Kg	4		6010B	Total/NA
Lead	7.7		1.9		mg/Kg	4		6010B	Total/NA
Zinc	52		5.8		mg/Kg	4		6010B	Total/NA

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T1S (5.5)-021111 — Lab Sample ID: 720-38467-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	110		1.8		mg/Kg	4		6010B	Total/NA
Nickel	150		1.8		mg/Kg	4		6010B	Total/NA
Lead	7.0		1.8		mg/Kg	4		6010B	Total/NA
Zinc	74		5.5		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-T1N (5)-021111 — Lab Sample ID: 720-38467-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	300		2.0		mg/Kg	2		8015B	Silica Gel Clean
Motor Oil Range Organics [C24-C36]	180		99		mg/Kg	2		8015B	Silica Gel Clean
Chromium	98		1.9		mg/Kg	4		6010B	Total/NA
Nickel	140		1.9		mg/Kg	4		6010B	Total/NA
Lead	6.3		1.9		mg/Kg	4		6010B	Total/NA
Zinc	180		5.8		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-WESTSP-(COMP)-021111 — Lab Sample ID: 720-38467-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	800		10		mg/Kg	10		8015B	Silica Gel Clean
Motor Oil Range Organics [C24-C36]	690		500		mg/Kg	10		8015B	Silica Gel Clean
Chromium	83		2.0		mg/Kg	4		6010B	Total/NA
Nickel	120		2.0		mg/Kg	4		6010B	Total/NA
Lead	40		2.0		mg/Kg	4		6010B	Total/NA
Zinc	86		5.9		mg/Kg	4		6010B	Total/NA

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-NW (5)-021111
Date Collected: 11/02/11 14:45
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-2
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Acetone	ND		51		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Benzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Dichlorobromomethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Bromobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Chlorobromomethane	ND		20		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Bromoform	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Bromomethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
2-Butanone (MEK)	ND		51		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
n-Butylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
sec-Butylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
tert-Butylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Carbon disulfide	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Carbon tetrachloride	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Chlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Chloroethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Chloroform	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Chloromethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
2-Chlorotoluene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
4-Chlorotoluene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Chlorodibromomethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,2-Dichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,3-Dichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,4-Dichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,3-Dichloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,1-Dichloropropene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,2-Dibromo-3-Chloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Ethylene Dibromide	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Dibromomethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,1-Dichloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,2-Dichloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,1-Dichloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
cis-1,2-Dichloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
trans-1,2-Dichloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,2-Dichloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
cis-1,3-Dichloropropene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
trans-1,3-Dichloropropene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Ethylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Hexachlorobutadiene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
2-Hexanone	ND		51		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Isopropylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
4-Isopropyltoluene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Methylene Chloride	ND		10		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
4-Methyl-2-pentanone (MIBK)	ND		51		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Naphthalene	ND		10		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
N-Propylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Styrene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,1,1,2-Tetrachloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,1,2,2-Tetrachloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-NW (5)-021111
Date Collected: 11/02/11 14:45
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-2
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Toluene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,2,3-Trichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,2,4-Trichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,1,1-Trichloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,1,2-Trichloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Trichloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Trichlorofluoromethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,2,3-Trichloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,2,4-Trimethylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
1,3,5-Trimethylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Vinyl acetate	ND		51		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Vinyl chloride	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Xylenes, Total	ND		10		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
2,2-Dichloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 03:48	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/02/11 20:15	11/05/11 03:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*45 - 131*	*11/02/11 20:15*	*11/05/11 03:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*114*		*60 - 140*	*11/02/11 20:15*	*11/05/11 03:48*	*1*
Toluene-d8 (Surr)	*93*		*58 - 140*	*11/02/11 20:15*	*11/05/11 03:48*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Acenaphthylene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Anthracene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Benzo[a]anthracene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Benzo[a]pyrene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Benzo[b]fluoranthene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Benzo[g,h,i]perylene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Benzo[k]fluoranthene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Chrysene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Fluoranthene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Fluorene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Indeno[1,2,3-cd]pyrene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Naphthalene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Phenanthrene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5
Pyrene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 13:04	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*33 - 120*	*11/04/11 14:34*	*11/07/11 13:04*	*5*
Terphenyl-d14	*88*		*35 - 146*	*11/04/11 14:34*	*11/07/11 13:04*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**250**		2.0		mg/Kg		11/04/11 14:37	11/07/11 10:28	2
Motor Oil Range Organics [C24-C36]	**170**		99		mg/Kg		11/04/11 14:37	11/07/11 10:28	2

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-NW (5)-021111
Date Collected: 11/02/11 14:45
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-2
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.03*		*0 - 1*	*11/04/11 14:37*	*11/07/11 10:28*	*2*
p-Terphenyl	*38*		*38 - 148*	*11/04/11 14:37*	*11/07/11 10:28*	*2*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.47		mg/Kg		11/04/11 14:44	11/07/11 13:53	4
Chromium	**91**		1.9		mg/Kg		11/04/11 14:44	11/07/11 13:53	4
Nickel	**140**		1.9		mg/Kg		11/04/11 14:44	11/07/11 13:53	4
Lead	**6.3**		1.9		mg/Kg		11/04/11 14:44	11/07/11 13:53	4
Zinc	**57**		5.7		mg/Kg		11/04/11 14:44	11/07/11 13:53	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-WW (5)-021111
Date Collected: 11/02/11 14:35
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-3
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Acetone	ND		56		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Benzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Dichlorobromomethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Bromobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Chlorobromomethane	ND		23		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Bromoform	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Bromomethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
2-Butanone (MEK)	ND		56		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
n-Butylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
sec-Butylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
tert-Butylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Carbon disulfide	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Carbon tetrachloride	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Chlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Chloroethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Chloroform	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Chloromethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
2-Chlorotoluene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
4-Chlorotoluene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Chlorodibromomethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,2-Dichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,3-Dichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,4-Dichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,3-Dichloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,1-Dichloropropene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,2-Dibromo-3-Chloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Ethylene Dibromide	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Dibromomethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Dichlorodifluoromethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,1-Dichloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,2-Dichloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,1-Dichloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
cis-1,2-Dichloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
trans-1,2-Dichloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,2-Dichloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
cis-1,3-Dichloropropene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
trans-1,3-Dichloropropene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Ethylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Hexachlorobutadiene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
2-Hexanone	ND		56		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Isopropylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
4-Isopropyltoluene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Methylene Chloride	ND		11		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
4-Methyl-2-pentanone (MIBK)	ND		56		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Naphthalene	ND		11		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
N-Propylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Styrene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,1,1,2-Tetrachloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,1,2,2-Tetrachloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1

Client Sample ID: SO-2344-WW (5)-021111
Date Collected: 11/02/11 14:35
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-3
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Toluene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,2,3-Trichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,2,4-Trichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,1,1-Trichloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,1,2-Trichloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Trichloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Trichlorofluoromethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,2,3-Trichloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,2,4-Trimethylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
1,3,5-Trimethylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Vinyl acetate	ND		56		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Vinyl chloride	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Xylenes, Total	ND		11		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
2,2-Dichloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 17:34	1
Gasoline Range Organics (GRO) -C5-C12	ND		280		ug/Kg		11/02/11 20:15	11/05/11 17:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*66*		*45 - 131*	*11/02/11 20:15*	*11/05/11 17:34*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*60 - 140*	*11/02/11 20:15*	*11/05/11 17:34*	*1*
Toluene-d8 (Surr)	*74*		*58 - 140*	*11/02/11 20:15*	*11/05/11 17:34*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Acenaphthylene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Anthracene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Benzo[a]anthracene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Benzo[a]pyrene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Benzo[b]fluoranthene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Benzo[g,h,i]perylene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Benzo[k]fluoranthene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Chrysene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Dibenz(a,h)anthracene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Fluoranthene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Fluorene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Indeno[1,2,3-cd]pyrene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Naphthalene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Phenanthrene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10
Pyrene	ND		250		ug/Kg		11/04/11 14:34	11/07/11 13:27	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*33 - 120*	*11/04/11 14:34*	*11/07/11 13:27*	*10*
Terphenyl-d14	*66*		*35 - 146*	*11/04/11 14:34*	*11/07/11 13:27*	*10*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**31**		9.9		mg/Kg		11/04/11 14:37	11/05/11 15:24	10
Motor Oil Range Organics [C24-C36]	**630**		490		mg/Kg		11/04/11 14:37	11/05/11 15:24	10

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-WW (5)-021111
Date Collected: 11/02/11 14:35
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-3
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*11/04/11 14:37*	*11/05/11 15:24*	*10*
p-Terphenyl	*0*	*X D*	*38 - 148*	*11/04/11 14:37*	*11/05/11 15:24*	*10*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.49		mg/Kg		11/04/11 14:44	11/07/11 13:58	4
Chromium	**80**		1.9		mg/Kg		11/04/11 14:44	11/07/11 13:58	4
Nickel	**140**		1.9		mg/Kg		11/04/11 14:44	11/07/11 13:58	4
Lead	**5.3**		1.9		mg/Kg		11/04/11 14:44	11/07/11 13:58	4
Zinc	**47**		5.8		mg/Kg		11/04/11 14:44	11/07/11 13:58	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-EW (5)-021111
Date Collected: 11/02/11 14:20
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-4
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Acetone	ND		52		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Benzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Dichlorobromomethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Bromobenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Chlorobromomethane	ND		21		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Bromoform	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Bromomethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
2-Butanone (MEK)	ND		52		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
n-Butylbenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
sec-Butylbenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
tert-Butylbenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Carbon disulfide	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Carbon tetrachloride	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Chlorobenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Chloroethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Chloroform	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Chloromethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
2-Chlorotoluene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
4-Chlorotoluene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Chlorodibromomethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,2-Dichlorobenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,3-Dichlorobenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,4-Dichlorobenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,3-Dichloropropane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,1-Dichloropropene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,2-Dibromo-3-Chloropropane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Ethylene Dibromide	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Dibromomethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,1-Dichloroethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,2-Dichloroethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,1-Dichloroethene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
cis-1,2-Dichloroethene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
trans-1,2-Dichloroethene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,2-Dichloropropane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
cis-1,3-Dichloropropene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
trans-1,3-Dichloropropene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Ethylbenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Hexachlorobutadiene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
2-Hexanone	ND		52		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Isopropylbenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
4-Isopropyltoluene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Methylene Chloride	ND		10		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
4-Methyl-2-pentanone (MIBK)	ND		52		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Naphthalene	ND		10		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
N-Propylbenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Styrene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,1,1,2-Tetrachloroethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,1,2,2-Tetrachloroethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-EW (5)-021111
Date Collected: 11/02/11 14:20
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-4
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Toluene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,2,3-Trichlorobenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,2,4-Trichlorobenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,1,1-Trichloroethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,1,2-Trichloroethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Trichloroethene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Trichlorofluoromethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,2,3-Trichloropropane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,2,4-Trimethylbenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
1,3,5-Trimethylbenzene	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Vinyl acetate	ND		52		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Vinyl chloride	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Xylenes, Total	ND		10		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
2,2-Dichloropropane	ND		5.2		ug/Kg		11/02/11 20:15	11/05/11 04:51	1
Gasoline Range Organics (GRO) -C5-C12	ND		260		ug/Kg		11/02/11 20:15	11/05/11 04:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*85*		*45 - 131*	*11/02/11 20:15*	*11/05/11 04:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*	*11/02/11 20:15*	*11/05/11 04:51*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*11/02/11 20:15*	*11/05/11 04:51*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Chrysene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Fluorene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1
Pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 13:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*33 - 120*	*11/04/11 14:34*	*11/07/11 13:50*	*1*
Terphenyl-d14	*78*		*35 - 146*	*11/04/11 14:34*	*11/07/11 13:50*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		11/04/11 14:37	11/05/11 18:15	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		11/04/11 14:37	11/05/11 18:15	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-EW (5)-021111
Date Collected: 11/02/11 14:20
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-4
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0.002*		*0 - 1*	*11/04/11 14:37*	*11/05/11 18:15*	*1*
p-Terphenyl	*83*		*38 - 148*	*11/04/11 14:37*	*11/05/11 18:15*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		11/04/11 14:44	11/07/11 14:02	4
Chromium	**88**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:02	4
Nickel	**140**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:02	4
Lead	**5.4**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:02	4
Zinc	**54**		5.8		mg/Kg		11/04/11 14:44	11/07/11 14:02	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-SW (5.5)-021111
Date Collected: 11/02/11 14:15
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-5
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Acetone	ND		53		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Benzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Dichlorobromomethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Bromobenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Chlorobromomethane	ND		21		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Bromoform	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Bromomethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
2-Butanone (MEK)	ND		53		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
n-Butylbenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
sec-Butylbenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
tert-Butylbenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Carbon disulfide	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Carbon tetrachloride	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Chlorobenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Chloroethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Chloroform	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Chloromethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
2-Chlorotoluene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
4-Chlorotoluene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Chlorodibromomethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,2-Dichlorobenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,3-Dichlorobenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,4-Dichlorobenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,3-Dichloropropane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,1-Dichloropropene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,2-Dibromo-3-Chloropropane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Ethylene Dibromide	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Dibromomethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Dichlorodifluoromethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,1-Dichloroethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,2-Dichloroethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,1-Dichloroethene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
cis-1,2-Dichloroethene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
trans-1,2-Dichloroethene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,2-Dichloropropane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
cis-1,3-Dichloropropene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
trans-1,3-Dichloropropene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Ethylbenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Hexachlorobutadiene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
2-Hexanone	ND		53		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Isopropylbenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
4-Isopropyltoluene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Methylene Chloride	ND		11		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
4-Methyl-2-pentanone (MIBK)	ND		53		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Naphthalene	ND		11		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
N-Propylbenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Styrene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,1,1,2-Tetrachloroethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,1,2,2-Tetrachloroethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1

Client Sample ID: SO-2344-SW (5.5)-021111
Date Collected: 11/02/11 14:15
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-5
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Toluene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,2,3-Trichlorobenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,2,4-Trichlorobenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,1,1-Trichloroethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,1,2-Trichloroethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Trichloroethene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Trichlorofluoromethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,2,3-Trichloropropane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,2,4-Trimethylbenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
1,3,5-Trimethylbenzene	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Vinyl acetate	ND		53		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Vinyl chloride	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Xylenes, Total	ND		11		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
2,2-Dichloropropane	ND		5.3		ug/Kg		11/02/11 20:15	11/05/11 05:22	1
Gasoline Range Organics (GRO) -C5-C12	ND		260		ug/Kg		11/02/11 20:15	11/05/11 05:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*85*		*45 - 131*	*11/02/11 20:15*	*11/05/11 05:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 140*	*11/02/11 20:15*	*11/05/11 05:22*	*1*
Toluene-d8 (Surr)	*91*		*58 - 140*	*11/02/11 20:15*	*11/05/11 05:22*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Chrysene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Fluorene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1
Pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*74*		*33 - 120*	*11/04/11 14:34*	*11/07/11 14:14*	*1*
Terphenyl-d14	*82*		*35 - 146*	*11/04/11 14:34*	*11/07/11 14:14*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		11/04/11 14:37	11/05/11 18:39	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/04/11 14:37	11/05/11 18:39	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-SW (5.5)-021111
Date Collected: 11/02/11 14:15
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-5
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0.0001*		*0 - 1*	*11/04/11 14:37*	*11/05/11 18:39*	*1*
p-Terphenyl	*76*		*38 - 148*	*11/04/11 14:37*	*11/05/11 18:39*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.49		mg/Kg		11/04/11 14:44	11/07/11 14:15	4
Chromium	**87**		2.0		mg/Kg		11/04/11 14:44	11/07/11 14:15	4
Nickel	**140**		2.0		mg/Kg		11/04/11 14:44	11/07/11 14:15	4
Lead	**6.8**		2.0		mg/Kg		11/04/11 14:44	11/07/11 14:15	4
Zinc	**64**		5.9		mg/Kg		11/04/11 14:44	11/07/11 14:15	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T2S (5.5)-021111
Date Collected: 11/02/11 14:05
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-6
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Acetone	ND		48		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Benzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Dichlorobromomethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Bromobenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Chlorobromomethane	ND		19		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Bromoform	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Bromomethane	ND		9.7		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
2-Butanone (MEK)	ND		48		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
n-Butylbenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
sec-Butylbenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
tert-Butylbenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Carbon disulfide	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Carbon tetrachloride	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Chlorobenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Chloroethane	ND		9.7		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Chloroform	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Chloromethane	ND		9.7		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
2-Chlorotoluene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
4-Chlorotoluene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Chlorodibromomethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,2-Dichlorobenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,3-Dichlorobenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,4-Dichlorobenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,3-Dichloropropane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,1-Dichloropropene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,2-Dibromo-3-Chloropropane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Ethylene Dibromide	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Dibromomethane	ND		9.7		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Dichlorodifluoromethane	ND		9.7		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,1-Dichloroethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,2-Dichloroethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,1-Dichloroethene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
cis-1,2-Dichloroethene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
trans-1,2-Dichloroethene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,2-Dichloropropane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
cis-1,3-Dichloropropene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
trans-1,3-Dichloropropene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Ethylbenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Hexachlorobutadiene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
2-Hexanone	ND		48		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Isopropylbenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
4-Isopropyltoluene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Methylene Chloride	ND		9.7		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
4-Methyl-2-pentanone (MIBK)	ND		48		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Naphthalene	ND		9.7		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
N-Propylbenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Styrene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,1,1,2-Tetrachloroethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,1,2,2-Tetrachloroethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T2S (5.5)-021111
Date Collected: 11/02/11 14:05
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-6
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Toluene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,2,3-Trichlorobenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,2,4-Trichlorobenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,1,1-Trichloroethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,1,2-Trichloroethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Trichloroethene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Trichlorofluoromethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,2,3-Trichloropropane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,2,4-Trimethylbenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
1,3,5-Trimethylbenzene	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Vinyl acetate	ND		48		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Vinyl chloride	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Xylenes, Total	ND		9.7		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
2,2-Dichloropropane	ND		4.8		ug/Kg		11/02/11 20:15	11/05/11 18:03	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		11/02/11 20:15	11/05/11 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*86*		*45 - 131*	*11/02/11 20:15*	*11/05/11 18:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*	*11/02/11 20:15*	*11/05/11 18:03*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*11/02/11 20:15*	*11/05/11 18:03*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Chrysene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Fluorene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1
Pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 14:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*33 - 120*	*11/04/11 14:34*	*11/07/11 14:37*	*1*
Terphenyl-d14	*83*		*35 - 146*	*11/04/11 14:34*	*11/07/11 14:37*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**76**		1.0		mg/Kg		11/04/11 14:37	11/05/11 17:02	1
Motor Oil Range Organics [C24-C36]	**85**		50		mg/Kg		11/04/11 14:37	11/05/11 17:02	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T2S (5.5)-021111
Date Collected: 11/02/11 14:05
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-6
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.006*		*0 - 1*	*11/04/11 14:37*	*11/05/11 17:02*	*1*
p-Terphenyl	*74*		*38 - 148*	*11/04/11 14:37*	*11/05/11 17:02*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		11/04/11 14:44	11/07/11 14:20	4
Chromium	**92**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:20	4
Nickel	**140**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:20	4
Lead	**7.1**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:20	4
Zinc	**55**		5.8		mg/Kg		11/04/11 14:44	11/07/11 14:20	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T2N (5)-021111
Date Collected: 11/02/11 13:55
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-7
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Acetone	ND		51		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Benzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Dichlorobromomethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Bromobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Chlorobromomethane	ND		21		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Bromoform	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Bromomethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
2-Butanone (MEK)	ND		51		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
n-Butylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
sec-Butylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
tert-Butylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Carbon disulfide	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Carbon tetrachloride	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Chlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Chloroethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Chloroform	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Chloromethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
2-Chlorotoluene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
4-Chlorotoluene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Chlorodibromomethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,2-Dichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,3-Dichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,4-Dichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,3-Dichloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,1-Dichloropropene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,2-Dibromo-3-Chloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Ethylene Dibromide	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Dibromomethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,1-Dichloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,2-Dichloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,1-Dichloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
cis-1,2-Dichloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
trans-1,2-Dichloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,2-Dichloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
cis-1,3-Dichloropropene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
trans-1,3-Dichloropropene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Ethylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Hexachlorobutadiene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
2-Hexanone	ND		51		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Isopropylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
4-Isopropyltoluene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Methylene Chloride	ND		10		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
4-Methyl-2-pentanone (MIBK)	ND		51		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Naphthalene	ND		10		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
N-Propylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Styrene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,1,1,2-Tetrachloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,1,2,2-Tetrachloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1

Client Sample ID: SO-2344-T2N (5)-021111
Date Collected: 11/02/11 13:55
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-7
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Toluene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,2,3-Trichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,2,4-Trichlorobenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,1,1-Trichloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,1,2-Trichloroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Trichloroethene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Trichlorofluoromethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,2,3-Trichloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,2,4-Trimethylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
1,3,5-Trimethylbenzene	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Vinyl acetate	ND		51		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Vinyl chloride	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Xylenes, Total	ND		10		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
2,2-Dichloropropane	ND		5.1		ug/Kg		11/02/11 20:15	11/05/11 16:36	1
Gasoline Range Organics (GRO) -C5-C12	ND		260		ug/Kg		11/02/11 20:15	11/05/11 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*71*		*45 - 131*	*11/02/11 20:15*	*11/05/11 16:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*110*		*60 - 140*	*11/02/11 20:15*	*11/05/11 16:36*	*1*
Toluene-d8 (Surr)	*77*		*58 - 140*	*11/02/11 20:15*	*11/05/11 16:36*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Acenaphthylene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Anthracene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Benzo[a]anthracene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Benzo[a]pyrene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Benzo[b]fluoranthene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Benzo[g,h,i]perylene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Benzo[k]fluoranthene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Chrysene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Dibenz(a,h)anthracene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Fluoranthene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Fluorene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Indeno[1,2,3-cd]pyrene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Naphthalene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Phenanthrene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2
Pyrene	ND		50		ug/Kg		11/04/11 14:34	11/07/11 15:01	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*66*		*33 - 120*	*11/04/11 14:34*	*11/07/11 15:01*	*2*
Terphenyl-d14	*65*		*35 - 146*	*11/04/11 14:34*	*11/07/11 15:01*	*2*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**170**		9.9		mg/Kg		11/04/11 14:37	11/05/11 17:26	10
Motor Oil Range Organics [C24-C36]	**1600**		490		mg/Kg		11/04/11 14:37	11/05/11 17:26	10

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T2N (5)-021111
Date Collected: 11/02/11 13:55
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-7
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0*		*0 - 1*	*11/04/11 14:37*	*11/05/11 17:26*	*10*
p-Terphenyl	*0*	*X D*	*38 - 148*	*11/04/11 14:37*	*11/05/11 17:26*	*10*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		11/04/11 14:44	11/07/11 14:24	4
Chromium	**90**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:24	4
Nickel	**130**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:24	4
Lead	**7.7**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:24	4
Zinc	**52**		5.8		mg/Kg		11/04/11 14:44	11/07/11 14:24	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T1S (5.5)-021111
Date Collected: 11/02/11 13:45
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-8
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Acetone	ND		56		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Benzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Dichlorobromomethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Bromobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Chlorobromomethane	ND		22		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Bromoform	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Bromomethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
2-Butanone (MEK)	ND		56		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
n-Butylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
sec-Butylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
tert-Butylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Carbon disulfide	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Carbon tetrachloride	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Chlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Chloroethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Chloroform	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Chloromethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
2-Chlorotoluene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
4-Chlorotoluene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Chlorodibromomethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,2-Dichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,3-Dichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,4-Dichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,3-Dichloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,1-Dichloropropene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,2-Dibromo-3-Chloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Ethylene Dibromide	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Dibromomethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Dichlorodifluoromethane	ND		11		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,1-Dichloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,2-Dichloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,1-Dichloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
cis-1,2-Dichloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
trans-1,2-Dichloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,2-Dichloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
cis-1,3-Dichloropropene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
trans-1,3-Dichloropropene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Ethylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Hexachlorobutadiene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
2-Hexanone	ND		56		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Isopropylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
4-Isopropyltoluene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Methylene Chloride	ND		11		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
4-Methyl-2-pentanone (MIBK)	ND		56		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Naphthalene	ND		11		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
N-Propylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Styrene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,1,1,2-Tetrachloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,1,2,2-Tetrachloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T1S (5.5)-021111
Date Collected: 11/02/11 13:45
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-8
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Toluene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,2,3-Trichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,2,4-Trichlorobenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,1,1-Trichloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,1,2-Trichloroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Trichloroethene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Trichlorofluoromethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,2,3-Trichloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,2,4-Trimethylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
1,3,5-Trimethylbenzene	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Vinyl acetate	ND		56		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Vinyl chloride	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Xylenes, Total	ND		11		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
2,2-Dichloropropane	ND		5.6		ug/Kg		11/02/11 20:15	11/05/11 06:24	1
Gasoline Range Organics (GRO) -C5-C12	ND		280		ug/Kg		11/02/11 20:15	11/05/11 06:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*45 - 131*	*11/02/11 20:15*	*11/05/11 06:24*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*60 - 140*	*11/02/11 20:15*	*11/05/11 06:24*	*1*
Toluene-d8 (Surr)	*90*		*58 - 140*	*11/02/11 20:15*	*11/05/11 06:24*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Chrysene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Fluorene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1
Pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*70*		*33 - 120*	*11/04/11 14:34*	*11/07/11 15:24*	*1*
Terphenyl-d14	*84*		*35 - 146*	*11/04/11 14:34*	*11/07/11 15:24*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		11/04/11 14:37	11/05/11 19:04	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/04/11 14:37	11/05/11 19:04	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T1S (5.5)-021111
Date Collected: 11/02/11 13:45
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-8
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0*		*0 - 1*	*11/04/11 14:37*	*11/05/11 19:04*	*1*
p-Terphenyl	*86*		*38 - 148*	*11/04/11 14:37*	*11/05/11 19:04*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.46		mg/Kg		11/04/11 14:44	11/07/11 14:28	4
Chromium	**110**		1.8		mg/Kg		11/04/11 14:44	11/07/11 14:28	4
Nickel	**150**		1.8		mg/Kg		11/04/11 14:44	11/07/11 14:28	4
Lead	**7.0**		1.8		mg/Kg		11/04/11 14:44	11/07/11 14:28	4
Zinc	**74**		5.5		mg/Kg		11/04/11 14:44	11/07/11 14:28	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T1N (5)-021111
Date Collected: 11/02/11 13:35
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-9
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Acetone	ND		72		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Benzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Dichlorobromomethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Bromobenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Chlorobromomethane	ND		29		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Bromoform	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Bromomethane	ND		14		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
2-Butanone (MEK)	ND		72		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
n-Butylbenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
sec-Butylbenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
tert-Butylbenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Carbon disulfide	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Carbon tetrachloride	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Chlorobenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Chloroethane	ND		14		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Chloroform	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Chloromethane	ND		14		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
2-Chlorotoluene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
4-Chlorotoluene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Chlorodibromomethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,2-Dichlorobenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,3-Dichlorobenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,4-Dichlorobenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,3-Dichloropropane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,1-Dichloropropene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,2-Dibromo-3-Chloropropane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Ethylene Dibromide	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Dibromomethane	ND		14		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Dichlorodifluoromethane	ND		14		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,1-Dichloroethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,2-Dichloroethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,1-Dichloroethene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
cis-1,2-Dichloroethene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
trans-1,2-Dichloroethene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,2-Dichloropropane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
cis-1,3-Dichloropropene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
trans-1,3-Dichloropropene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Ethylbenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Hexachlorobutadiene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
2-Hexanone	ND		72		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Isopropylbenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
4-Isopropyltoluene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Methylene Chloride	ND		14		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
4-Methyl-2-pentanone (MIBK)	ND		72		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Naphthalene	ND		14		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
N-Propylbenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Styrene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,1,1,2-Tetrachloroethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,1,2,2-Tetrachloroethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1

Client Sample ID: SO-2344-T1N (5)-021111
Date Collected: 11/02/11 13:35
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-9
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Toluene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,2,3-Trichlorobenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,2,4-Trichlorobenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,1,1-Trichloroethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,1,2-Trichloroethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Trichloroethene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Trichlorofluoromethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,2,3-Trichloropropane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,2,4-Trimethylbenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
1,3,5-Trimethylbenzene	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Vinyl acetate	ND		72		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Vinyl chloride	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Xylenes, Total	ND		14		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
2,2-Dichloropropane	ND		7.2		ug/Kg		11/02/11 20:15	11/05/11 06:55	1
Gasoline Range Organics (GRO) -C5-C12	ND		360		ug/Kg		11/02/11 20:15	11/05/11 06:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*79*		*45 - 131*	*11/02/11 20:15*	*11/05/11 06:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*60 - 140*	*11/02/11 20:15*	*11/05/11 06:55*	*1*
Toluene-d8 (Surr)	*89*		*58 - 140*	*11/02/11 20:15*	*11/05/11 06:55*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Acenaphthylene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Anthracene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Benzo[a]anthracene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Benzo[a]pyrene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Benzo[b]fluoranthene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Benzo[g,h,i]perylene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Benzo[k]fluoranthene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Chrysene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Dibenz(a,h)anthracene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Fluoranthene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Fluorene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Indeno[1,2,3-cd]pyrene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Naphthalene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Phenanthrene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5
Pyrene	ND		25		ug/Kg		11/04/11 14:34	11/07/11 15:48	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*33 - 120*	*11/04/11 14:34*	*11/07/11 15:48*	*5*
Terphenyl-d14	*82*		*35 - 146*	*11/04/11 14:34*	*11/07/11 15:48*	*5*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**300**		2.0		mg/Kg		11/04/11 14:37	11/07/11 11:47	2
Motor Oil Range Organics [C24-C36]	**180**		99		mg/Kg		11/04/11 14:37	11/07/11 11:47	2

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T1N (5)-021111
Date Collected: 11/02/11 13:35
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-9
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 1*	*11/04/11 14:37*	*11/07/11 11:47*	*2*
p-Terphenyl	*41*		*38 - 148*	*11/04/11 14:37*	*11/07/11 11:47*	*2*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		11/04/11 14:44	11/07/11 14:33	4
Chromium	**98**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:33	4
Nickel	**140**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:33	4
Lead	**6.3**		1.9		mg/Kg		11/04/11 14:44	11/07/11 14:33	4
Zinc	**180**		5.8		mg/Kg		11/04/11 14:44	11/07/11 14:33	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-WESTSP-(COMP)-021111
Date Collected: 11/02/11 14:50
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-10
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Benzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Ethylbenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Toluene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Xylenes, Total	ND		9.5		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
2-Nitropropane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,1,1-Trichloroethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
cis-1,3-Dichloropropene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Carbon disulfide	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Chlorobromomethane	ND		19		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Hexachloroethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Bromoform	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Tetrachloroethene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,1-Dichloroethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,2-Dichloroethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,2-Dichloropropane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,1,2-Trichloroethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Acetone	ND		47		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Dichlorodifluoromethane	ND		9.5		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
4-Methyl-2-pentanone (MIBK)	ND		47		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Methylene Chloride	ND		9.5		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Hexachlorobutadiene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
n-Butylbenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Chloromethane	ND		9.5		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,2,4-Trimethylbenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Bromomethane	ND		9.5		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
2-Chlorotoluene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Chlorodibromomethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Dibromomethane	ND		9.5		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,1-Dichloropropene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,2,4-Trichlorobenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Chlorobenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,2-Dibromo-3-Chloropropane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,3-Dichlorobenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Naphthalene	ND		9.5		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Styrene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
4-Chlorotoluene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
trans-1,2-Dichloroethene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Bromobenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,2,3-Trichlorobenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,1,2,2-Tetrachloroethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Chloroethane	ND		9.5		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,1-Dichloroethene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,2-Dichlorobenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Trichloroethene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,1,1,2-Tetrachloroethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
sec-Butylbenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-WESTSP-(COMP)-021111
Date Collected: 11/02/11 14:50
Date Received: 11/02/11 17:25

Lab Sample ID: 720-38467-10
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		47		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
2-Chloro-1,3-butadiene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
2-Butanone (MEK)	ND		47		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Isopropylbenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
2,2-Dichloropropane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
N-Propylbenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Trichlorofluoromethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
4-Isopropyltoluene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,2,3-Trichloropropane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,3,5-Trimethylbenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
trans-1,3-Dichloropropene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
cis-1,2-Dichloroethene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Chloroform	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Vinyl acetate	ND		47		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Vinyl chloride	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Ethylene Dibromide	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
tert-Butylbenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Carbon tetrachloride	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,4-Dichlorobenzene	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
1,3-Dichloropropane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1
Dichlorobromomethane	ND		4.7		ug/Kg		11/03/11 19:07	11/04/11 01:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*86*		*45 - 131*	*11/03/11 19:07*	*11/04/11 01:43*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*	*11/03/11 19:07*	*11/04/11 01:43*	*1*
Toluene-d8 (Surr)	*93*		*58 - 140*	*11/03/11 19:07*	*11/04/11 01:43*	*1*
1,2-Dichlorobenzene-d4	*95*		*70 - 130*	*11/03/11 19:07*	*11/04/11 01:43*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**800**		10		mg/Kg		11/04/11 14:37	11/05/11 18:39	10
Motor Oil Range Organics [C24-C36]	**690**		500		mg/Kg		11/04/11 14:37	11/05/11 18:39	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*11/04/11 14:37*	*11/05/11 18:39*	*10*
p-Terphenyl	*0*	*X D*	*38 - 148*	*11/04/11 14:37*	*11/05/11 18:39*	*10*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.50		mg/Kg		11/04/11 14:44	11/07/11 14:37	4
Chromium	**83**		2.0		mg/Kg		11/04/11 14:44	11/07/11 14:37	4
Nickel	**120**		2.0		mg/Kg		11/04/11 14:44	11/07/11 14:37	4
Lead	**40**		2.0		mg/Kg		11/04/11 14:44	11/07/11 14:37	4
Zinc	**86**		5.9		mg/Kg		11/04/11 14:44	11/07/11 14:37	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-102283/1-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Benzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2-Nitropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Carbon disulfide	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chlorobromomethane	ND		20		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Hexachloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Bromoform	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Acetone	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1-Dichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2-Dichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Ethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
n-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chloromethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Hexachlorobutadiene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Bromomethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2-Chlorotoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chlorodibromomethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Methylene Chloride	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Dibromomethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Tetrachloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Toluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Naphthalene	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Styrene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
4-Chlorotoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Bromobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Xylenes, Total	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chloroethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Trichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
sec-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102283/1-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2-Chloro-1,3-butadiene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2-Butanone (MEK)	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Isopropylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2,2-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
N-Propylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Trichlorofluoromethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
4-Isopropyltoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chloroform	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Vinyl acetate	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Vinyl chloride	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Ethylene Dibromide	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
tert-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Carbon tetrachloride	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,3-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Dichlorobromomethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichlorobenzene-d4	*98*		*70 - 130*	*11/03/11 19:07*	*11/03/11 20:52*	*1*
4-Bromofluorobenzene	*97*		*45 - 131*	*11/03/11 19:07*	*11/03/11 20:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*60 - 140*	*11/03/11 19:07*	*11/03/11 20:52*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*	*11/03/11 19:07*	*11/03/11 20:52*	*1*

Lab Sample ID: LCS 720-102283/2-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	53.6		ug/Kg		107	71 - 144
Benzene	50.0	46.8		ug/Kg		94	82 - 124
2-Nitropropane	50.0	ND		ug/Kg		0	-26 - 241
Carbon disulfide	50.0	39.2		ug/Kg		78	60 - 136
Chlorobromomethane	50.0	49.8		ug/Kg		100	81 - 116
Hexachloroethane	50.0	49.0		ug/Kg		98	45 - 151
Bromoform	50.0	58.4		ug/Kg		117	59 - 158
Acetone	250	212		ug/Kg		85	30 - 162
1,1-Dichloroethane	50.0	45.4		ug/Kg		91	76 - 119
Dichlorodifluoromethane	50.0	32.4		ug/Kg		65	37 - 158
1,2-Dichloroethane	50.0	47.0		ug/Kg		94	72 - 130
1,2-Dichloropropane	50.0	47.2		ug/Kg		94	73 - 127
cis-1,3-Dichloropropene	50.0	52.0		ug/Kg		104	68 - 147
Ethylbenzene	50.0	48.0		ug/Kg		96	80 - 137
n-Butylbenzene	50.0	51.8		ug/Kg		104	80 - 142
Chloromethane	50.0	40.8		ug/Kg		82	60 - 149

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102283/2-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorobutadiene	50.0	49.4		ug/Kg		99	72 - 132
Bromomethane	50.0	43.6		ug/Kg		87	59 - 132
2-Chlorotoluene	50.0	51.2		ug/Kg		102	80 - 138
Chlorodibromomethane	50.0	55.2		ug/Kg		110	75 - 146
Methylene Chloride	50.0	43.8		ug/Kg		88	72 - 134
4-Methyl-2-pentanone (MIBK)	250	262		ug/Kg		105	69 - 160
Dibromomethane	50.0	51.2		ug/Kg		102	80 - 139
1,1-Dichloropropene	50.0	47.8		ug/Kg		96	70 - 130
Tetrachloroethene	50.0	50.4		ug/Kg		101	78 - 132
Chlorobenzene	50.0	49.0		ug/Kg		98	87 - 113
Toluene	50.0	47.4		ug/Kg		95	83 - 128
1,2-Dibromo-3-Chloropropane	50.0	55.6		ug/Kg		111	68 - 145
1,2,4-Trichlorobenzene	50.0	49.6		ug/Kg		99	70 - 131
1,3-Dichlorobenzene	50.0	50.0		ug/Kg		100	84 - 131
1,1,1-Trichloroethane	50.0	48.2		ug/Kg		96	70 - 130
Naphthalene	50.0	51.4		ug/Kg		103	70 - 147
1,1,2-Trichloroethane	50.0	51.0		ug/Kg		102	82 - 125
Styrene	50.0	53.6		ug/Kg		107	89 - 126
4-Chlorotoluene	50.0	50.2		ug/Kg		100	79 - 136
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	44.4		ug/Kg		89	70 - 130
1,2,4-Trimethylbenzene	50.0	49.8		ug/Kg		100	84 - 130
trans-1,2-Dichloroethene	50.0	39.6		ug/Kg		79	67 - 108
m-Xylene & p-Xylene	100	99.4		ug/Kg		99	79 - 146
Bromobenzene	50.0	49.4		ug/Kg		99	88 - 120
o-Xylene	50.0	50.8		ug/Kg		102	84 - 140
1,2,3-Trichlorobenzene	50.0	50.0		ug/Kg		100	82 - 135
1,1,2,2-Tetrachloroethane	50.0	51.6		ug/Kg		103	82 - 146
Chloroethane	50.0	44.8		ug/Kg		90	65 - 126
1,1-Dichloroethene	50.0	41.4		ug/Kg		83	76 - 122
1,2-Dichlorobenzene	50.0	49.8		ug/Kg		100	84 - 130
Trichloroethene	50.0	47.6		ug/Kg		95	81 - 133
1,1,1,2-Tetrachloroethane	50.0	52.4		ug/Kg		105	90 - 130
sec-Butylbenzene	50.0	50.8		ug/Kg		102	85 - 136
2-Hexanone	250	257		ug/Kg		103	60 - 161
2-Chloro-1,3-butadiene	50.0	47.6		ug/Kg		95	
2-Butanone (MEK)	250	223		ug/Kg		89	61 - 150
Isopropylbenzene	50.0	51.6		ug/Kg		103	88 - 128
2,2-Dichloropropane	50.0	52.8		ug/Kg		106	73 - 162
N-Propylbenzene	50.0	48.8		ug/Kg		98	72 - 125
Trichlorofluoromethane	50.0	47.0		ug/Kg		94	70 - 139
4-Isopropyltoluene	50.0	50.6		ug/Kg		101	85 - 133
1,2,3-Trichloropropane	50.0	52.2		ug/Kg		104	76 - 146
1,3,5-Trimethylbenzene	50.0	51.2		ug/Kg		102	82 - 131
trans-1,3-Dichloropropene	50.0	55.4		ug/Kg		111	84 - 136
cis-1,2-Dichloroethene	50.0	53.0		ug/Kg		106	87 - 138
Chloroform	50.0	46.8		ug/Kg		94	77 - 127
Vinyl acetate	50.0	54.4		ug/Kg		109	38 - 176
Vinyl chloride	50.0	40.2		ug/Kg		80	58 - 125
Ethylene Dibromide	50.0	54.6		ug/Kg		109	79 - 140

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102283/2-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
tert-Butylbenzene	50.0	50.6		ug/Kg		101	71 - 130
Carbon tetrachloride	50.0	49.4		ug/Kg		99	70 - 138
1,4-Dichlorobenzene	50.0	49.6		ug/Kg		99	85 - 125
1,3-Dichloropropane	50.0	51.6		ug/Kg		103	79 - 140
Dichlorobromomethane	50.0	51.4		ug/Kg		103	86 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichlorobenzene-d4	*101*		*70 - 130*
4-Bromofluorobenzene	*102*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Lab Sample ID: LCS 720-102283/4-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	1000	825		ug/Kg		83	61 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichlorobenzene-d4	*101*		*70 - 130*
4-Bromofluorobenzene	*104*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Lab Sample ID: LCSD 720-102283/3-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	50.0	51.4		ug/Kg		103	71 - 144	4	20
Benzene	50.0	45.6		ug/Kg		91	82 - 124	3	20
2-Nitropropane	50.0	ND		ug/Kg		0	-26 - 241	NC	20
Carbon disulfide	50.0	37.8		ug/Kg		76	60 - 136	4	20
Chlorobromomethane	50.0	49.0		ug/Kg		98	81 - 116	2	20
Hexachloroethane	50.0	47.2		ug/Kg		94	45 - 151	4	20
Bromoform	50.0	57.2		ug/Kg		114	59 - 158	2	20
Acetone	250	203		ug/Kg		81	30 - 162	4	30
1,1-Dichloroethane	50.0	43.8		ug/Kg		88	76 - 119	4	20
Dichlorodifluoromethane	50.0	30.0		ug/Kg		60	37 - 158	8	20
1,2-Dichloroethane	50.0	46.2		ug/Kg		92	72 - 130	2	20
1,2-Dichloropropane	50.0	46.8		ug/Kg		94	73 - 127	1	20
cis-1,3-Dichloropropene	50.0	50.4		ug/Kg		101	68 - 147	3	20
Ethylbenzene	50.0	46.4		ug/Kg		93	80 - 137	3	20
n-Butylbenzene	50.0	49.8		ug/Kg		100	80 - 142	4	20
Chloromethane	50.0	39.0		ug/Kg		78	60 - 149	5	20
Hexachlorobutadiene	50.0	46.8		ug/Kg		94	72 - 132	5	20
Bromomethane	50.0	41.4		ug/Kg		83	59 - 132	5	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102283/3-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2-Chlorotoluene	50.0	48.4		ug/Kg		97	80 - 138	6	20
Chlorodibromomethane	50.0	53.8		ug/Kg		108	75 - 146	3	20
Methylene Chloride	50.0	43.4		ug/Kg		87	72 - 134	1	20
4-Methyl-2-pentanone (MIBK)	250	256		ug/Kg		102	69 - 160	2	20
Dibromomethane	50.0	50.6		ug/Kg		101	80 - 139	1	20
1,1-Dichloropropene	50.0	46.2		ug/Kg		92	70 - 130	3	20
Tetrachloroethene	50.0	48.2		ug/Kg		96	78 - 132	4	20
Chlorobenzene	50.0	47.0		ug/Kg		94	87 - 113	4	20
Toluene	50.0	46.4		ug/Kg		93	83 - 128	2	20
1,2-Dibromo-3-Chloropropane	50.0	53.0		ug/Kg		106	68 - 145	5	20
1,2,4-Trichlorobenzene	50.0	47.0		ug/Kg		94	70 - 131	5	20
1,3-Dichlorobenzene	50.0	48.2		ug/Kg		96	84 - 131	4	20
1,1,1-Trichloroethane	50.0	45.4		ug/Kg		91	70 - 130	6	20
Naphthalene	50.0	48.8		ug/Kg		98	70 - 147	5	20
1,1,2-Trichloroethane	50.0	51.0		ug/Kg		102	82 - 125	0	20
Styrene	50.0	53.0		ug/Kg		106	89 - 126	1	20
4-Chlorotoluene	50.0	48.0		ug/Kg		96	79 - 136	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	43.0		ug/Kg		86	70 - 130	3	20
1,2,4-Trimethylbenzene	50.0	47.8		ug/Kg		96	84 - 130	4	20
trans-1,2-Dichloroethene	50.0	38.4		ug/Kg		77	67 - 108	3	20
m-Xylene & p-Xylene	100	95.6		ug/Kg		96	79 - 146	4	20
Bromobenzene	50.0	48.0		ug/Kg		96	88 - 120	3	20
o-Xylene	50.0	48.8		ug/Kg		98	84 - 140	4	20
1,2,3-Trichlorobenzene	50.0	47.2		ug/Kg		94	82 - 135	6	20
1,1,2,2-Tetrachloroethane	50.0	50.6		ug/Kg		101	82 - 146	2	20
Chloroethane	50.0	43.4		ug/Kg		87	65 - 126	3	20
1,1-Dichloroethene	50.0	40.0		ug/Kg		80	76 - 122	3	20
1,2-Dichlorobenzene	50.0	48.2		ug/Kg		96	84 - 130	3	20
Trichloroethene	50.0	46.2		ug/Kg		92	81 - 133	3	20
1,1,1,2-Tetrachloroethane	50.0	51.0		ug/Kg		102	90 - 130	3	20
sec-Butylbenzene	50.0	48.6		ug/Kg		97	85 - 136	4	20
2-Hexanone	250	250		ug/Kg		100	60 - 161	3	20
2-Chloro-1,3-butadiene	50.0	46.4		ug/Kg		93		3	20
2-Butanone (MEK)	250	214		ug/Kg		86	61 - 150	4	20
Isopropylbenzene	50.0	49.8		ug/Kg		100	88 - 128	4	20
2,2-Dichloropropane	50.0	48.8		ug/Kg		98	73 - 162	8	20
N-Propylbenzene	50.0	46.4		ug/Kg		93	72 - 125	5	20
Trichlorofluoromethane	50.0	43.2		ug/Kg		86	70 - 139	8	20
4-Isopropyltoluene	50.0	49.4		ug/Kg		99	85 - 133	2	20
1,2,3-Trichloropropane	50.0	51.0		ug/Kg		102	76 - 146	2	20
1,3,5-Trimethylbenzene	50.0	49.0		ug/Kg		98	82 - 131	4	20
trans-1,3-Dichloropropene	50.0	54.2		ug/Kg		108	84 - 136	2	20
cis-1,2-Dichloroethene	50.0	51.2		ug/Kg		102	87 - 138	3	20
Chloroform	50.0	45.0		ug/Kg		90	77 - 127	4	20
Vinyl acetate	50.0	54.0		ug/Kg		108	38 - 176	1	20
Vinyl chloride	50.0	38.6		ug/Kg		77	58 - 125	4	20
Ethylene Dibromide	50.0	53.8		ug/Kg		108	79 - 140	1	20
tert-Butylbenzene	50.0	48.4		ug/Kg		97	71 - 130	4	20
Carbon tetrachloride	50.0	47.0		ug/Kg		94	70 - 138	5	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102283/3-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102283

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene			50.0	47.8		ug/Kg		96	85 - 125	4	20
1,3-Dichloropropane			50.0	51.0		ug/Kg		102	79 - 140	1	20
Dichlorobromomethane			50.0	50.2		ug/Kg		100	86 - 131	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichlorobenzene-d4	*100*		*70 - 130*
4-Bromofluorobenzene	*102*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Lab Sample ID: LCSD 720-102283/5-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102283

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			1000	839		ug/Kg		84	61 - 128	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichlorobenzene-d4	*102*		*70 - 130*
4-Bromofluorobenzene	*103*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Lab Sample ID: MB 720-102371/1-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102371

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Benzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Carbon disulfide	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Chlorobromomethane	ND		20		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Bromoform	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Acetone	ND		50		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,1-Dichloroethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,2-Dichloroethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,2-Dichloropropane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Ethylbenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
n-Butylbenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Chloromethane	ND		10		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Hexachlorobutadiene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Bromomethane	ND		10		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
2-Chlorotoluene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Chlorodibromomethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Methylene Chloride	ND		10		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		11/04/11 19:00	11/04/11 21:02	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102371/1-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102371

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		10		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,1-Dichloropropene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Tetrachloroethene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Chlorobenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Toluene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Naphthalene	ND		10		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Styrene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
4-Chlorotoluene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Bromobenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Xylenes, Total	ND		10		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Chloroethane	ND		10		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,1-Dichloroethene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Trichloroethene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
sec-Butylbenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
2-Hexanone	ND		50		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
2-Butanone (MEK)	ND		50		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Isopropylbenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
2,2-Dichloropropane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
N-Propylbenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Trichlorofluoromethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
4-Isopropyltoluene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Chloroform	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Vinyl acetate	ND		50		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Vinyl chloride	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Ethylene Dibromide	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
tert-Butylbenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Carbon tetrachloride	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
1,3-Dichloropropane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1
Dichlorobromomethane	ND		5.0		ug/Kg		11/04/11 19:00	11/04/11 21:02	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102371/1-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102371

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		45 - 131	11/04/11 19:00	11/04/11 21:02	1
1,2-Dichloroethane-d4 (Surr)	105		60 - 140	11/04/11 19:00	11/04/11 21:02	1
Toluene-d8 (Surr)	93		58 - 140	11/04/11 19:00	11/04/11 21:02	1

Lab Sample ID: LCS 720-102371/2-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	53.2		ug/Kg		106	71 - 144
Benzene	50.0	49.6		ug/Kg		99	77 - 113
Carbon disulfide	50.0	43.2		ug/Kg		86	60 - 136
Chlorobromomethane	50.0	50.4		ug/Kg		101	81 - 116
Bromoform	50.0	57.8		ug/Kg		116	59 - 158
Acetone	250	199		ug/Kg		79	30 - 162
1,1-Dichloroethane	50.0	50.6		ug/Kg		101	76 - 119
Dichlorodifluoromethane	50.0	43.0		ug/Kg		86	37 - 158
1,2-Dichloroethane	50.0	52.6		ug/Kg		105	72 - 130
1,2-Dichloropropane	50.0	50.4		ug/Kg		101	73 - 127
cis-1,3-Dichloropropene	50.0	54.0		ug/Kg		108	68 - 147
Ethylbenzene	50.0	50.8		ug/Kg		102	80 - 137
n-Butylbenzene	50.0	54.2		ug/Kg		108	80 - 142
Chloromethane	50.0	47.6		ug/Kg		95	60 - 149
Hexachlorobutadiene	50.0	53.4		ug/Kg		107	72 - 132
Bromomethane	50.0	51.0		ug/Kg		102	59 - 132
2-Chlorotoluene	50.0	53.6		ug/Kg		107	80 - 138
Chlorodibromomethane	50.0	57.0		ug/Kg		114	75 - 146
Methylene Chloride	50.0	51.0		ug/Kg		102	72 - 134
4-Methyl-2-pentanone (MIBK)	250	264		ug/Kg		106	69 - 160
Dibromomethane	50.0	51.6		ug/Kg		103	80 - 139
1,1-Dichloropropene	50.0	52.4		ug/Kg		105	70 - 130
Tetrachloroethene	50.0	51.8		ug/Kg		104	78 - 132
Chlorobenzene	50.0	50.2		ug/Kg		100	82 - 114
Toluene	50.0	50.4		ug/Kg		101	68 - 121
1,2-Dibromo-3-Chloropropane	50.0	54.0		ug/Kg		108	68 - 145
1,2,4-Trichlorobenzene	50.0	52.0		ug/Kg		104	70 - 131
1,3-Dichlorobenzene	50.0	51.4		ug/Kg		103	84 - 131
1,1,1-Trichloroethane	50.0	53.4		ug/Kg		107	80 - 127
Naphthalene	50.0	54.0		ug/Kg		108	70 - 147
1,1,2-Trichloroethane	50.0	52.0		ug/Kg		104	82 - 125
Styrene	50.0	55.0		ug/Kg		110	89 - 126
4-Chlorotoluene	50.0	52.2		ug/Kg		104	79 - 136
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	48.4		ug/Kg		97	70 - 130
1,2,4-Trimethylbenzene	50.0	52.6		ug/Kg		105	84 - 130
trans-1,2-Dichloroethene	50.0	42.8		ug/Kg		86	67 - 108
m-Xylene & p-Xylene	100	102		ug/Kg		102	79 - 146
Bromobenzene	50.0	50.6		ug/Kg		101	88 - 120
o-Xylene	50.0	54.0		ug/Kg		108	84 - 140
1,2,3-Trichlorobenzene	50.0	53.4		ug/Kg		107	82 - 135

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102371/2-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	50.0	51.8		ug/Kg		104	82 - 146
Chloroethane	50.0	53.0		ug/Kg		106	65 - 126
1,1-Dichloroethene	50.0	41.6		ug/Kg		83	68 - 119
1,2-Dichlorobenzene	50.0	51.4		ug/Kg		103	84 - 130
Trichloroethene	50.0	50.4		ug/Kg		101	81 - 133
1,1,1,2-Tetrachloroethane	50.0	55.4		ug/Kg		111	90 - 130
sec-Butylbenzene	50.0	54.0		ug/Kg		108	85 - 136
2-Hexanone	250	255		ug/Kg		102	60 - 161
2-Butanone (MEK)	250	240		ug/Kg		96	61 - 150
Isopropylbenzene	50.0	56.2		ug/Kg		112	88 - 128
2,2-Dichloropropane	50.0	55.8		ug/Kg		112	73 - 162
N-Propylbenzene	50.0	50.4		ug/Kg		101	72 - 125
Trichlorofluoromethane	50.0	54.6		ug/Kg		109	71 - 139
4-Isopropyltoluene	50.0	54.2		ug/Kg		108	85 - 133
1,2,3-Trichloropropane	50.0	54.4		ug/Kg		109	76 - 146
1,3,5-Trimethylbenzene	50.0	54.2		ug/Kg		108	82 - 131
trans-1,3-Dichloropropene	50.0	58.0		ug/Kg		116	84 - 136
cis-1,2-Dichloroethene	50.0	59.6		ug/Kg		119	87 - 138
Chloroform	50.0	52.0		ug/Kg		104	77 - 127
Vinyl acetate	50.0	56.0		ug/Kg		112	38 - 176
Vinyl chloride	50.0	49.8		ug/Kg		100	58 - 125
Ethylene Dibromide	50.0	55.4		ug/Kg		111	79 - 140
tert-Butylbenzene	50.0	54.4		ug/Kg		109	71 - 130
Carbon tetrachloride	50.0	54.6		ug/Kg		109	81 - 138
1,4-Dichlorobenzene	50.0	51.6		ug/Kg		103	85 - 125
1,3-Dichloropropane	50.0	53.6		ug/Kg		107	79 - 140
Dichlorobromomethane	50.0	55.0		ug/Kg		110	86 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*104*		*60 - 140*
Toluene-d8 (Surr)	*95*		*58 - 140*

Lab Sample ID: LCS 720-102371/4-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102371

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	1000	849		ug/Kg		85	61 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102371/3-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102371

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	50.0	53.4		ug/Kg		107	71 - 144	0	20
Benzene	50.0	50.0		ug/Kg		100	77 - 113	1	20
Carbon disulfide	50.0	43.8		ug/Kg		88	60 - 136	1	20
Chlorobromomethane	50.0	50.8		ug/Kg		102	81 - 116	1	20
Bromoform	50.0	57.8		ug/Kg		116	59 - 158	0	20
Acetone	250	206		ug/Kg		82	30 - 162	3	30
1,1-Dichloroethane	50.0	52.0		ug/Kg		104	76 - 119	3	20
Dichlorodifluoromethane	50.0	43.2		ug/Kg		86	37 - 158	0	20
1,2-Dichloroethane	50.0	52.4		ug/Kg		105	72 - 130	0	20
1,2-Dichloropropane	50.0	50.4		ug/Kg		101	73 - 127	0	20
cis-1,3-Dichloropropene	50.0	54.4		ug/Kg		109	68 - 147	1	20
Ethylbenzene	50.0	52.0		ug/Kg		104	80 - 137	2	20
n-Butylbenzene	50.0	56.8		ug/Kg		114	80 - 142	5	20
Chloromethane	50.0	50.6		ug/Kg		101	60 - 149	6	20
Hexachlorobutadiene	50.0	54.0		ug/Kg		108	72 - 132	1	20
Bromomethane	50.0	50.4		ug/Kg		101	59 - 132	1	20
2-Chlorotoluene	50.0	55.2		ug/Kg		110	80 - 138	3	20
Chlorodibromomethane	50.0	56.6		ug/Kg		113	75 - 146	1	20
Methylene Chloride	50.0	51.8		ug/Kg		104	72 - 134	2	20
4-Methyl-2-pentanone (MIBK)	250	276		ug/Kg		110	69 - 160	4	20
Dibromomethane	50.0	51.4		ug/Kg		103	80 - 139	0	20
1,1-Dichloropropene	50.0	52.2		ug/Kg		104	70 - 130	0	20
Tetrachloroethene	50.0	49.8		ug/Kg		100	78 - 132	4	20
Chlorobenzene	50.0	51.0		ug/Kg		102	82 - 114	2	20
Toluene	50.0	51.8		ug/Kg		104	68 - 121	3	20
1,2-Dibromo-3-Chloropropane	50.0	56.4		ug/Kg		113	68 - 145	4	20
1,2,4-Trichlorobenzene	50.0	52.0		ug/Kg		104	70 - 131	0	20
1,3-Dichlorobenzene	50.0	51.2		ug/Kg		102	84 - 131	0	20
1,1,1-Trichloroethane	50.0	52.2		ug/Kg		104	80 - 127	2	20
Naphthalene	50.0	55.0		ug/Kg		110	70 - 147	2	20
1,1,2-Trichloroethane	50.0	51.6		ug/Kg		103	82 - 125	1	20
Styrene	50.0	55.6		ug/Kg		111	89 - 126	1	20
4-Chlorotoluene	50.0	53.6		ug/Kg		107	79 - 136	3	20
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	46.8		ug/Kg		94	70 - 130	3	20
1,2,4-Trimethylbenzene	50.0	54.0		ug/Kg		108	84 - 130	3	20
trans-1,2-Dichloroethene	50.0	42.8		ug/Kg		86	67 - 108	0	20
m-Xylene & p-Xylene	100	104		ug/Kg		104	79 - 146	2	20
Bromobenzene	50.0	50.4		ug/Kg		101	88 - 120	0	20
o-Xylene	50.0	54.4		ug/Kg		109	84 - 140	1	20
1,2,3-Trichlorobenzene	50.0	54.0		ug/Kg		108	82 - 135	1	20
1,1,2,2-Tetrachloroethane	50.0	53.4		ug/Kg		107	82 - 146	3	20
Chloroethane	50.0	52.6		ug/Kg		105	65 - 126	1	20
1,1-Dichloroethene	50.0	41.8		ug/Kg		84	68 - 119	0	20
1,2-Dichlorobenzene	50.0	51.4		ug/Kg		103	84 - 130	0	20
Trichloroethene	50.0	49.8		ug/Kg		100	81 - 133	1	20
1,1,1,2-Tetrachloroethane	50.0	55.4		ug/Kg		111	90 - 130	0	20
sec-Butylbenzene	50.0	55.6		ug/Kg		111	85 - 136	3	20
2-Hexanone	250	272		ug/Kg		109	60 - 161	6	20
2-Butanone (MEK)	250	236		ug/Kg		94	61 - 150	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102371/3-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102371

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Isopropylbenzene			50.0	57.0		ug/Kg		114	88 - 128	1	20
2,2-Dichloropropane			50.0	56.2		ug/Kg		112	73 - 162	1	20
N-Propylbenzene			50.0	52.0		ug/Kg		104	72 - 125	3	20
Trichlorofluoromethane			50.0	52.2		ug/Kg		104	71 - 139	4	20
4-Isopropyltoluene			50.0	54.8		ug/Kg		110	85 - 133	1	20
1,2,3-Trichloropropane			50.0	55.2		ug/Kg		110	76 - 146	1	20
1,3,5-Trimethylbenzene			50.0	56.0		ug/Kg		112	82 - 131	3	20
trans-1,3-Dichloropropene			50.0	58.0		ug/Kg		116	84 - 136	0	20
cis-1,2-Dichloroethene			50.0	60.2		ug/Kg		120	87 - 138	1	20
Chloroform			50.0	51.4		ug/Kg		103	77 - 127	1	20
Vinyl acetate			50.0	56.8		ug/Kg		114	38 - 176	1	20
Vinyl chloride			50.0	52.2		ug/Kg		104	58 - 125	5	20
Ethylene Dibromide			50.0	54.6		ug/Kg		109	79 - 140	1	20
tert-Butylbenzene			50.0	55.2		ug/Kg		110	71 - 130	1	20
Carbon tetrachloride			50.0	53.2		ug/Kg		106	81 - 138	3	20
1,4-Dichlorobenzene			50.0	51.8		ug/Kg		104	85 - 125	0	20
1,3-Dichloropropane			50.0	53.6		ug/Kg		107	79 - 140	0	20
Dichlorobromomethane			50.0	55.0		ug/Kg		110	86 - 131	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*105*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: LCSD 720-102371/5-A
Matrix: Solid
Analysis Batch: 102364

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102371

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			1000	859		ug/Kg		86	61 - 128	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*
Toluene-d8 (Surr)	*95*		*58 - 140*

Lab Sample ID: MB 720-102382/1-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102382

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Benzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Carbon disulfide	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chlorobromomethane	ND		20		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Bromoform	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Acetone	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1-Dichloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102382/1-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102382

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2-Dichloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2-Dichloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Ethylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
n-Butylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chloromethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Hexachlorobutadiene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Bromomethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
2-Chlorotoluene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chlorodibromomethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Methylene Chloride	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Dibromomethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1-Dichloropropene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Tetrachloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Toluene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Naphthalene	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Styrene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
4-Chlorotoluene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Bromobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Xylenes, Total	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chloroethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1-Dichloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Trichloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
sec-Butylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
2-Hexanone	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
2-Butanone (MEK)	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Isopropylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
2,2-Dichloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
N-Propylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Trichlorofluoromethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
4-Isopropyltoluene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102382/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 102376 — **Prep Batch: 102382**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chloroform	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Vinyl acetate	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Vinyl chloride	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Ethylene Dibromide	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
tert-Butylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Carbon tetrachloride	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,3-Dichloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Dichlorobromomethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*45 - 131*	*11/05/11 09:56*	*11/05/11 12:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*60 - 140*	*11/05/11 09:56*	*11/05/11 12:06*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*11/05/11 09:56*	*11/05/11 12:06*	*1*

Lab Sample ID: LCS 720-102382/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 102376 — **Prep Batch: 102382**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	49.8	53.6		ug/Kg		108	71 - 144
Benzene	49.8	43.8		ug/Kg		88	77 - 113
Carbon disulfide	49.8	35.3		ug/Kg		71	60 - 136
Chlorobromomethane	49.8	47.0		ug/Kg		94	81 - 116
Bromoform	49.8	56.2		ug/Kg		113	59 - 158
Acetone	249	164		ug/Kg		66	30 - 162
1,1-Dichloroethane	49.8	42.6		ug/Kg		86	76 - 119
Dichlorodifluoromethane	49.8	31.1		ug/Kg		62	37 - 158
1,2-Dichloroethane	49.8	46.4		ug/Kg		93	72 - 130
1,2-Dichloropropane	49.8	44.8		ug/Kg		90	73 - 127
cis-1,3-Dichloropropene	49.8	49.4		ug/Kg		99	68 - 147
Ethylbenzene	49.8	46.0		ug/Kg		92	80 - 137
n-Butylbenzene	49.8	47.2		ug/Kg		95	80 - 142
Chloromethane	49.8	37.8		ug/Kg		76	60 - 149
Hexachlorobutadiene	49.8	45.2		ug/Kg		91	72 - 132
Bromomethane	49.8	41.2		ug/Kg		83	59 - 132
2-Chlorotoluene	49.8	48.2		ug/Kg		97	80 - 138
Chlorodibromomethane	49.8	53.2		ug/Kg		107	75 - 146
Methylene Chloride	49.8	42.0		ug/Kg		84	72 - 134
4-Methyl-2-pentanone (MIBK)	249	241		ug/Kg		97	69 - 160
Dibromomethane	49.8	49.0		ug/Kg		98	80 - 139
1,1-Dichloropropene	49.8	43.0		ug/Kg		86	70 - 130
Tetrachloroethene	49.8	45.2		ug/Kg		91	78 - 132
Chlorobenzene	49.8	46.0		ug/Kg		92	82 - 114
Toluene	49.8	47.2		ug/Kg		95	68 - 121
1,2-Dibromo-3-Chloropropane	49.8	53.4		ug/Kg		107	68 - 145
1,2,4-Trichlorobenzene	49.8	47.6		ug/Kg		96	70 - 131

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102382/2-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102382

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	49.8	47.2		ug/Kg		95	84 - 131
1,1,1-Trichloroethane	49.8	44.8		ug/Kg		90	80 - 127
Naphthalene	49.8	49.8		ug/Kg		100	70 - 147
1,1,2-Trichloroethane	49.8	48.6		ug/Kg		98	82 - 125
Styrene	49.8	49.8		ug/Kg		100	89 - 126
4-Chlorotoluene	49.8	47.6		ug/Kg		96	79 - 136
1,1,2-Trichloro-1,2,2-trifluoroethane	49.8	39.2		ug/Kg		79	70 - 130
1,2,4-Trimethylbenzene	49.8	48.8		ug/Kg		98	84 - 130
trans-1,2-Dichloroethene	49.8	36.3		ug/Kg		73	67 - 108
m-Xylene & p-Xylene	99.6	95.4		ug/Kg		96	79 - 146
Bromobenzene	49.8	47.0		ug/Kg		94	88 - 120
o-Xylene	49.8	49.0		ug/Kg		98	84 - 140
1,2,3-Trichlorobenzene	49.8	49.2		ug/Kg		99	82 - 135
1,1,2,2-Tetrachloroethane	49.8	49.4		ug/Kg		99	82 - 146
Chloroethane	49.8	42.2		ug/Kg		85	65 - 126
1,1-Dichloroethene	49.8	36.7		ug/Kg		74	68 - 119
1,2-Dichlorobenzene	49.8	47.6		ug/Kg		96	84 - 130
Trichloroethene	49.8	43.8		ug/Kg		88	81 - 133
1,1,1,2-Tetrachloroethane	49.8	50.6		ug/Kg		102	90 - 130
sec-Butylbenzene	49.8	46.8		ug/Kg		94	85 - 136
2-Hexanone	249	230		ug/Kg		92	60 - 161
2-Butanone (MEK)	249	190		ug/Kg		76	61 - 150
Isopropylbenzene	49.8	47.8		ug/Kg		96	88 - 128
2,2-Dichloropropane	49.8	47.6		ug/Kg		96	73 - 162
N-Propylbenzene	49.8	45.2		ug/Kg		91	72 - 125
Trichlorofluoromethane	49.8	43.4		ug/Kg		87	71 - 139
4-Isopropyltoluene	49.8	47.0		ug/Kg		94	85 - 133
1,2,3-Trichloropropane	49.8	50.0		ug/Kg		100	76 - 146
1,3,5-Trimethylbenzene	49.8	48.6		ug/Kg		98	82 - 131
trans-1,3-Dichloropropene	49.8	53.4		ug/Kg		107	84 - 136
cis-1,2-Dichloroethene	49.8	50.2		ug/Kg		101	87 - 138
Chloroform	49.8	44.8		ug/Kg		90	77 - 127
Vinyl acetate	49.8	50.2		ug/Kg		101	38 - 176
Vinyl chloride	49.8	37.6		ug/Kg		76	58 - 125
Ethylene Dibromide	49.8	51.6		ug/Kg		104	79 - 140
tert-Butylbenzene	49.8	47.2		ug/Kg		95	71 - 130
Carbon tetrachloride	49.8	45.8		ug/Kg		92	81 - 138
1,4-Dichlorobenzene	49.8	47.2		ug/Kg		95	85 - 125
1,3-Dichloropropane	49.8	49.0		ug/Kg		98	79 - 140
Dichlorobromomethane	49.8	49.8		ug/Kg		100	86 - 131

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*100*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102382/4-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102382

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C5-C12			996	763		ug/Kg		77	61 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: LCSD 720-102382/3-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102382

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			49.7	53.3		ug/Kg		107	71 - 144	1	20
Benzene			49.7	45.5		ug/Kg		92	77 - 113	4	20
Carbon disulfide			49.7	36.4		ug/Kg		73	60 - 136	3	20
Chlorobromomethane			49.7	49.3		ug/Kg		99	81 - 116	5	20
Bromoform			49.7	58.3		ug/Kg		117	59 - 158	4	20
Acetone			249	144		ug/Kg		58	30 - 162	13	30
1,1-Dichloroethane			49.7	44.7		ug/Kg		90	76 - 119	5	20
Dichlorodifluoromethane			49.7	30.6		ug/Kg		62	37 - 158	1	20
1,2-Dichloroethane			49.7	47.7		ug/Kg		96	72 - 130	3	20
1,2-Dichloropropane			49.7	47.1		ug/Kg		95	73 - 127	5	20
cis-1,3-Dichloropropene			49.7	51.9		ug/Kg		104	68 - 147	5	20
Ethylbenzene			49.7	45.9		ug/Kg		92	80 - 137	0	20
n-Butylbenzene			49.7	48.3		ug/Kg		97	80 - 142	2	20
Chloromethane			49.7	39.8		ug/Kg		80	60 - 149	5	20
Hexachlorobutadiene			49.7	45.5		ug/Kg		92	72 - 132	1	20
Bromomethane			49.7	42.7		ug/Kg		86	59 - 132	4	20
2-Chlorotoluene			49.7	50.5		ug/Kg		102	80 - 138	5	20
Chlorodibromomethane			49.7	55.1		ug/Kg		111	75 - 146	3	20
Methylene Chloride			49.7	44.3		ug/Kg		89	72 - 134	5	20
4-Methyl-2-pentanone (MIBK)			249	252		ug/Kg		102	69 - 160	4	20
Dibromomethane			49.7	51.3		ug/Kg		103	80 - 139	5	20
1,1-Dichloropropene			49.7	44.1		ug/Kg		89	70 - 130	3	20
Tetrachloroethene			49.7	45.9		ug/Kg		92	78 - 132	2	20
Chlorobenzene			49.7	47.9		ug/Kg		96	82 - 114	4	20
Toluene			49.7	46.1		ug/Kg		93	68 - 121	2	20
1,2-Dibromo-3-Chloropropane			49.7	56.7		ug/Kg		114	68 - 145	6	20
1,2,4-Trichlorobenzene			49.7	48.9		ug/Kg		98	70 - 131	3	20
1,3-Dichlorobenzene			49.7	50.1		ug/Kg		101	84 - 131	6	20
1,1,1-Trichloroethane			49.7	45.1		ug/Kg		91	80 - 127	1	20
Naphthalene			49.7	52.3		ug/Kg		105	70 - 147	5	20
1,1,2-Trichloroethane			49.7	50.5		ug/Kg		102	82 - 125	4	20
Styrene			49.7	52.5		ug/Kg		106	89 - 126	5	20
4-Chlorotoluene			49.7	49.7		ug/Kg		100	79 - 136	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane			49.7	39.6		ug/Kg		80	70 - 130	1	20
1,2,4-Trimethylbenzene			49.7	49.3		ug/Kg		99	84 - 130	1	20
trans-1,2-Dichloroethene			49.7	37.8		ug/Kg		76	67 - 108	4	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102382/3-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102382

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene			99.4	95.0		ug/Kg		96	79 - 146	0	20
Bromobenzene			49.7	50.1		ug/Kg		101	88 - 120	6	20
o-Xylene			49.7	49.5		ug/Kg		100	84 - 140	1	20
1,2,3-Trichlorobenzene			49.7	51.1		ug/Kg		103	82 - 135	4	20
1,1,2,2-Tetrachloroethane			49.7	53.1		ug/Kg		107	82 - 146	7	20
Chloroethane			49.7	43.5		ug/Kg		88	65 - 126	3	20
1,1-Dichloroethene			49.7	37.8		ug/Kg		76	68 - 119	3	20
1,2-Dichlorobenzene			49.7	49.9		ug/Kg		100	84 - 130	5	20
Trichloroethene			49.7	45.3		ug/Kg		91	81 - 133	3	20
1,1,1,2-Tetrachloroethane			49.7	52.7		ug/Kg		106	90 - 130	4	20
sec-Butylbenzene			49.7	47.9		ug/Kg		96	85 - 136	2	20
2-Hexanone			249	238		ug/Kg		96	60 - 161	3	20
2-Butanone (MEK)			249	187		ug/Kg		75	61 - 150	2	20
Isopropylbenzene			49.7	49.1		ug/Kg		99	88 - 128	3	20
2,2-Dichloropropane			49.7	48.3		ug/Kg		97	73 - 162	1	20
N-Propylbenzene			49.7	46.9		ug/Kg		94	72 - 125	4	20
Trichlorofluoromethane			49.7	42.7		ug/Kg		86	71 - 139	2	20
4-Isopropyltoluene			49.7	48.5		ug/Kg		98	85 - 133	3	20
1,2,3-Trichloropropane			49.7	52.5		ug/Kg		106	76 - 146	5	20
1,3,5-Trimethylbenzene			49.7	49.9		ug/Kg		100	82 - 131	3	20
trans-1,3-Dichloropropene			49.7	55.5		ug/Kg		112	84 - 136	4	20
cis-1,2-Dichloroethene			49.7	52.3		ug/Kg		105	87 - 138	4	20
Chloroform			49.7	46.3		ug/Kg		93	77 - 127	3	20
Vinyl acetate			49.7	54.3		ug/Kg		109	38 - 176	8	20
Vinyl chloride			49.7	38.2		ug/Kg		77	58 - 125	1	20
Ethylene Dibromide			49.7	53.9		ug/Kg		108	79 - 140	4	20
tert-Butylbenzene			49.7	48.9		ug/Kg		98	71 - 130	4	20
Carbon tetrachloride			49.7	45.5		ug/Kg		92	81 - 138	1	20
1,4-Dichlorobenzene			49.7	49.3		ug/Kg		99	85 - 125	4	20
1,3-Dichloropropane			49.7	51.5		ug/Kg		104	79 - 140	5	20
Dichlorobromomethane			49.7	51.7		ug/Kg		104	86 - 131	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*100*		*60 - 140*
Toluene-d8 (Surr)	*95*		*58 - 140*

Lab Sample ID: LCSD 720-102382/5-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102382

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			996	789		ug/Kg		79	61 - 128	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*98*		*60 - 140*
Toluene-d8 (Surr)	*95*		*58 - 140*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-102348/1-A
Matrix: Solid
Analysis Batch: 102389

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 102348

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		11/04/11 14:37	11/05/11 21:30	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/04/11 14:37	11/05/11 21:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.01*		*0 - 1*	*11/04/11 14:37*	*11/05/11 21:30*	*1*
p-Terphenyl	*87*		*38 - 148*	*11/04/11 14:37*	*11/05/11 21:30*	*1*

Lab Sample ID: LCS 720-102348/2-A
Matrix: Solid
Analysis Batch: 102389

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 102348

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			83.2	42.5		mg/Kg		51	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*92*		*38 - 148*

Lab Sample ID: LCSD 720-102348/3-A
Matrix: Solid
Analysis Batch: 102389

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 102348

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			83.3	42.2		mg/Kg		51	50 - 150	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*94*		*38 - 148*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-102349/1-A
Matrix: Solid
Analysis Batch: 102450

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102349

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.13		mg/Kg		11/04/11 14:44	11/07/11 13:23	1
Chromium	ND		0.50		mg/Kg		11/04/11 14:44	11/07/11 13:23	1
Nickel	ND		0.50		mg/Kg		11/04/11 14:44	11/07/11 13:23	1
Lead	ND		0.50		mg/Kg		11/04/11 14:44	11/07/11 13:23	1
Zinc	ND		1.5		mg/Kg		11/04/11 14:44	11/07/11 13:23	1

Lab Sample ID: LCS 720-102349/2-A
Matrix: Solid
Analysis Batch: 102450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102349

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cadmium			50.0	49.4		mg/Kg		99	80 - 120		
Chromium			50.0	49.8		mg/Kg		100	80 - 120		

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 720-102349/2-A
Matrix: Solid
Analysis Batch: 102450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102349

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nickel	50.0	50.6		mg/Kg		101	80 - 120
Lead	50.0	51.2		mg/Kg		102	80 - 120
Zinc	50.0	50.5		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 720-102349/3-A
Matrix: Solid
Analysis Batch: 102450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102349

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	50.0	48.8		mg/Kg		98	80 - 120	1	20
Chromium	50.0	49.5		mg/Kg		99	80 - 120	0	20
Nickel	50.0	50.4		mg/Kg		101	80 - 120	1	20
Lead	50.0	51.0		mg/Kg		102	80 - 120	0	20
Zinc	50.0	50.2		mg/Kg		100	80 - 120	1	20

Lab Sample ID: LCSSRM 720-102349/16-A
Matrix: Solid
Analysis Batch: 102450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102349

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	48.3	44.2		mg/Kg		92	67 - 118
Chromium	171	158		mg/Kg		93	67 - 121
Nickel	76.0	71.8		mg/Kg		95	65 - 117
Lead	181	169		mg/Kg		93	62 - 113
Zinc	256	248		mg/Kg		97	62 - 110

GC/MS VOA

Analysis Batch: 102272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-10	SO-2344-WESTSP-(COMP)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102283
LCS 720-102283/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102283
LCS 720-102283/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102283
LCSD 720-102283/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102283
LCSD 720-102283/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102283
MB 720-102283/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	102283

Prep Batch: 102283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-10	SO-2344-WESTSP-(COMP)-021111	Total/NA	Solid	5030B	
LCS 720-102283/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-102283/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-102283/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCSD 720-102283/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-102283/1-A	Method Blank	Total/NA	Solid	5030B	

Analysis Batch: 102364

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-2	SO-2344-NW (5)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102371
720-38467-4	SO-2344-EW (5)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102371
720-38467-5	SO-2344-SW (5.5)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102371
720-38467-8	SO-2344-T1S (5.5)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102371
720-38467-9	SO-2344-T1N (5)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102371
LCS 720-102371/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102371
LCS 720-102371/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102371
LCSD 720-102371/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102371
LCSD 720-102371/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102371
MB 720-102371/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	102371

Prep Batch: 102371

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-2	SO-2344-NW (5)-021111	Total/NA	Solid	5035	
720-38467-4	SO-2344-EW (5)-021111	Total/NA	Solid	5035	
720-38467-5	SO-2344-SW (5.5)-021111	Total/NA	Solid	5035	
720-38467-8	SO-2344-T1S (5.5)-021111	Total/NA	Solid	5035	
720-38467-9	SO-2344-T1N (5)-021111	Total/NA	Solid	5035	
LCS 720-102371/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 720-102371/4-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 720-102371/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 720-102371/5-A	Lab Control Sample Dup	Total/NA	Solid	5035	

GC/MS VOA (Continued)

Prep Batch: 102371 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-102371/1-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 102376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-3	SO-2344-WW (5)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102382
720-38467-6	SO-2344-T2S (5.5)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102382
720-38467-7	SO-2344-T2N (5)-021111	Total/NA	Solid	8260B/CA_LUFT MS	102382
LCS 720-102382/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102382
LCS 720-102382/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102382
LCSD 720-102382/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102382
LCSD 720-102382/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102382
MB 720-102382/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	102382

Prep Batch: 102382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-3	SO-2344-WW (5)-021111	Total/NA	Solid	5035	
720-38467-6	SO-2344-T2S (5.5)-021111	Total/NA	Solid	5035	
720-38467-7	SO-2344-T2N (5)-021111	Total/NA	Solid	5035	
LCS 720-102382/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 720-102382/4-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 720-102382/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 720-102382/5-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 720-102382/1-A	Method Blank	Total/NA	Solid	5035	

GC/MS Semi VOA

Prep Batch: 102317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-2	SO-2344-NW (5)-021111	Total/NA	Solid	3546	
720-38467-3	SO-2344-WW (5)-021111	Total/NA	Solid	3546	
720-38467-4	SO-2344-EW (5)-021111	Total/NA	Solid	3546	
720-38467-5	SO-2344-SW (5.5)-021111	Total/NA	Solid	3546	
720-38467-6	SO-2344-T2S (5.5)-021111	Total/NA	Solid	3546	
720-38467-7	SO-2344-T2N (5)-021111	Total/NA	Solid	3546	
720-38467-8	SO-2344-T1S (5.5)-021111	Total/NA	Solid	3546	
720-38467-9	SO-2344-T1N (5)-021111	Total/NA	Solid	3546	

Analysis Batch: 102429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-2	SO-2344-NW (5)-021111	Total/NA	Solid	8270C SIM	102317
720-38467-3	SO-2344-WW (5)-021111	Total/NA	Solid	8270C SIM	102317
720-38467-4	SO-2344-EW (5)-021111	Total/NA	Solid	8270C SIM	102317
720-38467-5	SO-2344-SW (5.5)-021111	Total/NA	Solid	8270C SIM	102317
720-38467-6	SO-2344-T2S (5.5)-021111	Total/NA	Solid	8270C SIM	102317
720-38467-7	SO-2344-T2N (5)-021111	Total/NA	Solid	8270C SIM	102317
720-38467-8	SO-2344-T1S (5.5)-021111	Total/NA	Solid	8270C SIM	102317

GC/MS Semi VOA (Continued)

Analysis Batch: 102429 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-9	SO-2344-T1N (5)-021111	Total/NA	Solid	8270C SIM	102317

GC Semi VOA

Prep Batch: 102348

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-2	SO-2344-NW (5)-021111	Silica Gel Cleanup	Solid	3546	
720-38467-3	SO-2344-WW (5)-021111	Silica Gel Cleanup	Solid	3546	
720-38467-4	SO-2344-EW (5)-021111	Silica Gel Cleanup	Solid	3546	
720-38467-5	SO-2344-SW (5.5)-021111	Silica Gel Cleanup	Solid	3546	
720-38467-6	SO-2344-T2S (5.5)-021111	Silica Gel Cleanup	Solid	3546	
720-38467-7	SO-2344-T2N (5)-021111	Silica Gel Cleanup	Solid	3546	
720-38467-8	SO-2344-T1S (5.5)-021111	Silica Gel Cleanup	Solid	3546	
720-38467-9	SO-2344-T1N (5)-021111	Silica Gel Cleanup	Solid	3546	
720-38467-10	SO-2344-WESTSP-(COMP)-021111	Silica Gel Cleanup	Solid	3546	
LCS 720-102348/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-102348/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-102348/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 102388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-3	SO-2344-WW (5)-021111	Silica Gel Cleanup	Solid	8015B	102348
720-38467-4	SO-2344-EW (5)-021111	Silica Gel Cleanup	Solid	8015B	102348
720-38467-5	SO-2344-SW (5.5)-021111	Silica Gel Cleanup	Solid	8015B	102348
720-38467-8	SO-2344-T1S (5.5)-021111	Silica Gel Cleanup	Solid	8015B	102348

Analysis Batch: 102389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-6	SO-2344-T2S (5.5)-021111	Silica Gel Cleanup	Solid	8015B	102348
720-38467-7	SO-2344-T2N (5)-021111	Silica Gel Cleanup	Solid	8015B	102348
720-38467-10	SO-2344-WESTSP-(COMP)-021111	Silica Gel Cleanup	Solid	8015B	102348
LCS 720-102348/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	102348
LCSD 720-102348/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	102348
MB 720-102348/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	102348

Analysis Batch: 102412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-2	SO-2344-NW (5)-021111	Silica Gel Cleanup	Solid	8015B	102348
720-38467-9	SO-2344-T1N (5)-021111	Silica Gel Cleanup	Solid	8015B	102348

Metals

Prep Batch: 102349

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-2	SO-2344-NW (5)-021111	Total/NA	Solid	3050B	
720-38467-3	SO-2344-WW (5)-021111	Total/NA	Solid	3050B	
720-38467-4	SO-2344-EW (5)-021111	Total/NA	Solid	3050B	
720-38467-5	SO-2344-SW (5.5)-021111	Total/NA	Solid	3050B	
720-38467-6	SO-2344-T2S (5.5)-021111	Total/NA	Solid	3050B	
720-38467-7	SO-2344-T2N (5)-021111	Total/NA	Solid	3050B	
720-38467-8	SO-2344-T1S (5.5)-021111	Total/NA	Solid	3050B	
720-38467-9	SO-2344-T1N (5)-021111	Total/NA	Solid	3050B	

Metals (Continued)

Prep Batch: 102349 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-10	SO-2344-WESTSP-(COMP)-021111	Total/NA	Solid	3050B	
LCS 720-102349/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-102349/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-102349/16-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-102349/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 102450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38467-2	SO-2344-NW (5)-021111	Total/NA	Solid	6010B	102349
720-38467-3	SO-2344-WW (5)-021111	Total/NA	Solid	6010B	102349
720-38467-4	SO-2344-EW (5)-021111	Total/NA	Solid	6010B	102349
720-38467-5	SO-2344-SW (5.5)-021111	Total/NA	Solid	6010B	102349
720-38467-6	SO-2344-T2S (5.5)-021111	Total/NA	Solid	6010B	102349
720-38467-7	SO-2344-T2N (5)-021111	Total/NA	Solid	6010B	102349
720-38467-8	SO-2344-T1S (5.5)-021111	Total/NA	Solid	6010B	102349
720-38467-9	SO-2344-T1N (5)-021111	Total/NA	Solid	6010B	102349
720-38467-10	SO-2344-WESTSP-(COMP)-021111	Total/NA	Solid	6010B	102349
LCS 720-102349/2-A	Lab Control Sample	Total/NA	Solid	6010B	102349
LCSD 720-102349/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	102349
LCSSRM 720-102349/16-A	Lab Control Sample	Total/NA	Solid	6010B	102349
MB 720-102349/1-A	Method Blank	Total/NA	Solid	6010B	102349

Client Sample ID: SO-2344-NW (5)-021111

Lab Sample ID: 720-38467-2

Date Collected: 11/02/11 14:45

Matrix: Solid

Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102371	11/02/11 20:15	LL	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102364	11/05/11 03:48	AC	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		5	102429	11/07/11 13:04	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		2	102412	11/07/11 10:28	WR	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 13:53	BA	TAL SF

Client Sample ID: SO-2344-WW (5)-021111

Lab Sample ID: 720-38467-3

Date Collected: 11/02/11 14:35

Matrix: Solid

Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102382	11/02/11 20:15	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102376	11/05/11 17:34	YB	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		10	102429	11/07/11 13:27	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		10	102388	11/05/11 15:24	DH	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 13:58	BA	TAL SF

Client Sample ID: SO-2344-EW (5)-021111

Lab Sample ID: 720-38467-4

Date Collected: 11/02/11 14:20

Matrix: Solid

Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102371	11/02/11 20:15	LL	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102364	11/05/11 04:51	AC	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 13:50	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102388	11/05/11 18:15	DH	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 14:02	BA	TAL SF

Client Sample ID: SO-2344-SW (5.5)-021111

Lab Sample ID: 720-38467-5

Date Collected: 11/02/11 14:15

Matrix: Solid

Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102371	11/02/11 20:15	LL	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102364	11/05/11 05:22	AC	TAL SF

Client Sample ID: SO-2344-SW (5.5)-021111

Lab Sample ID: 720-38467-5

Date Collected: 11/02/11 14:15

Matrix: Solid

Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 14:14	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102388	11/05/11 18:39	DH	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 14:15	BA	TAL SF

Client Sample ID: SO-2344-T2S (5.5)-021111

Lab Sample ID: 720-38467-6

Date Collected: 11/02/11 14:05

Matrix: Solid

Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102382	11/02/11 20:15	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102376	11/05/11 18:03	YB	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 14:37	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102389	11/05/11 17:02	DH	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 14:20	BA	TAL SF

Client Sample ID: SO-2344-T2N (5)-021111

Lab Sample ID: 720-38467-7

Date Collected: 11/02/11 13:55

Matrix: Solid

Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102382	11/02/11 20:15	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102376	11/05/11 16:36	YB	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		2	102429	11/07/11 15:01	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		10	102389	11/05/11 17:26	DH	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 14:24	BA	TAL SF

Client Sample ID: SO-2344-T1S (5.5)-021111

Lab Sample ID: 720-38467-8

Date Collected: 11/02/11 13:45

Matrix: Solid

Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102371	11/02/11 20:15	LL	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102364	11/05/11 06:24	AC	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 15:24	JZ	TAL SF

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Client Sample ID: SO-2344-T1S (5.5)-021111

Lab Sample ID: 720-38467-8

Date Collected: 11/02/11 13:45
Matrix: Solid
Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102388	11/05/11 19:04	DH	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 14:28	BA	TAL SF

Client Sample ID: SO-2344-T1N (5)-021111

Lab Sample ID: 720-38467-9

Date Collected: 11/02/11 13:35
Matrix: Solid
Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102371	11/02/11 20:15	LL	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102364	11/05/11 06:55	AC	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		5	102429	11/07/11 15:48	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		2	102412	11/07/11 11:47	WR	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 14:33	BA	TAL SF

Client Sample ID: SO-2344-WESTSP-(COMP)-021111

Lab Sample ID: 720-38467-10

Date Collected: 11/02/11 14:50
Matrix: Solid
Date Received: 11/02/11 17:25

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			102283	11/03/11 19:07	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102272	11/04/11 01:43	AC	TAL SF
Silica Gel Cleanup	Prep	3546			102348	11/04/11 14:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		10	102389	11/05/11 18:39	DH	TAL SF
Total/NA	Prep	3050B			102349	11/04/11 14:44	ET	TAL SF
Total/NA	Analysis	6010B		4	102450	11/07/11 14:37	BA	TAL SF

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL SF
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF
6010B	Metals (ICP)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38467-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-38467-2	SO-2344-NW (5)-021111	Solid	11/02/11 14:45	11/02/11 17:25
720-38467-3	SO-2344-WW (5)-021111	Solid	11/02/11 14:35	11/02/11 17:25
720-38467-4	SO-2344-EW (5)-021111	Solid	11/02/11 14:20	11/02/11 17:25
720-38467-5	SO-2344-SW (5.5)-021111	Solid	11/02/11 14:15	11/02/11 17:25
720-38467-6	SO-2344-T2S (5.5)-021111	Solid	11/02/11 14:05	11/02/11 17:25
720-38467-7	SO-2344-T2N (5)-021111	Solid	11/02/11 13:55	11/02/11 17:25
720-38467-8	SO-2344-T1S (5.5)-021111	Solid	11/02/11 13:45	11/02/11 17:25
720-38467-9	SO-2344-T1N (5)-021111	Solid	11/02/11 13:35	11/02/11 17:25
720-38467-10	SO-2344-WESTSP-(COMP)-021111	Solid	11/02/11 14:50	11/02/11 17:25

Sharma, Dimple

From: Lia Holden [Lia.Holden@anteagroup.com]
Sent: Thursday, November 03, 2011 7:22 AM
To: Sharma, Dimple
Subject: UPRR-Santa Rosa

Hi Dimple,
Yesterday, Steve submitted 9 to 10 soil samples. Most were placed on 72 hr TAT; one was held. I need the results of that held sample on a 24 hr TAT.

Please confirm. Thanks Dimple.

Lia Holden, PG | Geologist - Project Manager | USA
Antea™Group
Direct: +1 408 826 1863| Mobile: +1 408 410 9781| Fax: +1 408 225 8506
312 Piercy Road, San Jose California 95138
Member of Inogen® | www.inogenet.com

This e-mail is personal. For our full disclaimer, please visit http://www.anteagroup.com/confidentiality.

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-38467-1

Login Number: 38467

List Source: TestAmerica San Francisco

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Test America- Pleasanton

134684

720-38467

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-Rev1-20110926
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Stephen Meninger	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO, BTEX, and MTBE by EPA 8260	DRO by EPA 8015 (with Silica Gel Cleaup)	Motor Oil by EPA 8015	CA LUFT 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	SVOCs by EPA 8270	PAHs			Special Instructions
SO-2344-Fill(Comp)-021111	SO	Glass	1	11/2/11 10:45	N/A	X	X	X						Hold
SO-2344-NW(5)-021111	SO	Vantage	4	11/2/11 14:45	N/A	X	X	X	X					
SO-2344-W(5)-021111	SO	Vantage	4	11/2/11 14:35	N/A	X	X	X	X					
SO-2344-EW(5)-021111	SO	Vantage	4	11/2/11 14:20	N/A	X	X	X	X					
SO-2344-SW(5)-021111	SO	Vantage	4	11/2/11 14:15	N/A	X	X	X	X					
SO-2344-T2S(5)-021111	SO	Vantage	4	11/2/11 14:05	N/A	X	X	X	X					
SO-2344-T2N(5)-021111	SO	Vantage	4	11/2/11 13:55	N/A	X	X	X	X					
SO-2344-T1S(5)-021111	SO	Vantage	4	11/2/11 13:45	N/A	X	X	X	X					RUSH
SO-2344-T1N(5)-021111	SO	Vantage	4	11/2/11 13:35	N/A	X	X	X	X					
			SW											
SO-2344-WestSP-(Comp)-021111	SO	~~Vantage~~ Glass	1	11/2/11 14:30	N/A	X	X	X	X					

Relinquished By: Stephen Meninger Date/Time: 11/2/11 17:25	Received by: Date/Time:	Turnaround Time: (check) Same Day SW 72 Hours X 24 Hours ~~test~~ 5 days _____
Relinquished By: Date/Time:	Received by: Date/Time:	48 hours _____ normal _____
Relinquished By: Date/Time:	Received in ~~test~~ Lab by: John Mullen Date/Time: 11-2-11 1725	Sample Integrity: (Check) 4.2° Intact On Ice: Custody

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-38506-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
11/17/2011 3:31:49 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD exceeds the control limits

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Job ID: 720-38506-1

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-38506-1

Comments
No additional comments.

Receipt
Sample for metals analysis does not appear to be field filtered.. Gave to lab to filter.

All other samples were received in good condition within temperature requirements.

GC/MS VOA
Method 8260B: Internal standard responses were outside of acceptance limits for the following sample: SO-2344-NWB(15)-031111 (720-38506-8). The results were confirmed by re-analysis.

Method 8260B: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch #102299 exceeded control limits for the following analytes: Bromobenzene.

No other analytical or quality issues were noted.

GC/MS Semi VOA
No analytical or quality issues were noted.

GC Semi VOA
Method 8015B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: SO-2344-NWB(15) -031111 (720-38506-8).

No other analytical or quality issues were noted.

Metals
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-EWA (7)-031111 — Lab Sample ID: 720-38506-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.0		0.99		mg/Kg	1		8015B	Silica Gel Clean
Chromium	110		1.9		mg/Kg	4		6010B	Total/NA
Nickel	150		1.9		mg/Kg	4		6010B	Total/NA
Lead	6.6		1.9		mg/Kg	4		6010B	Total/NA
Zinc	52		5.8		mg/Kg	4		6010B	Total/NA
Barium	170		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	58		1.9		mg/Kg	4		6010B	Total/NA
Arsenic	5.3		3.8		mg/Kg	4		6010B	Total/NA
Copper	28		5.8		mg/Kg	4		6010B	Total/NA
Cobalt	18		0.77		mg/Kg	4		6010B	Total/NA
Mercury	0.064		0.0094		mg/Kg	1		7471A	Total/NA

Client Sample ID: SO-2344-SSA(4)-031111 — Lab Sample ID: 720-38506-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	3.7		0.99		mg/Kg	1		8015B	Silica Gel Clean
Chromium	98		2.0		mg/Kg	4		6010B	Total/NA
Nickel	150		2.0		mg/Kg	4		6010B	Total/NA
Lead	12		2.0		mg/Kg	4		6010B	Total/NA
Zinc	63		5.9		mg/Kg	4		6010B	Total/NA
Barium	190		2.0		mg/Kg	4		6010B	Total/NA
Vanadium	62		2.0		mg/Kg	4		6010B	Total/NA
Arsenic	5.9		3.9		mg/Kg	4		6010B	Total/NA
Copper	32		5.9		mg/Kg	4		6010B	Total/NA
Cobalt	22		0.78		mg/Kg	4		6010B	Total/NA
Mercury	0.089		0.0095		mg/Kg	1		7471A	Total/NA

Client Sample ID: SO-2344-NWA(8)-031111 — Lab Sample ID: 720-38506-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	2.9		1.0		mg/Kg	1		8015B	Silica Gel Clean
Chromium	85		1.9		mg/Kg	4		6010B	Total/NA
Nickel	150		1.9		mg/Kg	4		6010B	Total/NA
Lead	19		1.9		mg/Kg	4		6010B	Total/NA
Zinc	53		5.8		mg/Kg	4		6010B	Total/NA
Barium	180		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	54		1.9		mg/Kg	4		6010B	Total/NA
Arsenic	5.4		3.8		mg/Kg	4		6010B	Total/NA
Copper	28		5.8		mg/Kg	4		6010B	Total/NA
Cobalt	18		0.77		mg/Kg	4		6010B	Total/NA
Mercury	0.061		0.0097		mg/Kg	1		7471A	Total/NA

Client Sample ID: SO-2344-SWB(15)-031111 — Lab Sample ID: 720-38506-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5.9		4.4		ug/Kg	1		8260B/CA_LUFTM	Total/NA
Anthracene	14		5.0		ug/Kg	1		8270C SIM	Total/NA
Chrysene	12		5.0		ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	23		5.0		ug/Kg	1		8270C SIM	Total/NA
Pyrene	7.3		5.0		ug/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	72		1.0		mg/Kg	1		8015B	Silica Gel Clean
Chromium	84		1.9		mg/Kg	4		6010B	Total/NA
Nickel	91		1.9		mg/Kg	4		6010B	Total/NA
Lead	5.2		1.9		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-SWB(15)-031111 (Continued) — Lab Sample ID: 720-38506-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	39		5.8		mg/Kg	4		6010B	Total/NA
Barium	160		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	37		1.9		mg/Kg	4		6010B	Total/NA
Copper	21		5.8		mg/Kg	4		6010B	Total/NA
Cobalt	8.5		0.77		mg/Kg	4		6010B	Total/NA
Mercury	0.032		0.0095		mg/Kg	1		7471A	Total/NA

Client Sample ID: SO-2344-WWB(15)-031111 — Lab Sample ID: 720-38506-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Naphthalene	5.2		5.0		ug/Kg	1		8270C SIM	Total/NA
Chromium	100		1.9		mg/Kg	4		6010B	Total/NA
Nickel	100		1.9		mg/Kg	4		6010B	Total/NA
Lead	6.3		1.9		mg/Kg	4		6010B	Total/NA
Zinc	44		5.8		mg/Kg	4		6010B	Total/NA
Barium	140		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	48		1.9		mg/Kg	4		6010B	Total/NA
Arsenic	4.0		3.9		mg/Kg	4		6010B	Total/NA
Copper	20		5.8		mg/Kg	4		6010B	Total/NA
Cobalt	12		0.78		mg/Kg	4		6010B	Total/NA
Mercury	0.038		0.0095		mg/Kg	1		7471A	Total/NA

Client Sample ID: SO-2344-NWB(15)-031111 — Lab Sample ID: 720-38506-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chrysene	23		5.0		ug/Kg	1		8270C SIM	Total/NA
Fluorene	5.4		5.0		ug/Kg	1		8270C SIM	Total/NA
Phenanthrene	19		5.0		ug/Kg	1		8270C SIM	Total/NA
Pyrene	21		5.0		ug/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	560		10		mg/Kg	10		8015B	Silica Gel Clea
Chromium	93		2.0		mg/Kg	4		6010B	Total/NA
Nickel	150		2.0		mg/Kg	4		6010B	Total/NA
Lead	14		2.0		mg/Kg	4		6010B	Total/NA
Zinc	56		6.0		mg/Kg	4		6010B	Total/NA
Barium	190		2.0		mg/Kg	4		6010B	Total/NA
Vanadium	56		2.0		mg/Kg	4		6010B	Total/NA
Arsenic	6.0		4.0		mg/Kg	4		6010B	Total/NA
Copper	32		6.0		mg/Kg	4		6010B	Total/NA
Cobalt	20		0.80		mg/Kg	4		6010B	Total/NA
Mercury	0.070		0.0091		mg/Kg	1		7471A	Total/NA

Client Sample ID: SO-2344-WWA(7)-031111 — Lab Sample ID: 720-38506-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	89		2.0		mg/Kg	4		6010B	Total/NA
Nickel	140		2.0		mg/Kg	4		6010B	Total/NA
Lead	5.8		2.0		mg/Kg	4		6010B	Total/NA
Zinc	50		6.0		mg/Kg	4		6010B	Total/NA
Barium	170		2.0		mg/Kg	4		6010B	Total/NA
Vanadium	59		2.0		mg/Kg	4		6010B	Total/NA
Arsenic	6.2		4.0		mg/Kg	4		6010B	Total/NA
Copper	28		6.0		mg/Kg	4		6010B	Total/NA
Cobalt	18		0.80		mg/Kg	4		6010B	Total/NA
Mercury	0.051		0.0090		mg/Kg	1		7471A	Total/NA

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-EWB(15)-031111

Lab Sample ID: 720-38506-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	35		1.0		mg/Kg	1		8015B	Silica Gel Clean
Chromium	74		2.0		mg/Kg	4		6010B	Total/NA
Nickel	150		2.0		mg/Kg	4		6010B	Total/NA
Lead	6.3		2.0		mg/Kg	4		6010B	Total/NA
Zinc	43		5.9		mg/Kg	4		6010B	Total/NA
Barium	200		2.0		mg/Kg	4		6010B	Total/NA
Vanadium	44		2.0		mg/Kg	4		6010B	Total/NA
Arsenic	4.0		3.9		mg/Kg	4		6010B	Total/NA
Copper	23		5.9		mg/Kg	4		6010B	Total/NA
Cobalt	29		0.78		mg/Kg	4		6010B	Total/NA
Mercury	0.053		0.0094		mg/Kg	1		7471A	Total/NA

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-EWA (7)-031111
Date Collected: 11/03/11 15:35
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-3
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Acetone	ND		50		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Benzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Dichlorobromomethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Bromobenzene	ND	*	5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Chlorobromomethane	ND		20		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Bromoform	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Bromomethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
2-Butanone (MEK)	ND		50		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
n-Butylbenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
sec-Butylbenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
tert-Butylbenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Carbon disulfide	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Carbon tetrachloride	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Chlorobenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Chloroethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Chloroform	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Chloromethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
2-Chlorotoluene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
4-Chlorotoluene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Chlorodibromomethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,3-Dichloropropane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,1-Dichloropropene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Ethylene Dibromide	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Dibromomethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,1-Dichloroethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,2-Dichloroethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,1-Dichloroethene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,2-Dichloropropane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Ethylbenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Hexachlorobutadiene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
2-Hexanone	ND		50		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Isopropylbenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
4-Isopropyltoluene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Methylene Chloride	ND		10		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Naphthalene	ND		10		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
N-Propylbenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Styrene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-EWA (7)-031111
Date Collected: 11/03/11 15:35
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-3
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Toluene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Trichloroethene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Trichlorofluoromethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Vinyl acetate	ND		50		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Vinyl chloride	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Xylenes, Total	ND		10		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
2,2-Dichloropropane	ND		5.0		ug/Kg		11/03/11 21:30	11/04/11 15:37	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/03/11 21:30	11/04/11 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*86*		*45 - 131*	*11/03/11 21:30*	*11/04/11 15:37*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*60 - 140*	*11/03/11 21:30*	*11/04/11 15:37*	*1*
Toluene-d8 (Surr)	*93*		*58 - 140*	*11/03/11 21:30*	*11/04/11 15:37*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Chrysene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Fluorene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1
Pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*33 - 120*	*11/04/11 14:34*	*11/07/11 16:57*	*1*
Terphenyl-d14	*74*		*35 - 146*	*11/04/11 14:34*	*11/07/11 16:57*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.0**		0.99		mg/Kg		11/09/11 10:21	11/10/11 15:39	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		11/09/11 10:21	11/10/11 15:39	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-EWA (7)-031111
Date Collected: 11/03/11 15:35
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-3
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0.02*		*0 - 1*	*11/09/11 10:21*	*11/10/11 15:39*	*1*
p-Terphenyl	*98*		*38 - 148*	*11/09/11 10:21*	*11/10/11 15:39*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Chromium	**110**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Nickel	**150**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Lead	**6.6**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Zinc	**52**		5.8		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Antimony	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Beryllium	ND		0.38		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Barium	**170**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Thallium	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Molybdenum	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Vanadium	**58**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Silver	ND		0.96		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Arsenic	**5.3**		3.8		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Copper	**28**		5.8		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Selenium	ND		3.8		mg/Kg		11/15/11 08:32	11/15/11 19:39	4
Cobalt	**18**		0.77		mg/Kg		11/15/11 08:32	11/15/11 19:39	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.064**		0.0094		mg/Kg		11/04/11 14:02	11/04/11 16:33	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-SSA(4)-031111
Date Collected: 11/03/11 15:35
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-4
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Acetone	ND		49		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Benzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Dichlorobromomethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Bromobenzene	ND	*	4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Chlorobromomethane	ND		20		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Bromoform	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Bromomethane	ND		9.8		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
2-Butanone (MEK)	ND		49		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
n-Butylbenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
sec-Butylbenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
tert-Butylbenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Carbon disulfide	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Carbon tetrachloride	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Chlorobenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Chloroethane	ND		9.8		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Chloroform	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Chloromethane	ND		9.8		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
2-Chlorotoluene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
4-Chlorotoluene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Chlorodibromomethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,2-Dichlorobenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,3-Dichlorobenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,4-Dichlorobenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,3-Dichloropropane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,1-Dichloropropene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,2-Dibromo-3-Chloropropane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Ethylene Dibromide	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Dibromomethane	ND		9.8		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Dichlorodifluoromethane	ND		9.8		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,1-Dichloroethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,2-Dichloroethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,1-Dichloroethene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
cis-1,2-Dichloroethene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
trans-1,2-Dichloroethene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,2-Dichloropropane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
cis-1,3-Dichloropropene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
trans-1,3-Dichloropropene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Ethylbenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Hexachlorobutadiene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
2-Hexanone	ND		49		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Isopropylbenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
4-Isopropyltoluene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Methylene Chloride	ND		9.8		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
4-Methyl-2-pentanone (MIBK)	ND		49		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Naphthalene	ND		9.8		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
N-Propylbenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Styrene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,1,1,2-Tetrachloroethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,1,2,2-Tetrachloroethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-SSA(4)-031111
Date Collected: 11/03/11 15:35
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-4
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Toluene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,2,3-Trichlorobenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,2,4-Trichlorobenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,1,1-Trichloroethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,1,2-Trichloroethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Trichloroethene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Trichlorofluoromethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,2,3-Trichloropropane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,2,4-Trimethylbenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
1,3,5-Trimethylbenzene	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Vinyl acetate	ND		49		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Vinyl chloride	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Xylenes, Total	ND		9.8		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
2,2-Dichloropropane	ND		4.9		ug/Kg		11/03/11 21:30	11/04/11 17:42	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/03/11 21:30	11/04/11 17:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*86*		*45 - 131*	*11/03/11 21:30*	*11/04/11 17:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*115*		*60 - 140*	*11/03/11 21:30*	*11/04/11 17:42*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*11/03/11 21:30*	*11/04/11 17:42*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Chrysene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Fluorene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1
Pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 17:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*33 - 120*	*11/04/11 14:34*	*11/07/11 17:21*	*1*
Terphenyl-d14	*80*		*35 - 146*	*11/04/11 14:34*	*11/07/11 17:21*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**3.7**		0.99		mg/Kg		11/09/11 10:21	11/10/11 16:02	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		11/09/11 10:21	11/10/11 16:02	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-SSA(4)-031111
Date Collected: 11/03/11 15:35
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-4
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0.007*		*0 - 1*	*11/09/11 10:21*	*11/10/11 16:02*	*1*
p-Terphenyl	*77*		*38 - 148*	*11/09/11 10:21*	*11/10/11 16:02*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.49		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Chromium	**98**		2.0		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Nickel	**150**		2.0		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Lead	**12**		2.0		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Zinc	**63**		5.9		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Antimony	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Beryllium	ND		0.39		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Barium	**190**		2.0		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Thallium	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Molybdenum	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Vanadium	**62**		2.0		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Silver	ND		0.98		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Arsenic	**5.9**		3.9		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Copper	**32**		5.9		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Selenium	ND		3.9		mg/Kg		11/15/11 08:32	11/15/11 19:43	4
Cobalt	**22**		0.78		mg/Kg		11/15/11 08:32	11/15/11 19:43	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.089**		0.0095		mg/Kg		11/04/11 14:02	11/04/11 16:35	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-NWA(8)-031111
Date Collected: 11/03/11 15:15
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-5
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Acetone	ND		51		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Benzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Dichlorobromomethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Bromobenzene	ND	*	5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Chlorobromomethane	ND		20		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Bromoform	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Bromomethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
2-Butanone (MEK)	ND		51		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
n-Butylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
sec-Butylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
tert-Butylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Carbon disulfide	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Carbon tetrachloride	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Chlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Chloroethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Chloroform	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Chloromethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
2-Chlorotoluene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
4-Chlorotoluene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Chlorodibromomethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,2-Dichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,3-Dichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,4-Dichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,3-Dichloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,1-Dichloropropene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,2-Dibromo-3-Chloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Ethylene Dibromide	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Dibromomethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,1-Dichloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,2-Dichloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,1-Dichloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
cis-1,2-Dichloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
trans-1,2-Dichloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,2-Dichloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
cis-1,3-Dichloropropene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
trans-1,3-Dichloropropene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Ethylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Hexachlorobutadiene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
2-Hexanone	ND		51		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Isopropylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
4-Isopropyltoluene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Methylene Chloride	ND		10		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
4-Methyl-2-pentanone (MIBK)	ND		51		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Naphthalene	ND		10		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
N-Propylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Styrene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,1,1,2-Tetrachloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,1,2,2-Tetrachloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1

Client Sample ID: SO-2344-NWA(8)-031111
Date Collected: 11/03/11 15:15
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-5
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Toluene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,2,3-Trichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,2,4-Trichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,1,1-Trichloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,1,2-Trichloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Trichloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Trichlorofluoromethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,2,3-Trichloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,2,4-Trimethylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
1,3,5-Trimethylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Vinyl acetate	ND		51		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Vinyl chloride	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Xylenes, Total	ND		10		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
2,2-Dichloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 16:08	1
Gasoline Range Organics (GRO) -C5-C12	ND		260		ug/Kg		11/03/11 21:30	11/04/11 16:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*84*		*45 - 131*	*11/03/11 21:30*	*11/04/11 16:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*60 - 140*	*11/03/11 21:30*	*11/04/11 16:08*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*11/03/11 21:30*	*11/04/11 16:08*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Acenaphthylene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Anthracene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Benzo[a]anthracene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Benzo[a]pyrene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Benzo[b]fluoranthene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Benzo[g,h,i]perylene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Benzo[k]fluoranthene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Chrysene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Dibenz(a,h)anthracene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Fluoranthene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Fluorene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Indeno[1,2,3-cd]pyrene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Naphthalene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Phenanthrene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2
Pyrene	ND		9.9		ug/Kg		11/04/11 14:34	11/07/11 17:44	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*68*		*33 - 120*	*11/04/11 14:34*	*11/07/11 17:44*	*2*
Terphenyl-d14	*68*		*35 - 146*	*11/04/11 14:34*	*11/07/11 17:44*	*2*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**2.9**		1.0		mg/Kg		11/09/11 10:21	11/10/11 16:26	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/09/11 10:21	11/10/11 16:26	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-NWA(8)-031111
Date Collected: 11/03/11 15:15
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-5
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0*		*0 - 1*	*11/09/11 10:21*	*11/10/11 16:26*	*1*
p-Terphenyl	*90*		*38 - 148*	*11/09/11 10:21*	*11/10/11 16:26*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Chromium	**85**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Nickel	**150**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Lead	**19**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Zinc	**53**		5.8		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Antimony	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Beryllium	ND		0.38		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Barium	**180**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Thallium	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Molybdenum	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Vanadium	**54**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Silver	ND		0.96		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Arsenic	**5.4**		3.8		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Copper	**28**		5.8		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Selenium	ND		3.8		mg/Kg		11/15/11 08:32	11/15/11 19:48	4
Cobalt	**18**		0.77		mg/Kg		11/15/11 08:32	11/15/11 19:48	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.061**		0.0097		mg/Kg		11/04/11 14:02	11/04/11 16:38	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-SWB(15)-031111
Date Collected: 11/03/11 14:58
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-6
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Acetone	ND		44		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Benzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Dichlorobromomethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Bromobenzene	ND	*	4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Chlorobromomethane	ND		18		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Bromoform	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Bromomethane	ND		8.9		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
2-Butanone (MEK)	ND		44		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
n-Butylbenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
sec-Butylbenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
tert-Butylbenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Carbon disulfide	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Carbon tetrachloride	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Chlorobenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Chloroethane	ND		8.9		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Chloroform	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Chloromethane	ND		8.9		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
2-Chlorotoluene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
4-Chlorotoluene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Chlorodibromomethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,2-Dichlorobenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,3-Dichlorobenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,4-Dichlorobenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,3-Dichloropropane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,1-Dichloropropene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,2-Dibromo-3-Chloropropane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Ethylene Dibromide	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Dibromomethane	ND		8.9		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Dichlorodifluoromethane	ND		8.9		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,1-Dichloroethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,2-Dichloroethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,1-Dichloroethene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
cis-1,2-Dichloroethene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
trans-1,2-Dichloroethene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,2-Dichloropropane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
cis-1,3-Dichloropropene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
trans-1,3-Dichloropropene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Ethylbenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Hexachlorobutadiene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
2-Hexanone	ND		44		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Isopropylbenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
4-Isopropyltoluene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Methylene Chloride	ND		8.9		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
4-Methyl-2-pentanone (MIBK)	ND		44		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Naphthalene	ND		8.9		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
N-Propylbenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Styrene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,1,1,2-Tetrachloroethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,1,2,2-Tetrachloroethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1

Client Sample ID: SO-2344-SWB(15)-031111
Date Collected: 11/03/11 14:58
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-6
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**5.9**		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Toluene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,2,3-Trichlorobenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,2,4-Trichlorobenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,1,1-Trichloroethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,1,2-Trichloroethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Trichloroethene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Trichlorofluoromethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,2,3-Trichloropropane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,2,4-Trimethylbenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
1,3,5-Trimethylbenzene	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Vinyl acetate	ND		44		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Vinyl chloride	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Xylenes, Total	ND		8.9		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
2,2-Dichloropropane	ND		4.4		ug/Kg		11/03/11 21:30	11/04/11 16:39	1
Gasoline Range Organics (GRO) -C5-C12	ND		220		ug/Kg		11/03/11 21:30	11/04/11 16:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*45 - 131*	*11/03/11 21:30*	*11/04/11 16:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*116*		*60 - 140*	*11/03/11 21:30*	*11/04/11 16:39*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*11/03/11 21:30*	*11/04/11 16:39*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Acenaphthylene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Anthracene	**14**		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Chrysene	**12**		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Fluorene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Naphthalene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Phenanthrene	**23**		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1
Pyrene	**7.3**		5.0		ug/Kg		11/05/11 12:56	11/07/11 22:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*71*		*33 - 120*	*11/05/11 12:56*	*11/07/11 22:27*	*1*
Terphenyl-d14	*96*		*35 - 146*	*11/05/11 12:56*	*11/07/11 22:27*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**72**		1.0		mg/Kg		11/09/11 10:21	11/10/11 16:49	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/09/11 10:21	11/10/11 16:49	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-SWB(15)-031111
Date Collected: 11/03/11 14:58
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-6
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0.2*		*0 - 1*	*11/09/11 10:21*	*11/10/11 16:49*	*1*
p-Terphenyl	*54*		*38 - 148*	*11/09/11 10:21*	*11/10/11 16:49*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Chromium	**84**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Nickel	**91**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Lead	**5.2**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Zinc	**39**		5.8		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Antimony	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Beryllium	ND		0.38		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Barium	**160**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Thallium	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Molybdenum	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Vanadium	**37**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Silver	ND		0.96		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Arsenic	ND		3.8		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Copper	**21**		5.8		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Selenium	ND		3.8		mg/Kg		11/15/11 08:32	11/15/11 19:52	4
Cobalt	**8.5**		0.77		mg/Kg		11/15/11 08:32	11/15/11 19:52	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.032**		0.0095		mg/Kg		11/04/11 14:02	11/04/11 16:40	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-WWB(15)-031111
Date Collected: 11/03/11 14:30
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-7
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Acetone	ND		51		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Benzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Dichlorobromomethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Bromobenzene	ND	*	5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Chlorobromomethane	ND		20		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Bromoform	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Bromomethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
2-Butanone (MEK)	ND		51		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
n-Butylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
sec-Butylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
tert-Butylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Carbon disulfide	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Carbon tetrachloride	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Chlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Chloroethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Chloroform	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Chloromethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
2-Chlorotoluene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
4-Chlorotoluene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Chlorodibromomethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,2-Dichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,3-Dichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,4-Dichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,3-Dichloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,1-Dichloropropene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,2-Dibromo-3-Chloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Ethylene Dibromide	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Dibromomethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,1-Dichloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,2-Dichloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,1-Dichloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
cis-1,2-Dichloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
trans-1,2-Dichloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,2-Dichloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
cis-1,3-Dichloropropene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
trans-1,3-Dichloropropene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Ethylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Hexachlorobutadiene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
2-Hexanone	ND		51		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Isopropylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
4-Isopropyltoluene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Methylene Chloride	ND		10		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
4-Methyl-2-pentanone (MIBK)	ND		51		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Naphthalene	ND		10		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
N-Propylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Styrene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,1,1,2-Tetrachloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,1,2,2-Tetrachloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-WWB(15)-031111
Date Collected: 11/03/11 14:30
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-7
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Toluene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,2,3-Trichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,2,4-Trichlorobenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,1,1-Trichloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,1,2-Trichloroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Trichloroethene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Trichlorofluoromethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,2,3-Trichloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,2,4-Trimethylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
1,3,5-Trimethylbenzene	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Vinyl acetate	ND		51		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Vinyl chloride	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Xylenes, Total	ND		10		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
2,2-Dichloropropane	ND		5.1		ug/Kg		11/03/11 21:30	11/04/11 17:11	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/03/11 21:30	11/04/11 17:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*103*		*45 - 131*	*11/03/11 21:30*	*11/04/11 17:11*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*60 - 140*	*11/03/11 21:30*	*11/04/11 17:11*	*1*
Toluene-d8 (Surr)	*97*		*58 - 140*	*11/03/11 21:30*	*11/04/11 17:11*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Acenaphthylene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Chrysene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Fluorene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Naphthalene	**5.2**		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Phenanthrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1
Pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*50*		*33 - 120*	*11/05/11 12:56*	*11/08/11 15:14*	*1*
Terphenyl-d14	*59*		*35 - 146*	*11/05/11 12:56*	*11/08/11 15:14*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		11/09/11 10:21	11/10/11 17:12	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/09/11 10:21	11/10/11 17:12	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-WWB(15)-031111
Date Collected: 11/03/11 14:30
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-7
Matrix: Solid

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*11/09/11 10:21*	*11/10/11 17:12*	*1*
p-Terphenyl	*84*		*38 - 148*	*11/09/11 10:21*	*11/10/11 17:12*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.49		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Chromium	**100**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Nickel	**100**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Lead	**6.3**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Zinc	**44**		5.8		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Antimony	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Beryllium	ND		0.39		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Barium	**140**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Thallium	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Molybdenum	ND		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Vanadium	**48**		1.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Silver	ND		0.97		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Arsenic	**4.0**		3.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Copper	**20**		5.8		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Selenium	ND		3.9		mg/Kg		11/15/11 08:32	11/15/11 19:56	4
Cobalt	**12**		0.78		mg/Kg		11/15/11 08:32	11/15/11 19:56	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.038**		0.0095		mg/Kg		11/04/11 14:02	11/04/11 16:42	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-NWB(15)-031111
Date Collected: 11/03/11 15:05
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-8
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Acetone	ND		72		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Benzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Dichlorobromomethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Bromobenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Chlorobromomethane	ND		29		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Bromoform	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Bromomethane	ND		14		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
2-Butanone (MEK)	ND		72		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
n-Butylbenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
sec-Butylbenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
tert-Butylbenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Carbon disulfide	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Carbon tetrachloride	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Chlorobenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Chloroethane	ND		14		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Chloroform	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Chloromethane	ND		14		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
2-Chlorotoluene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
4-Chlorotoluene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Chlorodibromomethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,2-Dichlorobenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,3-Dichlorobenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,4-Dichlorobenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,3-Dichloropropane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,1-Dichloropropene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,2-Dibromo-3-Chloropropane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Ethylene Dibromide	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Dibromomethane	ND		14		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Dichlorodifluoromethane	ND		14		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,1-Dichloroethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,2-Dichloroethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,1-Dichloroethene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
cis-1,2-Dichloroethene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
trans-1,2-Dichloroethene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,2-Dichloropropane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
cis-1,3-Dichloropropene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
trans-1,3-Dichloropropene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Ethylbenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Hexachlorobutadiene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
2-Hexanone	ND		72		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Isopropylbenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
4-Isopropyltoluene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Methylene Chloride	ND		14		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
4-Methyl-2-pentanone (MIBK)	ND		72		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Naphthalene	ND		14		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
N-Propylbenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Styrene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,1,1,2-Tetrachloroethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,1,2,2-Tetrachloroethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-NWB(15)-031111
Date Collected: 11/03/11 15:05
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-8
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Toluene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,2,3-Trichlorobenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,2,4-Trichlorobenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,1,1-Trichloroethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,1,2-Trichloroethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Trichloroethene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Trichlorofluoromethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,2,3-Trichloropropane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,2,4-Trimethylbenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
1,3,5-Trimethylbenzene	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Vinyl acetate	ND		72		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Vinyl chloride	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Xylenes, Total	ND		14		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
2,2-Dichloropropane	ND		7.2		ug/Kg		11/03/11 21:30	11/05/11 17:05	1
Gasoline Range Organics (GRO) -C5-C12	ND		360		ug/Kg		11/03/11 21:30	11/05/11 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*80*		*45 - 131*	*11/03/11 21:30*	*11/05/11 17:05*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*60 - 140*	*11/03/11 21:30*	*11/05/11 17:05*	*1*
Toluene-d8 (Surr)	*86*		*58 - 140*	*11/03/11 21:30*	*11/05/11 17:05*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Acenaphthylene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Chrysene	**23**		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Fluorene	**5.4**		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Naphthalene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Phenanthrene	**19**		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1
Pyrene	**21**		5.0		ug/Kg		11/05/11 12:56	11/08/11 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*62*		*33 - 120*	*11/05/11 12:56*	*11/08/11 15:37*	*1*
Terphenyl-d14	*128*		*35 - 146*	*11/05/11 12:56*	*11/08/11 15:37*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**560**		10		mg/Kg		11/09/11 10:21	11/16/11 20:45	10
Motor Oil Range Organics [C24-C36]	ND		500		mg/Kg		11/09/11 10:21	11/16/11 20:45	10

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-NWB(15)-031111
Date Collected: 11/03/11 15:05
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-8
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0*		*0 - 1*	*11/09/11 10:21*	*11/16/11 20:45*	*10*
p-Terphenyl	*0*	*D X*	*38 - 148*	*11/09/11 10:21*	*11/16/11 20:45*	*10*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Chromium	**93**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Nickel	**150**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Lead	**14**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Zinc	**56**		6.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Antimony	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Beryllium	ND		0.40		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Barium	**190**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Thallium	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Molybdenum	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Vanadium	**56**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Silver	ND		1.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Arsenic	**6.0**		4.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Copper	**32**		6.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Selenium	ND		4.0		mg/Kg		11/15/11 08:32	11/15/11 20:01	4
Cobalt	**20**		0.80		mg/Kg		11/15/11 08:32	11/15/11 20:01	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.070**		0.0091		mg/Kg		11/04/11 14:02	11/04/11 16:49	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-WWA(7)-031111
Date Collected: 11/03/11 14:40
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-9
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Acetone	ND		57		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Benzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Dichlorobromomethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Bromobenzene	ND	*	5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Chlorobromomethane	ND		23		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Bromoform	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Bromomethane	ND		11		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
2-Butanone (MEK)	ND		57		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
n-Butylbenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
sec-Butylbenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
tert-Butylbenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Carbon disulfide	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Carbon tetrachloride	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Chlorobenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Chloroethane	ND		11		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Chloroform	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Chloromethane	ND		11		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
2-Chlorotoluene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
4-Chlorotoluene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Chlorodibromomethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,2-Dichlorobenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,3-Dichlorobenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,4-Dichlorobenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,3-Dichloropropane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,1-Dichloropropene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,2-Dibromo-3-Chloropropane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Ethylene Dibromide	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Dibromomethane	ND		11		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Dichlorodifluoromethane	ND		11		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,1-Dichloroethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,2-Dichloroethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,1-Dichloroethene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
cis-1,2-Dichloroethene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
trans-1,2-Dichloroethene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,2-Dichloropropane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
cis-1,3-Dichloropropene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
trans-1,3-Dichloropropene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Ethylbenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Hexachlorobutadiene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
2-Hexanone	ND		57		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Isopropylbenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
4-Isopropyltoluene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Methylene Chloride	ND		11		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
4-Methyl-2-pentanone (MIBK)	ND		57		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Naphthalene	ND		11		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
N-Propylbenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Styrene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,1,1,2-Tetrachloroethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,1,2,2-Tetrachloroethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1

Client Sample ID: SO-2344-WWA(7)-031111
Date Collected: 11/03/11 14:40
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-9
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Toluene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,2,3-Trichlorobenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,2,4-Trichlorobenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,1,1-Trichloroethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,1,2-Trichloroethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Trichloroethene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Trichlorofluoromethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,2,3-Trichloropropane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,2,4-Trimethylbenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
1,3,5-Trimethylbenzene	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Vinyl acetate	ND		57		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Vinyl chloride	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Xylenes, Total	ND		11		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
2,2-Dichloropropane	ND		5.7		ug/Kg		11/03/11 21:30	11/04/11 18:45	1
Gasoline Range Organics (GRO) -C5-C12	ND		280		ug/Kg		11/03/11 21:30	11/04/11 18:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*45 - 131*	*11/03/11 21:30*	*11/04/11 18:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*112*		*60 - 140*	*11/03/11 21:30*	*11/04/11 18:45*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*	*11/03/11 21:30*	*11/04/11 18:45*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Acenaphthylene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Anthracene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Benzo[a]anthracene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Benzo[a]pyrene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Benzo[b]fluoranthene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Benzo[g,h,i]perylene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Benzo[k]fluoranthene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Chrysene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Dibenz(a,h)anthracene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Fluoranthene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Fluorene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Indeno[1,2,3-cd]pyrene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Naphthalene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Phenanthrene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1
Pyrene	ND		4.9		ug/Kg		11/05/11 12:56	11/08/11 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*84*		*33 - 120*	*11/05/11 12:56*	*11/08/11 16:01*	*1*
Terphenyl-d14	*84*		*35 - 146*	*11/05/11 12:56*	*11/08/11 16:01*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		11/09/11 10:21	11/16/11 21:09	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		11/09/11 10:21	11/16/11 21:09	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-WWA(7)-031111
Date Collected: 11/03/11 14:40
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-9
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0.007*		*0 - 1*	*11/09/11 10:21*	*11/16/11 21:09*	*1*
p-Terphenyl	*94*		*38 - 148*	*11/09/11 10:21*	*11/16/11 21:09*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Chromium	**89**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Nickel	**140**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Lead	**5.8**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Zinc	**50**		6.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Antimony	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Beryllium	ND		0.40		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Barium	**170**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Thallium	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Molybdenum	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Vanadium	**59**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Silver	ND		1.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Arsenic	**6.2**		4.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Copper	**28**		6.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Selenium	ND		4.0		mg/Kg		11/15/11 08:32	11/15/11 20:05	4
Cobalt	**18**		0.80		mg/Kg		11/15/11 08:32	11/15/11 20:05	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.051**		0.0090		mg/Kg		11/04/11 14:02	11/04/11 16:51	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-EWB(15)-031111
Date Collected: 11/03/11 14:20
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-10
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Acetone	ND		52		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Benzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Dichlorobromomethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Bromobenzene	ND	*	5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Chlorobromomethane	ND		21		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Bromoform	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Bromomethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
2-Butanone (MEK)	ND		52		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
n-Butylbenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
sec-Butylbenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
tert-Butylbenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Carbon disulfide	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Carbon tetrachloride	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Chlorobenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Chloroethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Chloroform	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Chloromethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
2-Chlorotoluene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
4-Chlorotoluene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Chlorodibromomethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,2-Dichlorobenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,3-Dichlorobenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,4-Dichlorobenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,3-Dichloropropane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,1-Dichloropropene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,2-Dibromo-3-Chloropropane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Ethylene Dibromide	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Dibromomethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,1-Dichloroethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,2-Dichloroethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,1-Dichloroethene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
cis-1,2-Dichloroethene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
trans-1,2-Dichloroethene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,2-Dichloropropane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
cis-1,3-Dichloropropene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
trans-1,3-Dichloropropene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Ethylbenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Hexachlorobutadiene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
2-Hexanone	ND		52		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Isopropylbenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
4-Isopropyltoluene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Methylene Chloride	ND		10		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
4-Methyl-2-pentanone (MIBK)	ND		52		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Naphthalene	ND		10		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
N-Propylbenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Styrene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,1,1,2-Tetrachloroethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,1,2,2-Tetrachloroethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1

Client Sample ID: SO-EWB(15)-031111
Date Collected: 11/03/11 14:20
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-10
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Toluene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,2,3-Trichlorobenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,2,4-Trichlorobenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,1,1-Trichloroethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,1,2-Trichloroethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Trichloroethene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Trichlorofluoromethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,2,3-Trichloropropane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,2,4-Trimethylbenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
1,3,5-Trimethylbenzene	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Vinyl acetate	ND		52		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Vinyl chloride	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Xylenes, Total	ND		10		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
2,2-Dichloropropane	ND		5.2		ug/Kg		11/03/11 21:30	11/04/11 19:16	1
Gasoline Range Organics (GRO) -C5-C12	ND		260		ug/Kg		11/03/11 21:30	11/04/11 19:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*45 - 131*	*11/03/11 21:30*	*11/04/11 19:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*113*		*60 - 140*	*11/03/11 21:30*	*11/04/11 19:16*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*	*11/03/11 21:30*	*11/04/11 19:16*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Acenaphthylene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Chrysene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Fluorene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Naphthalene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Phenanthrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1
Pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/08/11 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*76*		*33 - 120*	*11/05/11 12:56*	*11/08/11 16:24*	*1*
Terphenyl-d14	*78*		*35 - 146*	*11/05/11 12:56*	*11/08/11 16:24*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**35**		1.0		mg/Kg		11/09/11 10:21	11/10/11 18:23	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/09/11 10:21	11/10/11 18:23	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-EWB(15)-031111
Date Collected: 11/03/11 14:20
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-10
Matrix: Solid

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Capric Acid (Surr)	*0.08*		*0 - 1*	*11/09/11 10:21*	*11/10/11 18:23*	*1*
p-Terphenyl	*64*		*38 - 148*	*11/09/11 10:21*	*11/10/11 18:23*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.49		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Chromium	**74**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Nickel	**150**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Lead	**6.3**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Zinc	**43**		5.9		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Antimony	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Beryllium	ND		0.39		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Barium	**200**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Thallium	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Molybdenum	ND		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Vanadium	**44**		2.0		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Silver	ND		0.98		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Arsenic	**4.0**		3.9		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Copper	**23**		5.9		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Selenium	ND		3.9		mg/Kg		11/15/11 08:32	11/15/11 20:09	4
Cobalt	**29**		0.78		mg/Kg		11/15/11 08:32	11/15/11 20:09	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.053**		0.0094		mg/Kg		11/04/11 14:02	11/04/11 16:53	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-102314/1-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102314

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Acetone	ND		50		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Benzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Dichlorobromomethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Bromobenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Chlorobromomethane	ND		20		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Bromoform	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Bromomethane	ND		10		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
2-Butanone (MEK)	ND		50		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
n-Butylbenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
sec-Butylbenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
tert-Butylbenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Carbon disulfide	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Carbon tetrachloride	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Chlorobenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Chloroethane	ND		10		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Chloroform	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Chloromethane	ND		10		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
2-Chlorotoluene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
4-Chlorotoluene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Chlorodibromomethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,3-Dichloropropane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,1-Dichloropropene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Ethylene Dibromide	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Dibromomethane	ND		10		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,1-Dichloroethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,2-Dichloroethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,1-Dichloroethene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,2-Dichloropropane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Ethylbenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Hexachlorobutadiene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
2-Hexanone	ND		50		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Isopropylbenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
4-Isopropyltoluene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Methylene Chloride	ND		10		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Naphthalene	ND		10		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
N-Propylbenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Styrene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102314/1-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102314

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Tetrachloroethene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Toluene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Trichloroethene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Trichlorofluoromethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Vinyl acetate	ND		50		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Vinyl chloride	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Xylenes, Total	ND		10		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
2,2-Dichloropropane	ND		5.0		ug/Kg		11/04/11 08:55	11/04/11 10:03	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/04/11 08:55	11/04/11 10:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*94*		*45 - 131*	*11/04/11 08:55*	*11/04/11 10:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*60 - 140*	*11/04/11 08:55*	*11/04/11 10:03*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*11/04/11 08:55*	*11/04/11 10:03*	*1*

Lab Sample ID: LCS 720-102314/2-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102314

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	49.7	47.1		ug/Kg		95	71 - 144
Acetone	249	184		ug/Kg		74	30 - 162
Benzene	49.7	43.5		ug/Kg		88	77 - 113
Dichlorobromomethane	49.7	48.9		ug/Kg		98	86 - 131
Bromobenzene	49.7	43.1	*	ug/Kg		87	88 - 120
Chlorobromomethane	49.7	43.9		ug/Kg		88	81 - 116
Bromoform	49.7	52.1		ug/Kg		105	59 - 158
Bromomethane	49.7	45.7		ug/Kg		92	59 - 132
2-Butanone (MEK)	249	217		ug/Kg		88	61 - 150
n-Butylbenzene	49.7	51.1		ug/Kg		103	80 - 142
sec-Butylbenzene	49.7	49.1		ug/Kg		99	85 - 136
tert-Butylbenzene	49.7	47.5		ug/Kg		96	71 - 130
Carbon disulfide	49.7	37.8		ug/Kg		76	60 - 136
Carbon tetrachloride	49.7	49.7		ug/Kg		100	81 - 138
Chlorobenzene	49.7	45.3		ug/Kg		91	82 - 114
Chloroethane	49.7	46.9		ug/Kg		94	65 - 126
Chloroform	49.7	46.5		ug/Kg		94	77 - 127
Chloromethane	49.7	44.5		ug/Kg		90	60 - 149
2-Chlorotoluene	49.7	48.1		ug/Kg		97	80 - 138
4-Chlorotoluene	49.7	46.9		ug/Kg		94	79 - 136

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102314/2-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102314

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorodibromomethane	49.7	51.1		ug/Kg		103	75 - 146
1,2-Dichlorobenzene	49.7	44.5		ug/Kg		90	84 - 130
1,3-Dichlorobenzene	49.7	45.1		ug/Kg		91	84 - 131
1,4-Dichlorobenzene	49.7	45.1		ug/Kg		91	85 - 125
1,3-Dichloropropane	49.7	48.7		ug/Kg		98	79 - 140
1,1-Dichloropropene	49.7	46.5		ug/Kg		94	70 - 130
1,2-Dibromo-3-Chloropropane	49.7	45.5		ug/Kg		92	68 - 145
Ethylene Dibromide	49.7	48.9		ug/Kg		98	79 - 140
Dibromomethane	49.7	47.1		ug/Kg		95	80 - 139
Dichlorodifluoromethane	49.7	40.0		ug/Kg		80	37 - 158
1,1-Dichloroethane	49.7	45.1		ug/Kg		91	76 - 119
1,2-Dichloroethane	49.7	49.7		ug/Kg		100	72 - 130
1,1-Dichloroethene	49.7	37.0		ug/Kg		74	68 - 119
cis-1,2-Dichloroethene	49.7	54.3		ug/Kg		109	87 - 138
trans-1,2-Dichloroethene	49.7	36.8		ug/Kg		74	67 - 108
1,2-Dichloropropane	49.7	44.1		ug/Kg		89	73 - 127
cis-1,3-Dichloropropene	49.7	49.3		ug/Kg		99	68 - 147
trans-1,3-Dichloropropene	49.7	53.5		ug/Kg		108	84 - 136
Ethylbenzene	49.7	46.3		ug/Kg		93	80 - 137
Hexachlorobutadiene	49.7	48.1		ug/Kg		97	72 - 132
2-Hexanone	249	235		ug/Kg		95	60 - 161
Isopropylbenzene	49.7	51.3		ug/Kg		103	88 - 128
4-Isopropyltoluene	49.7	48.9		ug/Kg		98	85 - 133
Methylene Chloride	49.7	40.8		ug/Kg		82	72 - 134
4-Methyl-2-pentanone (MIBK)	249	244		ug/Kg		98	69 - 160
Naphthalene	49.7	45.3		ug/Kg		91	70 - 147
N-Propylbenzene	49.7	45.5		ug/Kg		92	72 - 125
Styrene	49.7	48.9		ug/Kg		98	89 - 126
1,1,1,2-Tetrachloroethane	49.7	49.7		ug/Kg		100	90 - 130
1,1,2,2-Tetrachloroethane	49.7	44.9		ug/Kg		90	82 - 146
Tetrachloroethene	49.7	46.1		ug/Kg		93	78 - 132
Toluene	49.7	45.5		ug/Kg		92	68 - 121
1,2,3-Trichlorobenzene	49.7	45.3		ug/Kg		91	82 - 135
1,2,4-Trichlorobenzene	49.7	45.3		ug/Kg		91	70 - 131
1,1,1-Trichloroethane	49.7	47.9		ug/Kg		96	80 - 127
1,1,2-Trichloroethane	49.7	46.3		ug/Kg		93	82 - 125
Trichloroethene	49.7	43.7		ug/Kg		88	81 - 133
Trichlorofluoromethane	49.7	52.7		ug/Kg		106	71 - 139
1,2,3-Trichloropropane	49.7	48.3		ug/Kg		97	76 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	49.7	41.6		ug/Kg		84	70 - 130
1,2,4-Trimethylbenzene	49.7	47.1		ug/Kg		95	84 - 130
1,3,5-Trimethylbenzene	49.7	48.9		ug/Kg		98	82 - 131
Vinyl acetate	49.7	54.5		ug/Kg		110	38 - 176
Vinyl chloride	49.7	46.7		ug/Kg		94	58 - 125
m-Xylene & p-Xylene	99.4	93.4		ug/Kg		94	79 - 146
o-Xylene	49.7	49.5		ug/Kg		100	84 - 140
2,2-Dichloropropane	49.7	52.1		ug/Kg		105	73 - 162

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102314/2-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102314

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	*103*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*110*		*60 - 140*
Toluene-d8 (Surr)	*97*		*58 - 140*

Lab Sample ID: LCS 720-102314/4-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102314

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C5-C12			992	877		ug/Kg		88	61 - 128		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene	*99*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*109*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: LCSD 720-102314/3-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102314

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			49.2	46.1		ug/Kg		94	71 - 144	2	20
Acetone			246	159		ug/Kg		65	30 - 162	15	30
Benzene			49.2	43.3		ug/Kg		88	77 - 113	1	20
Dichlorobromomethane			49.2	48.8		ug/Kg		99	86 - 131	0	20
Bromobenzene			49.2	45.1		ug/Kg		92	88 - 120	4	20
Chlorobromomethane			49.2	45.5		ug/Kg		92	81 - 116	3	20
Bromoform			49.2	48.2		ug/Kg		98	59 - 158	8	20
Bromomethane			49.2	47.2		ug/Kg		96	59 - 132	3	20
2-Butanone (MEK)			246	191		ug/Kg		77	61 - 150	13	20
n-Butylbenzene			49.2	50.4		ug/Kg		102	80 - 142	1	20
sec-Butylbenzene			49.2	48.8		ug/Kg		99	85 - 136	1	20
tert-Butylbenzene			49.2	48.2		ug/Kg		98	71 - 130	1	20
Carbon disulfide			49.2	36.8		ug/Kg		75	60 - 136	3	20
Carbon tetrachloride			49.2	48.6		ug/Kg		99	81 - 138	2	20
Chlorobenzene			49.2	43.9		ug/Kg		89	82 - 114	3	20
Chloroethane			49.2	50.4		ug/Kg		102	65 - 126	7	20
Chloroform			49.2	46.3		ug/Kg		94	77 - 127	1	20
Chloromethane			49.2	45.3		ug/Kg		92	60 - 149	2	20
2-Chlorotoluene			49.2	48.0		ug/Kg		98	80 - 138	0	20
4-Chlorotoluene			49.2	46.9		ug/Kg		95	79 - 136	0	20
Chlorodibromomethane			49.2	49.6		ug/Kg		101	75 - 146	3	20
1,2-Dichlorobenzene			49.2	45.5		ug/Kg		92	84 - 130	2	20
1,3-Dichlorobenzene			49.2	45.7		ug/Kg		93	84 - 131	1	20
1,4-Dichlorobenzene			49.2	46.3		ug/Kg		94	85 - 125	2	20
1,3-Dichloropropane			49.2	46.9		ug/Kg		95	79 - 140	4	20
1,1-Dichloropropene			49.2	45.7		ug/Kg		93	70 - 130	2	20
1,2-Dibromo-3-Chloropropane			49.2	43.9		ug/Kg		89	68 - 145	4	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102314/3-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102314

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide			49.2	47.2		ug/Kg		96	79 - 140	3	20
Dibromomethane			49.2	44.9		ug/Kg		91	80 - 139	5	20
Dichlorodifluoromethane			49.2	40.2		ug/Kg		82	37 - 158	0	20
1,1-Dichloroethane			49.2	44.3		ug/Kg		90	76 - 119	2	20
1,2-Dichloroethane			49.2	47.0		ug/Kg		96	72 - 130	5	20
1,1-Dichloroethene			49.2	36.8		ug/Kg		75	68 - 119	0	20
cis-1,2-Dichloroethene			49.2	51.8		ug/Kg		105	87 - 138	5	20
trans-1,2-Dichloroethene			49.2	36.8		ug/Kg		75	67 - 108	0	20
1,2-Dichloropropane			49.2	42.9		ug/Kg		87	73 - 127	3	20
cis-1,3-Dichloropropene			49.2	48.0		ug/Kg		98	68 - 147	3	20
trans-1,3-Dichloropropene			49.2	52.0		ug/Kg		106	84 - 136	3	20
Ethylbenzene			49.2	44.7		ug/Kg		91	80 - 137	4	20
Hexachlorobutadiene			49.2	49.0		ug/Kg		100	72 - 132	2	20
2-Hexanone			246	207		ug/Kg		84	60 - 161	13	20
Isopropylbenzene			49.2	48.6		ug/Kg		99	88 - 128	5	20
4-Isopropyltoluene			49.2	49.0		ug/Kg		100	85 - 133	0	20
Methylene Chloride			49.2	40.6		ug/Kg		82	72 - 134	1	20
4-Methyl-2-pentanone (MIBK)			246	220		ug/Kg		89	69 - 160	11	20
Naphthalene			49.2	44.1		ug/Kg		90	70 - 147	3	20
N-Propylbenzene			49.2	45.9		ug/Kg		93	72 - 125	1	20
Styrene			49.2	47.2		ug/Kg		96	89 - 126	3	20
1,1,1,2-Tetrachloroethane			49.2	48.0		ug/Kg		98	90 - 130	3	20
1,1,2,2-Tetrachloroethane			49.2	43.5		ug/Kg		88	82 - 146	3	20
Tetrachloroethene			49.2	45.9		ug/Kg		93	78 - 132	1	20
Toluene			49.2	43.7		ug/Kg		89	68 - 121	4	20
1,2,3-Trichlorobenzene			49.2	45.7		ug/Kg		93	82 - 135	1	20
1,2,4-Trichlorobenzene			49.2	45.5		ug/Kg		92	70 - 131	0	20
1,1,1-Trichloroethane			49.2	47.2		ug/Kg		96	80 - 127	1	20
1,1,2-Trichloroethane			49.2	44.9		ug/Kg		91	82 - 125	3	20
Trichloroethene			49.2	44.7		ug/Kg		91	81 - 133	2	20
Trichlorofluoromethane			49.2	54.7		ug/Kg		111	71 - 139	4	20
1,2,3-Trichloropropane			49.2	46.3		ug/Kg		94	76 - 146	4	20
1,1,2-Trichloro-1,2,2-trifluoroetha ne			49.2	42.1		ug/Kg		86	70 - 130	1	20
1,2,4-Trimethylbenzene			49.2	47.8		ug/Kg		97	84 - 130	2	20
1,3,5-Trimethylbenzene			49.2	49.2		ug/Kg		100	82 - 131	1	20
Vinyl acetate			49.2	50.8		ug/Kg		103	38 - 176	7	20
Vinyl chloride			49.2	48.8		ug/Kg		99	58 - 125	4	20
m-Xylene & p-Xylene			98.4	89.4		ug/Kg		91	79 - 146	4	20
o-Xylene			49.2	47.0		ug/Kg		96	84 - 140	5	20
2,2-Dichloropropane			49.2	49.6		ug/Kg		101	73 - 162	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*101*		*60 - 140*
Toluene-d8 (Surr)	*97*		*58 - 140*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102314/5-A
Matrix: Solid
Analysis Batch: 102299

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102314

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			998	790		ug/Kg		79	61 - 128	10	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*107*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: MB 720-102382/1-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102382

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Acetone	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Benzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Dichlorobromomethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Bromobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chlorobromomethane	ND		20		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Bromoform	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Bromomethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
2-Butanone (MEK)	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
n-Butylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
sec-Butylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
tert-Butylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Carbon disulfide	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Carbon tetrachloride	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chloroethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chloroform	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chloromethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
2-Chlorotoluene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
4-Chlorotoluene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Chlorodibromomethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,3-Dichloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1-Dichloropropene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Ethylene Dibromide	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Dibromomethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1-Dichloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2-Dichloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1-Dichloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2-Dichloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102382/1-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102382

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Ethylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Hexachlorobutadiene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
2-Hexanone	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Isopropylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
4-Isopropyltoluene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Methylene Chloride	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Naphthalene	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
N-Propylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Styrene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Tetrachloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Toluene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Trichloroethene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Trichlorofluoromethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Vinyl acetate	ND		50		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Vinyl chloride	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Xylenes, Total	ND		10		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
2,2-Dichloropropane	ND		5.0		ug/Kg		11/05/11 09:56	11/05/11 12:06	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/05/11 09:56	11/05/11 12:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*45 - 131*	*11/05/11 09:56*	*11/05/11 12:06*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*60 - 140*	*11/05/11 09:56*	*11/05/11 12:06*	*1*
Toluene-d8 (Surr)	*92*		*58 - 140*	*11/05/11 09:56*	*11/05/11 12:06*	*1*

Lab Sample ID: LCS 720-102382/2-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102382

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	49.8	53.6		ug/Kg		108	71 - 144
Acetone	249	164		ug/Kg		66	30 - 162
Benzene	49.8	43.8		ug/Kg		88	77 - 113
Dichlorobromomethane	49.8	49.8		ug/Kg		100	86 - 131
Bromobenzene	49.8	47.0		ug/Kg		94	88 - 120
Chlorobromomethane	49.8	47.0		ug/Kg		94	81 - 116
Bromoform	49.8	56.2		ug/Kg		113	59 - 158

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102382/2-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102382

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromomethane	49.8	41.2		ug/Kg		83	59 - 132
2-Butanone (MEK)	249	190		ug/Kg		76	61 - 150
n-Butylbenzene	49.8	47.2		ug/Kg		95	80 - 142
sec-Butylbenzene	49.8	46.8		ug/Kg		94	85 - 136
tert-Butylbenzene	49.8	47.2		ug/Kg		95	71 - 130
Carbon disulfide	49.8	35.3		ug/Kg		71	60 - 136
Carbon tetrachloride	49.8	45.8		ug/Kg		92	81 - 138
Chlorobenzene	49.8	46.0		ug/Kg		92	82 - 114
Chloroethane	49.8	42.2		ug/Kg		85	65 - 126
Chloroform	49.8	44.8		ug/Kg		90	77 - 127
Chloromethane	49.8	37.8		ug/Kg		76	60 - 149
2-Chlorotoluene	49.8	48.2		ug/Kg		97	80 - 138
4-Chlorotoluene	49.8	47.6		ug/Kg		96	79 - 136
Chlorodibromomethane	49.8	53.2		ug/Kg		107	75 - 146
1,2-Dichlorobenzene	49.8	47.6		ug/Kg		96	84 - 130
1,3-Dichlorobenzene	49.8	47.2		ug/Kg		95	84 - 131
1,4-Dichlorobenzene	49.8	47.2		ug/Kg		95	85 - 125
1,3-Dichloropropane	49.8	49.0		ug/Kg		98	79 - 140
1,1-Dichloropropene	49.8	43.0		ug/Kg		86	70 - 130
1,2-Dibromo-3-Chloropropane	49.8	53.4		ug/Kg		107	68 - 145
Ethylene Dibromide	49.8	51.6		ug/Kg		104	79 - 140
Dibromomethane	49.8	49.0		ug/Kg		98	80 - 139
Dichlorodifluoromethane	49.8	31.1		ug/Kg		62	37 - 158
1,1-Dichloroethane	49.8	42.6		ug/Kg		86	76 - 119
1,2-Dichloroethane	49.8	46.4		ug/Kg		93	72 - 130
1,1-Dichloroethene	49.8	36.7		ug/Kg		74	68 - 119
cis-1,2-Dichloroethene	49.8	50.2		ug/Kg		101	87 - 138
trans-1,2-Dichloroethene	49.8	36.3		ug/Kg		73	67 - 108
1,2-Dichloropropane	49.8	44.8		ug/Kg		90	73 - 127
cis-1,3-Dichloropropene	49.8	49.4		ug/Kg		99	68 - 147
trans-1,3-Dichloropropene	49.8	53.4		ug/Kg		107	84 - 136
Ethylbenzene	49.8	46.0		ug/Kg		92	80 - 137
Hexachlorobutadiene	49.8	45.2		ug/Kg		91	72 - 132
2-Hexanone	249	230		ug/Kg		92	60 - 161
Isopropylbenzene	49.8	47.8		ug/Kg		96	88 - 128
4-Isopropyltoluene	49.8	47.0		ug/Kg		94	85 - 133
Methylene Chloride	49.8	42.0		ug/Kg		84	72 - 134
4-Methyl-2-pentanone (MIBK)	249	241		ug/Kg		97	69 - 160
Naphthalene	49.8	49.8		ug/Kg		100	70 - 147
N-Propylbenzene	49.8	45.2		ug/Kg		91	72 - 125
Styrene	49.8	49.8		ug/Kg		100	89 - 126
1,1,1,2-Tetrachloroethane	49.8	50.6		ug/Kg		102	90 - 130
1,1,2,2-Tetrachloroethane	49.8	49.4		ug/Kg		99	82 - 146
Tetrachloroethene	49.8	45.2		ug/Kg		91	78 - 132
Toluene	49.8	47.2		ug/Kg		95	68 - 121
1,2,3-Trichlorobenzene	49.8	49.2		ug/Kg		99	82 - 135
1,2,4-Trichlorobenzene	49.8	47.6		ug/Kg		96	70 - 131
1,1,1-Trichloroethane	49.8	44.8		ug/Kg		90	80 - 127
1,1,2-Trichloroethane	49.8	48.6		ug/Kg		98	82 - 125
Trichloroethene	49.8	43.8		ug/Kg		88	81 - 133

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102382/2-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102382

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichlorofluoromethane	49.8	43.4		ug/Kg		87	71 - 139
1,2,3-Trichloropropane	49.8	50.0		ug/Kg		100	76 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	49.8	39.2		ug/Kg		79	70 - 130
1,2,4-Trimethylbenzene	49.8	48.8		ug/Kg		98	84 - 130
1,3,5-Trimethylbenzene	49.8	48.6		ug/Kg		98	82 - 131
Vinyl acetate	49.8	50.2		ug/Kg		101	38 - 176
Vinyl chloride	49.8	37.6		ug/Kg		76	58 - 125
m-Xylene & p-Xylene	99.6	95.4		ug/Kg		96	79 - 146
o-Xylene	49.8	49.0		ug/Kg		98	84 - 140
2,2-Dichloropropane	49.8	47.6		ug/Kg		96	73 - 162

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*100*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: LCS 720-102382/4-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102382

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	996	763		ug/Kg		77	61 - 128

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*100*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*96*		*58 - 140*

Lab Sample ID: LCSD 720-102382/3-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102382

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	49.7	53.3		ug/Kg		107	71 - 144	1	20
Acetone	249	144		ug/Kg		58	30 - 162	13	30
Benzene	49.7	45.5		ug/Kg		92	77 - 113	4	20
Dichlorobromomethane	49.7	51.7		ug/Kg		104	86 - 131	4	20
Bromobenzene	49.7	50.1		ug/Kg		101	88 - 120	6	20
Chlorobromomethane	49.7	49.3		ug/Kg		99	81 - 116	5	20
Bromoform	49.7	58.3		ug/Kg		117	59 - 158	4	20
Bromomethane	49.7	42.7		ug/Kg		86	59 - 132	4	20
2-Butanone (MEK)	249	187		ug/Kg		75	61 - 150	2	20
n-Butylbenzene	49.7	48.3		ug/Kg		97	80 - 142	2	20
sec-Butylbenzene	49.7	47.9		ug/Kg		96	85 - 136	2	20
tert-Butylbenzene	49.7	48.9		ug/Kg		98	71 - 130	4	20
Carbon disulfide	49.7	36.4		ug/Kg		73	60 - 136	3	20
Carbon tetrachloride	49.7	45.5		ug/Kg		92	81 - 138	1	20
Chlorobenzene	49.7	47.9		ug/Kg		96	82 - 114	4	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102382/3-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102382

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroethane	49.7	43.5		ug/Kg		88	65 - 126	3	20
Chloroform	49.7	46.3		ug/Kg		93	77 - 127	3	20
Chloromethane	49.7	39.8		ug/Kg		80	60 - 149	5	20
2-Chlorotoluene	49.7	50.5		ug/Kg		102	80 - 138	5	20
4-Chlorotoluene	49.7	49.7		ug/Kg		100	79 - 136	4	20
Chlorodibromomethane	49.7	55.1		ug/Kg		111	75 - 146	3	20
1,2-Dichlorobenzene	49.7	49.9		ug/Kg		100	84 - 130	5	20
1,3-Dichlorobenzene	49.7	50.1		ug/Kg		101	84 - 131	6	20
1,4-Dichlorobenzene	49.7	49.3		ug/Kg		99	85 - 125	4	20
1,3-Dichloropropane	49.7	51.5		ug/Kg		104	79 - 140	5	20
1,1-Dichloropropene	49.7	44.1		ug/Kg		89	70 - 130	3	20
1,2-Dibromo-3-Chloropropane	49.7	56.7		ug/Kg		114	68 - 145	6	20
Ethylene Dibromide	49.7	53.9		ug/Kg		108	79 - 140	4	20
Dibromomethane	49.7	51.3		ug/Kg		103	80 - 139	5	20
Dichlorodifluoromethane	49.7	30.6		ug/Kg		62	37 - 158	1	20
1,1-Dichloroethane	49.7	44.7		ug/Kg		90	76 - 119	5	20
1,2-Dichloroethane	49.7	47.7		ug/Kg		96	72 - 130	3	20
1,1-Dichloroethene	49.7	37.8		ug/Kg		76	68 - 119	3	20
cis-1,2-Dichloroethene	49.7	52.3		ug/Kg		105	87 - 138	4	20
trans-1,2-Dichloroethene	49.7	37.8		ug/Kg		76	67 - 108	4	20
1,2-Dichloropropane	49.7	47.1		ug/Kg		95	73 - 127	5	20
cis-1,3-Dichloropropene	49.7	51.9		ug/Kg		104	68 - 147	5	20
trans-1,3-Dichloropropene	49.7	55.5		ug/Kg		112	84 - 136	4	20
Ethylbenzene	49.7	45.9		ug/Kg		92	80 - 137	0	20
Hexachlorobutadiene	49.7	45.5		ug/Kg		92	72 - 132	1	20
2-Hexanone	249	238		ug/Kg		96	60 - 161	3	20
Isopropylbenzene	49.7	49.1		ug/Kg		99	88 - 128	3	20
4-Isopropyltoluene	49.7	48.5		ug/Kg		98	85 - 133	3	20
Methylene Chloride	49.7	44.3		ug/Kg		89	72 - 134	5	20
4-Methyl-2-pentanone (MIBK)	249	252		ug/Kg		102	69 - 160	4	20
Naphthalene	49.7	52.3		ug/Kg		105	70 - 147	5	20
N-Propylbenzene	49.7	46.9		ug/Kg		94	72 - 125	4	20
Styrene	49.7	52.5		ug/Kg		106	89 - 126	5	20
1,1,1,2-Tetrachloroethane	49.7	52.7		ug/Kg		106	90 - 130	4	20
1,1,2,2-Tetrachloroethane	49.7	53.1		ug/Kg		107	82 - 146	7	20
Tetrachloroethene	49.7	45.9		ug/Kg		92	78 - 132	2	20
Toluene	49.7	46.1		ug/Kg		93	68 - 121	2	20
1,2,3-Trichlorobenzene	49.7	51.1		ug/Kg		103	82 - 135	4	20
1,2,4-Trichlorobenzene	49.7	48.9		ug/Kg		98	70 - 131	3	20
1,1,1-Trichloroethane	49.7	45.1		ug/Kg		91	80 - 127	1	20
1,1,2-Trichloroethane	49.7	50.5		ug/Kg		102	82 - 125	4	20
Trichloroethene	49.7	45.3		ug/Kg		91	81 - 133	3	20
Trichlorofluoromethane	49.7	42.7		ug/Kg		86	71 - 139	2	20
1,2,3-Trichloropropane	49.7	52.5		ug/Kg		106	76 - 146	5	20
1,1,2-Trichloro-1,2,2-trifluoroethane	49.7	39.6		ug/Kg		80	70 - 130	1	20
1,2,4-Trimethylbenzene	49.7	49.3		ug/Kg		99	84 - 130	1	20
1,3,5-Trimethylbenzene	49.7	49.9		ug/Kg		100	82 - 131	3	20
Vinyl acetate	49.7	54.3		ug/Kg		109	38 - 176	8	20
Vinyl chloride	49.7	38.2		ug/Kg		77	58 - 125	1	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102382/3-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102382

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
m-Xylene & p-Xylene			99.4	95.0		ug/Kg		96	79 - 146	0	20
o-Xylene			49.7	49.5		ug/Kg		100	84 - 140	1	20
2,2-Dichloropropane			49.7	48.3		ug/Kg		97	73 - 162	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*100*		*60 - 140*
Toluene-d8 (Surr)	*95*		*58 - 140*

Lab Sample ID: LCSD 720-102382/5-A
Matrix: Solid
Analysis Batch: 102376

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102382

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			996	789		ug/Kg		79	61 - 128	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*98*		*60 - 140*
Toluene-d8 (Surr)	*95*		*58 - 140*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-102317/1-A
Matrix: Solid
Analysis Batch: 102325

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Anthracene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Chrysene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Fluorene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Pyrene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*79*		*33 - 120*	*11/04/11 11:01*	*11/04/11 17:17*	*1*
Terphenyl-d14	*90*		*35 - 146*	*11/04/11 11:01*	*11/04/11 17:17*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCS 720-102317/2-A
Matrix: Solid
Analysis Batch: 102325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102317

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acenaphthene			332	265		ug/Kg		80	49 - 120		
Acenaphthylene			332	244		ug/Kg		74	52 - 120		
Anthracene			332	279		ug/Kg		84	52 - 120		
Benzo[a]anthracene			332	273		ug/Kg		82	52 - 120		
Benzo[a]pyrene			332	293		ug/Kg		88	54 - 120		
Benzo[b]fluoranthene			332	301		ug/Kg		91	51 - 120		
Benzo[g,h,i]perylene			332	306		ug/Kg		92	48 - 120		
Benzo[k]fluoranthene			332	267		ug/Kg		80	56 - 120		
Chrysene			332	223		ug/Kg		67	40 - 120		
Dibenz(a,h)anthracene			332	316		ug/Kg		95	50 - 120		
Fluoranthene			332	285		ug/Kg		86	57 - 120		
Fluorene			332	263		ug/Kg		79	52 - 120		
Indeno[1,2,3-cd]pyrene			332	309		ug/Kg		93	48 - 120		
Naphthalene			332	249		ug/Kg		75	46 - 120		
Phenanthrene			332	261		ug/Kg		79	48 - 120		
Pyrene			332	300		ug/Kg		90	53 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*74*		*33 - 120*
Terphenyl-d14	*97*		*35 - 146*

Lab Sample ID: LCSD 720-102317/3-A
Matrix: Solid
Analysis Batch: 102325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102317

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			329	233		ug/Kg		71	49 - 120	13	20
Acenaphthylene			329	237		ug/Kg		72	52 - 120	3	20
Anthracene			329	280		ug/Kg		85	52 - 120	1	20
Benzo[a]anthracene			329	274		ug/Kg		83	52 - 120	0	20
Benzo[a]pyrene			329	295		ug/Kg		90	54 - 120	1	20
Benzo[b]fluoranthene			329	301		ug/Kg		92	51 - 120	0	20
Benzo[g,h,i]perylene			329	302		ug/Kg		92	48 - 120	1	20
Benzo[k]fluoranthene			329	273		ug/Kg		83	56 - 120	2	20
Chrysene			329	219		ug/Kg		67	40 - 120	2	20
Dibenz(a,h)anthracene			329	320		ug/Kg		97	50 - 120	1	20
Fluoranthene			329	285		ug/Kg		87	57 - 120	0	20
Fluorene			329	252		ug/Kg		77	52 - 120	4	20
Indeno[1,2,3-cd]pyrene			329	316		ug/Kg		96	48 - 120	2	20
Naphthalene			329	247		ug/Kg		75	46 - 120	1	20
Phenanthrene			329	266		ug/Kg		81	48 - 120	2	20
Pyrene			329	296		ug/Kg		90	53 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*81*		*33 - 120*
Terphenyl-d14	*94*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: MB 720-102393/1-A
Matrix: Solid
Analysis Batch: 102429

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102393

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Acenaphthylene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Chrysene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Fluoranthene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Fluorene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Naphthalene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Phenanthrene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1
Pyrene	ND		5.0		ug/Kg		11/05/11 12:56	11/07/11 18:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*80*		*33 - 120*	*11/05/11 12:56*	*11/07/11 18:54*	*1*
Terphenyl-d14	*94*		*35 - 146*	*11/05/11 12:56*	*11/07/11 18:54*	*1*

Lab Sample ID: LCS 720-102393/2-A
Matrix: Solid
Analysis Batch: 102429

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102393

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	332	277		ug/Kg		83	49 - 120
Acenaphthylene	332	266		ug/Kg		80	52 - 120
Anthracene	332	289		ug/Kg		87	52 - 120
Benzo[a]anthracene	332	273		ug/Kg		82	52 - 120
Benzo[a]pyrene	332	308		ug/Kg		93	54 - 120
Benzo[b]fluoranthene	332	323		ug/Kg		97	51 - 120
Benzo[g,h,i]perylene	332	243		ug/Kg		73	48 - 120
Benzo[k]fluoranthene	332	295		ug/Kg		89	56 - 120
Chrysene	332	213		ug/Kg		64	40 - 120
Dibenz(a,h)anthracene	332	308		ug/Kg		93	50 - 120
Fluoranthene	332	283		ug/Kg		85	57 - 120
Fluorene	332	281		ug/Kg		85	52 - 120
Indeno[1,2,3-cd]pyrene	332	285		ug/Kg		86	48 - 120
Naphthalene	332	279		ug/Kg		84	46 - 120
Phenanthrene	332	278		ug/Kg		84	48 - 120
Pyrene	332	283		ug/Kg		85	53 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*86*		*33 - 120*
Terphenyl-d14	*95*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-102393/3-A
Matrix: Solid
Analysis Batch: 102429

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102393

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			330	267		ug/Kg		81	49 - 120	4	20
Acenaphthylene			330	265		ug/Kg		80	52 - 120	0	20
Anthracene			330	293		ug/Kg		89	52 - 120	2	20
Benzo[a]anthracene			330	280		ug/Kg		85	52 - 120	2	20
Benzo[a]pyrene			330	314		ug/Kg		95	54 - 120	2	20
Benzo[b]fluoranthene			330	330		ug/Kg		100	51 - 120	2	20
Benzo[g,h,i]perylene			330	246		ug/Kg		74	48 - 120	1	20
Benzo[k]fluoranthene			330	306		ug/Kg		93	56 - 120	4	20
Chrysene			330	222		ug/Kg		67	40 - 120	4	20
Dibenz(a,h)anthracene			330	310		ug/Kg		94	50 - 120	1	20
Fluoranthene			330	297		ug/Kg		90	57 - 120	5	20
Fluorene			330	273		ug/Kg		83	52 - 120	3	20
Indeno[1,2,3-cd]pyrene			330	286		ug/Kg		87	48 - 120	0	20
Naphthalene			330	279		ug/Kg		84	46 - 120	0	20
Phenanthrene			330	285		ug/Kg		87	48 - 120	3	20
Pyrene			330	294		ug/Kg		89	53 - 120	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*88*		*33 - 120*
Terphenyl-d14	*95*		*35 - 146*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-102588/1-A
Matrix: Solid
Analysis Batch: 102658

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 102588

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		11/09/11 10:21	11/10/11 11:57	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/09/11 10:21	11/10/11 11:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.0006*		*0 - 1*	*11/09/11 10:21*	*11/10/11 11:57*	*1*
p-Terphenyl	*81*		*38 - 148*	*11/09/11 10:21*	*11/10/11 11:57*	*1*

Lab Sample ID: LCS 720-102588/2-A
Matrix: Solid
Analysis Batch: 102658

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 102588

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			83.0	57.3		mg/Kg		69	47 - 124		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*88*		*38 - 148*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-102588/3-A
Matrix: Solid
Analysis Batch: 102658

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 102588

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.5	56.4		mg/Kg		68	47 - 124	2	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*78*		*38 - 148*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-102925/1-A
Matrix: Solid
Analysis Batch: 102976

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102925

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.13		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Chromium	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Nickel	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Lead	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Zinc	ND		1.5		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Antimony	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Beryllium	ND		0.10		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Barium	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Thallium	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Molybdenum	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Vanadium	ND		0.50		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Silver	ND		0.25		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Arsenic	ND		1.0		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Copper	ND		1.5		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Selenium	ND		1.0		mg/Kg		11/15/11 08:32	11/15/11 16:01	1
Cobalt	ND		0.20		mg/Kg		11/15/11 08:32	11/15/11 16:01	1

Lab Sample ID: LCS 720-102925/2-A
Matrix: Solid
Analysis Batch: 102976

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102925

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	50.0	49.8		mg/Kg		100	80 - 120
Chromium	50.0	50.7		mg/Kg		101	80 - 120
Nickel	50.0	50.7		mg/Kg		101	80 - 120
Lead	50.0	50.8		mg/Kg		102	80 - 120
Zinc	50.0	48.6		mg/Kg		97	80 - 120
Antimony	50.0	47.9		mg/Kg		96	80 - 120
Beryllium	50.0	51.5		mg/Kg		103	80 - 120
Barium	50.0	50.9		mg/Kg		102	80 - 120
Thallium	50.0	50.4		mg/Kg		101	80 - 120
Molybdenum	50.0	50.9		mg/Kg		102	80 - 120
Vanadium	50.0	51.0		mg/Kg		102	80 - 120
Silver	25.0	24.4		mg/Kg		97	80 - 120
Arsenic	50.0	48.7		mg/Kg		97	80 - 120
Copper	50.0	50.4		mg/Kg		101	80 - 120

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 720-102925/2-A
Matrix: Solid
Analysis Batch: 102976

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102925

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Selenium	50.0	47.9		mg/Kg		96	80 - 120
Cobalt	50.0	50.4		mg/Kg		101	80 - 120

Lab Sample ID: LCSD 720-102925/3-A
Matrix: Solid
Analysis Batch: 102976

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102925

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	50.0	50.8		mg/Kg		102	80 - 120	2	20
Chromium	50.0	51.9		mg/Kg		104	80 - 120	2	20
Nickel	50.0	52.0		mg/Kg		104	80 - 120	3	20
Lead	50.0	51.9		mg/Kg		104	80 - 120	2	20
Zinc	50.0	50.4		mg/Kg		101	80 - 120	4	20
Antimony	50.0	49.9		mg/Kg		100	80 - 120	4	20
Beryllium	50.0	52.3		mg/Kg		105	80 - 120	2	20
Barium	50.0	52.2		mg/Kg		104	80 - 120	2	20
Thallium	50.0	51.8		mg/Kg		104	80 - 120	3	20
Molybdenum	50.0	52.4		mg/Kg		105	80 - 120	3	20
Vanadium	50.0	51.8		mg/Kg		104	80 - 120	1	20
Silver	25.0	25.1		mg/Kg		101	80 - 120	3	20
Arsenic	50.0	50.5		mg/Kg		101	80 - 120	4	20
Copper	50.0	51.5		mg/Kg		103	80 - 120	2	20
Selenium	50.0	49.4		mg/Kg		99	80 - 120	3	20
Cobalt	50.0	52.2		mg/Kg		104	80 - 120	4	20

Lab Sample ID: LCSSRM 720-102925/19-A
Matrix: Solid
Analysis Batch: 102982

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102925

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	48.3	43.3		mg/Kg		90	67 - 118
Chromium	171	153		mg/Kg		89	67 - 121
Nickel	76.0	68.3		mg/Kg		90	65 - 117
Lead	181	157		mg/Kg		87	62 - 113
Zinc	256	231		mg/Kg		90	62 - 110
Antimony	105	67.9		mg/Kg		65	11 - 101
Beryllium	304	281		mg/Kg		93	56 - 102
Barium	391	343		mg/Kg		88	61 - 117
Thallium	192	167		mg/Kg		87	64 - 124
Molybdenum	156	148		mg/Kg		95	62 - 128
Vanadium	213	200		mg/Kg		94	67 - 123
Silver	29.1	26.7		mg/Kg		92	51 - 130
Arsenic	79.4	72.6		mg/Kg		91	69 - 119
Copper	327	295		mg/Kg		90	68 - 126
Selenium	76.9	65.7		mg/Kg		85	63 - 126
Cobalt	59.2	55.1		mg/Kg		93	64 - 133

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 720-102341/1-A
Matrix: Solid
Analysis Batch: 102357

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102341

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.010		mg/Kg		11/04/11 14:02	11/04/11 16:22	1

Lab Sample ID: LCS 720-102341/2-A
Matrix: Solid
Analysis Batch: 102357

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102341

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.758		mg/Kg		91	80 - 120

Lab Sample ID: LCSD 720-102341/3-A
Matrix: Solid
Analysis Batch: 102357

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102341

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.833	0.738		mg/Kg		89	80 - 120	3	20

Lab Sample ID: 720-38506-3 MS
Matrix: Solid
Analysis Batch: 102357

Client Sample ID: SO-EWA (7)-031111
Prep Type: Total/NA
Prep Batch: 102341

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.064		1.43	1.32		mg/Kg		88	75 - 125

Lab Sample ID: 720-38506-3 MSD
Matrix: Solid
Analysis Batch: 102357

Client Sample ID: SO-EWA (7)-031111
Prep Type: Total/NA
Prep Batch: 102341

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.064		1.56	1.42		mg/Kg		87	75 - 125	7	20

GC/MS VOA

Analysis Batch: 102299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102314
720-38506-4	SO-2344-SSA(4)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102314
720-38506-5	SO-2344-NWA(8)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102314
720-38506-6	SO-2344-SWB(15)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102314
720-38506-7	SO-2344-WWB(15)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102314
720-38506-9	SO-2344-WWA(7)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102314
720-38506-10	SO-EWB(15)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102314
LCS 720-102314/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102314
LCS 720-102314/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102314
LCSD 720-102314/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102314
LCSD 720-102314/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102314
MB 720-102314/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	102314

Prep Batch: 102314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Total/NA	Solid	5035	
720-38506-4	SO-2344-SSA(4)-031111	Total/NA	Solid	5035	
720-38506-5	SO-2344-NWA(8)-031111	Total/NA	Solid	5035	
720-38506-6	SO-2344-SWB(15)-031111	Total/NA	Solid	5035	
720-38506-7	SO-2344-WWB(15)-031111	Total/NA	Solid	5035	
720-38506-9	SO-2344-WWA(7)-031111	Total/NA	Solid	5035	
720-38506-10	SO-EWB(15)-031111	Total/NA	Solid	5035	
LCS 720-102314/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 720-102314/4-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 720-102314/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 720-102314/5-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 720-102314/1-A	Method Blank	Total/NA	Solid	5035	

Analysis Batch: 102376

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-8	SO-2344-NWB(15)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102382
LCS 720-102382/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102382
LCS 720-102382/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102382
LCSD 720-102382/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102382
LCSD 720-102382/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102382
MB 720-102382/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	102382

GC/MS VOA (Continued)

Prep Batch: 102382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-8	SO-2344-NWB(15)-031111	Total/NA	Solid	5035	
LCS 720-102382/2-A	Lab Control Sample	Total/NA	Solid	5035	
LCS 720-102382/4-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 720-102382/3-A	Lab Control Sample Dup	Total/NA	Solid	5035	
LCSD 720-102382/5-A	Lab Control Sample Dup	Total/NA	Solid	5035	
MB 720-102382/1-A	Method Blank	Total/NA	Solid	5035	

GC/MS Semi VOA

Prep Batch: 102317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Total/NA	Solid	3546	
720-38506-4	SO-2344-SSA(4)-031111	Total/NA	Solid	3546	
720-38506-5	SO-2344-NWA(8)-031111	Total/NA	Solid	3546	
LCS 720-102317/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-102317/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-102317/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 102325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-102317/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	102317
LCSD 720-102317/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	102317
MB 720-102317/1-A	Method Blank	Total/NA	Solid	8270C SIM	102317

Prep Batch: 102393

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-6	SO-2344-SWB(15)-031111	Total/NA	Solid	3546	
720-38506-7	SO-2344-WWB(15)-031111	Total/NA	Solid	3546	
720-38506-8	SO-2344-NWB(15)-031111	Total/NA	Solid	3546	
720-38506-9	SO-2344-WWA(7)-031111	Total/NA	Solid	3546	
720-38506-10	SO-EWB(15)-031111	Total/NA	Solid	3546	
LCS 720-102393/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-102393/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-102393/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 102429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Total/NA	Solid	8270C SIM	102317
720-38506-4	SO-2344-SSA(4)-031111	Total/NA	Solid	8270C SIM	102317
720-38506-5	SO-2344-NWA(8)-031111	Total/NA	Solid	8270C SIM	102317
720-38506-6	SO-2344-SWB(15)-031111	Total/NA	Solid	8270C SIM	102393
LCS 720-102393/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	102393
LCSD 720-102393/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	102393
MB 720-102393/1-A	Method Blank	Total/NA	Solid	8270C SIM	102393

Analysis Batch: 102505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-7	SO-2344-WWB(15)-031111	Total/NA	Solid	8270C SIM	102393
720-38506-8	SO-2344-NWB(15)-031111	Total/NA	Solid	8270C SIM	102393
720-38506-9	SO-2344-WWA(7)-031111	Total/NA	Solid	8270C SIM	102393
720-38506-10	SO-EWB(15)-031111	Total/NA	Solid	8270C SIM	102393

QC Association Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

GC Semi VOA

Prep Batch: 102588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-4	SO-2344-SSA(4)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-5	SO-2344-NWA(8)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-6	SO-2344-SWB(15)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-7	SO-2344-WWB(15)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-8	SO-2344-NWB(15)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-9	SO-2344-WWA(7)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-10	SO-EWB(15)-031111	Silica Gel Cleanup	Solid	3546	
LCS 720-102588/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-102588/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-102588/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 102658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-102588/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	102588
LCSD 720-102588/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	102588
MB 720-102588/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	102588

Analysis Batch: 102663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Silica Gel Cleanup	Solid	8015B	102588
720-38506-4	SO-2344-SSA(4)-031111	Silica Gel Cleanup	Solid	8015B	102588
720-38506-5	SO-2344-NWA(8)-031111	Silica Gel Cleanup	Solid	8015B	102588
720-38506-6	SO-2344-SWB(15)-031111	Silica Gel Cleanup	Solid	8015B	102588
720-38506-7	SO-2344-WWB(15)-031111	Silica Gel Cleanup	Solid	8015B	102588
720-38506-10	SO-EWB(15)-031111	Silica Gel Cleanup	Solid	8015B	102588

Analysis Batch: 102988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-8	SO-2344-NWB(15)-031111	Silica Gel Cleanup	Solid	8015B	102588
720-38506-9	SO-2344-WWA(7)-031111	Silica Gel Cleanup	Solid	8015B	102588

Metals

Prep Batch: 102341

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Total/NA	Solid	7471A	
720-38506-3 MS	SO-EWA (7)-031111	Total/NA	Solid	7471A	
720-38506-3 MSD	SO-EWA (7)-031111	Total/NA	Solid	7471A	
720-38506-4	SO-2344-SSA(4)-031111	Total/NA	Solid	7471A	
720-38506-5	SO-2344-NWA(8)-031111	Total/NA	Solid	7471A	
720-38506-6	SO-2344-SWB(15)-031111	Total/NA	Solid	7471A	
720-38506-7	SO-2344-WWB(15)-031111	Total/NA	Solid	7471A	
720-38506-8	SO-2344-NWB(15)-031111	Total/NA	Solid	7471A	
720-38506-9	SO-2344-WWA(7)-031111	Total/NA	Solid	7471A	
720-38506-10	SO-EWB(15)-031111	Total/NA	Solid	7471A	
LCS 720-102341/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 720-102341/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
MB 720-102341/1-A	Method Blank	Total/NA	Solid	7471A	

Metals (Continued)

Analysis Batch: 102357

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Total/NA	Solid	7471A	102341
720-38506-3 MS	SO-EWA (7)-031111	Total/NA	Solid	7471A	102341
720-38506-3 MSD	SO-EWA (7)-031111	Total/NA	Solid	7471A	102341
720-38506-4	SO-2344-SSA(4)-031111	Total/NA	Solid	7471A	102341
720-38506-5	SO-2344-NWA(8)-031111	Total/NA	Solid	7471A	102341
720-38506-6	SO-2344-SWB(15)-031111	Total/NA	Solid	7471A	102341
720-38506-7	SO-2344-WWB(15)-031111	Total/NA	Solid	7471A	102341
720-38506-8	SO-2344-NWB(15)-031111	Total/NA	Solid	7471A	102341
720-38506-9	SO-2344-WWA(7)-031111	Total/NA	Solid	7471A	102341
720-38506-10	SO-EWB(15)-031111	Total/NA	Solid	7471A	102341
LCS 720-102341/2-A	Lab Control Sample	Total/NA	Solid	7471A	102341
LCSD 720-102341/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	102341
MB 720-102341/1-A	Method Blank	Total/NA	Solid	7471A	102341

Prep Batch: 102925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Total/NA	Solid	3050B	
720-38506-4	SO-2344-SSA(4)-031111	Total/NA	Solid	3050B	
720-38506-5	SO-2344-NWA(8)-031111	Total/NA	Solid	3050B	
720-38506-6	SO-2344-SWB(15)-031111	Total/NA	Solid	3050B	
720-38506-7	SO-2344-WWB(15)-031111	Total/NA	Solid	3050B	
720-38506-8	SO-2344-NWB(15)-031111	Total/NA	Solid	3050B	
720-38506-9	SO-2344-WWA(7)-031111	Total/NA	Solid	3050B	
720-38506-10	SO-EWB(15)-031111	Total/NA	Solid	3050B	
LCS 720-102925/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-102925/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-102925/19-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-102925/1-A	Method Blank	Total/NA	Solid	3050B	

Analysis Batch: 102976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-102925/2-A	Lab Control Sample	Total/NA	Solid	6010B	102925
LCSD 720-102925/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	102925
MB 720-102925/1-A	Method Blank	Total/NA	Solid	6010B	102925

Analysis Batch: 102982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-3	SO-EWA (7)-031111	Total/NA	Solid	6010B	102925
720-38506-4	SO-2344-SSA(4)-031111	Total/NA	Solid	6010B	102925
720-38506-5	SO-2344-NWA(8)-031111	Total/NA	Solid	6010B	102925
720-38506-6	SO-2344-SWB(15)-031111	Total/NA	Solid	6010B	102925
720-38506-7	SO-2344-WWB(15)-031111	Total/NA	Solid	6010B	102925
720-38506-8	SO-2344-NWB(15)-031111	Total/NA	Solid	6010B	102925
720-38506-9	SO-2344-WWA(7)-031111	Total/NA	Solid	6010B	102925
720-38506-10	SO-EWB(15)-031111	Total/NA	Solid	6010B	102925
LCSSRM 720-102925/19-A	Lab Control Sample	Total/NA	Solid	6010B	102925

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-EWA (7)-031111

Lab Sample ID: 720-38506-3

Date Collected: 11/03/11 15:35

Matrix: Solid

Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102314	11/03/11 21:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102299	11/04/11 15:37	AC	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 16:57	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102588	11/09/11 10:21	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102663	11/10/11 15:39	DH	TAL SF
Total/NA	Prep	7471A			102341	11/04/11 14:02	ET	TAL SF
Total/NA	Analysis	7471A		1	102357	11/04/11 16:33	EFH	TAL SF
Total/NA	Prep	3050B			102925	11/15/11 08:32	ET	TAL SF
Total/NA	Analysis	6010B		4	102982	11/15/11 19:39	BA	TAL SF

Client Sample ID: SO-2344-SSA(4)-031111

Lab Sample ID: 720-38506-4

Date Collected: 11/03/11 15:35

Matrix: Solid

Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102314	11/03/11 21:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102299	11/04/11 17:42	AC	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 17:21	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102588	11/09/11 10:21	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102663	11/10/11 16:02	DH	TAL SF
Total/NA	Prep	7471A			102341	11/04/11 14:02	ET	TAL SF
Total/NA	Analysis	7471A		1	102357	11/04/11 16:35	EFH	TAL SF
Total/NA	Prep	3050B			102925	11/15/11 08:32	ET	TAL SF
Total/NA	Analysis	6010B		4	102982	11/15/11 19:43	BA	TAL SF

Client Sample ID: SO-2344-NWA(8)-031111

Lab Sample ID: 720-38506-5

Date Collected: 11/03/11 15:15

Matrix: Solid

Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102314	11/03/11 21:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102299	11/04/11 16:08	AC	TAL SF
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		2	102429	11/07/11 17:44	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102588	11/09/11 10:21	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102663	11/10/11 16:26	DH	TAL SF
Total/NA	Prep	7471A			102341	11/04/11 14:02	ET	TAL SF
Total/NA	Analysis	7471A		1	102357	11/04/11 16:38	EFH	TAL SF
Total/NA	Prep	3050B			102925	11/15/11 08:32	ET	TAL SF
Total/NA	Analysis	6010B		4	102982	11/15/11 19:48	BA	TAL SF

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-SWB(15)-031111

Lab Sample ID: 720-38506-6

Date Collected: 11/03/11 14:58
Matrix: Solid
Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102314	11/03/11 21:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102299	11/04/11 16:39	AC	TAL SF
Total/NA	Prep	3546			102393	11/05/11 12:56	JRM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 22:27	JZ	TAL SF
Silica Gel Cleanup	Prep	3546			102588	11/09/11 10:21	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102663	11/10/11 16:49	DH	TAL SF
Total/NA	Prep	7471A			102341	11/04/11 14:02	ET	TAL SF
Total/NA	Analysis	7471A		1	102357	11/04/11 16:40	EFH	TAL SF
Total/NA	Prep	3050B			102925	11/15/11 08:32	ET	TAL SF
Total/NA	Analysis	6010B		4	102982	11/15/11 19:52	BA	TAL SF

Client Sample ID: SO-2344-WWB(15)-031111

Lab Sample ID: 720-38506-7

Date Collected: 11/03/11 14:30
Matrix: Solid
Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102314	11/03/11 21:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102299	11/04/11 17:11	AC	TAL SF
Total/NA	Prep	3546			102393	11/05/11 12:56	JRM	TAL SF
Total/NA	Analysis	8270C SIM		1	102505	11/08/11 15:14	EC	TAL SF
Silica Gel Cleanup	Prep	3546			102588	11/09/11 10:21	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102663	11/10/11 17:12	DH	TAL SF
Total/NA	Prep	7471A			102341	11/04/11 14:02	ET	TAL SF
Total/NA	Analysis	7471A		1	102357	11/04/11 16:42	EFH	TAL SF
Total/NA	Prep	3050B			102925	11/15/11 08:32	ET	TAL SF
Total/NA	Analysis	6010B		4	102982	11/15/11 19:56	BA	TAL SF

Client Sample ID: SO-2344-NWB(15)-031111

Lab Sample ID: 720-38506-8

Date Collected: 11/03/11 15:05
Matrix: Solid
Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102382	11/03/11 21:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102376	11/05/11 17:05	YB	TAL SF
Total/NA	Prep	3546			102393	11/05/11 12:56	JRM	TAL SF
Total/NA	Analysis	8270C SIM		1	102505	11/08/11 15:37	EC	TAL SF
Silica Gel Cleanup	Prep	3546			102588	11/09/11 10:21	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		10	102988	11/16/11 20:45	DH	TAL SF
Total/NA	Prep	7471A			102341	11/04/11 14:02	ET	TAL SF
Total/NA	Analysis	7471A		1	102357	11/04/11 16:49	EFH	TAL SF
Total/NA	Prep	3050B			102925	11/15/11 08:32	ET	TAL SF
Total/NA	Analysis	6010B		4	102982	11/15/11 20:01	BA	TAL SF

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Client Sample ID: SO-2344-WWA(7)-031111

Lab Sample ID: 720-38506-9

Date Collected: 11/03/11 14:40
Matrix: Solid
Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102314	11/03/11 21:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102299	11/04/11 18:45	AC	TAL SF
Total/NA	Prep	3546			102393	11/05/11 12:56	JRM	TAL SF
Total/NA	Analysis	8270C SIM		1	102505	11/08/11 16:01	EC	TAL SF
Silica Gel Cleanup	Prep	3546			102588	11/09/11 10:21	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102988	11/16/11 21:09	DH	TAL SF
Total/NA	Prep	7471A			102341	11/04/11 14:02	ET	TAL SF
Total/NA	Analysis	7471A		1	102357	11/04/11 16:51	EFH	TAL SF
Total/NA	Prep	3050B			102925	11/15/11 08:32	ET	TAL SF
Total/NA	Analysis	6010B		4	102982	11/15/11 20:05	BA	TAL SF

Client Sample ID: SO-EWB(15)-031111

Lab Sample ID: 720-38506-10

Date Collected: 11/03/11 14:20
Matrix: Solid
Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			102314	11/03/11 21:30	JZ	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102299	11/04/11 19:16	AC	TAL SF
Total/NA	Prep	3546			102393	11/05/11 12:56	JRM	TAL SF
Total/NA	Analysis	8270C SIM		1	102505	11/08/11 16:24	EC	TAL SF
Silica Gel Cleanup	Prep	3546			102588	11/09/11 10:21	AM	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102663	11/10/11 18:23	DH	TAL SF
Total/NA	Prep	7471A			102341	11/04/11 14:02	ET	TAL SF
Total/NA	Analysis	7471A		1	102357	11/04/11 16:53	EFH	TAL SF
Total/NA	Prep	3050B			102925	11/15/11 08:32	ET	TAL SF
Total/NA	Analysis	6010B		4	102982	11/15/11 20:09	BA	TAL SF

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL SF
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF
6010B	Metals (ICP)	SW846	TAL SF
7471A	Mercury (CVAA)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-38506-3	SO-EWA (7)-031111	Solid	11/03/11 15:35	11/03/11 18:34
720-38506-4	SO-2344-SSA(4)-031111	Solid	11/03/11 15:35	11/03/11 18:34
720-38506-5	SO-2344-NWA(8)-031111	Solid	11/03/11 15:15	11/03/11 18:34
720-38506-6	SO-2344-SWB(15)-031111	Solid	11/03/11 14:58	11/03/11 18:34
720-38506-7	SO-2344-WWB(15)-031111	Solid	11/03/11 14:30	11/03/11 18:34
720-38506-8	SO-2344-NWB(15)-031111	Solid	11/03/11 15:05	11/03/11 18:34
720-38506-9	SO-2344-WWA(7)-031111	Solid	11/03/11 14:40	11/03/11 18:34
720-38506-10	SO-EWB(15)-031111	Solid	11/03/11 14:20	11/03/11 18:34

Test America- Pleasanton

134711

720-38506

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-Rev1-20110926
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Stephen Meninger	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO, BTEX, and MTBE by EPA 8260	DRO by EPA 8015 (with Silica Gel Cleaup)	Motor Oil by EPA 8015	CA LUFT 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	SVOCs by EPA 8270	PAHs	JOCS 8260		Special Instructions
SO-2344-Wastel(comp)-031111	SO	Glass	1	11/3 16:00	—	X	X	X	X					24 hr turn
SO-2344-Waster(comp)-031111	SO	Glass	1	11/3 16:00	—	X	X	X	X					24 hr turn
SO-EWA(7)-031111	SO	Vartos	4	11/3 15:35	—	X	X	X	X					
SO-2344-SSA(9)-031111	SO	Vartos	4	11/3 15:35	—	X	X	X	X					
SO-2344-NWA(5)-031111	SO	Vartos	4	11/3 15:15	—	X	X	X	X					
SO-2344-SWB(15)-031111	SO	Vartos	4	11/3 14:30	—	X	X	X	X					
SO-2344-WWB(15)-031111	SO	Vartos	4	11/3 14:30	—	X	X	X	X					
SO-2344-NWB(15)-031111	SO	Vartos	4	11/3 15:05	—	X	X	X	X					
SO-2344-WWA(7)-031111	SO	Vartos	4	11/3 14:40	—	X	X	X	X					
SO-EWB(15)-031111	SO	Vartos	4	11/3 14:20	—	X	X	X	X					
WQ-2344-Water-031111	SO	Vartos	11	11/3 14:00	—	X	X	X	X	X	X	X		24 hr turn Field Filtered
									dissolved metals.					

X RUSH

Relinquished By:	Received by:	Turnaround Time: (check)
Date/Time: Stephen Meninger 11/3/2011 18:34	Date/Time:	Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time:	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Date/Time: 11/3/11 1834 TMSF	Sample Integrity: (Check) Intact On Ice: Custody

Temp 4.7°

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

11/17/2011

Sharma, Dimple

From: Lia Holden [Lia.Holden@anteagroup.com]
Sent: Friday, November 04, 2011 12:00 PM
To: Sharma, Dimple
Subject: RE: Sample Login Confirmation for 720-38506, UPRR- Santa Rosa
Importance: High

Hello Dimple,
Please run all soil samples on this COC (Including rushed samples) for PAHs and VOCs. If you cannot report PAHs on the rush samples until later, just include the PAHs for the samples in the final standard TAT report.

Additionally, please run the three rush samples on this COC (two soil, one waste water) for CAM 17 metals, rather than LUFT 5. I understand that mercury may not be ready until Monday, but get us what you can today so that we can arrange for transport/disposal as quickly as possible. Metals in water must be total metals.

Thanks Dimple,

Please call me if anything here isn't clear.

Lia Holden, PG | Geologist - Project Manager | USA
Antea™Group
Direct: +1 408 826 1863| Mobile: +1 408 410 9781| Fax: +1 408 225 8506
312 Piercy Road, San Jose California 95138

anteagroup
Member of Inogen® | www.inogenet.com

From: Sharma, Dimple [mailto:dimple.sharma@testamericainc.com]
Sent: Friday, November 04, 2011 10:26 AM
To: Lia Holden; UPRR SysDat
Subject: Sample Login Confirmation for 720-38506, UPRR- Santa Rosa

Sample for metals analysis did not appear to be field filtered. Filtered metal in the lab.

DIMPLE SHARMA

TestAmerica San Francisco
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484.1919
www.testamericainc.com

Reference: [092785]
Attachments: 5

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-38506-1

Login Number: 38506

List Source: TestAmerica San Francisco

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-38506-2
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
11/4/2011 5:48:09 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
F	RPD of the MS and MSD exceeds the control limits
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-38506-2

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-38506-2

Comments
No additional comments.

Receipt
Sample for metals analysis did not appear to be field filtered. Filtered in the lab for metals..

All other samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC/MS Semi VOA
No analytical or quality issues were noted.

GC VOA
No analytical or quality issues were noted.

GC Semi VOA
Method 8015B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for batch 102284 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Metals
Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for prep batch 102289 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111 — Lab Sample ID: 720-38506-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	4.9		0.99		mg/Kg	1		8015B	Silica Gel Clean
Chromium	90		1.8		mg/Kg	4		6010B	Total/NA
Nickel	130		1.8		mg/Kg	4		6010B	Total/NA
Lead	12		1.8		mg/Kg	4		6010B	Total/NA
Zinc	50		5.5		mg/Kg	4		6010B	Total/NA
Antimony	15		1.8		mg/Kg	4		6010B	Total/NA
Barium	180		1.8		mg/Kg	4		6010B	Total/NA
Vanadium	55		1.8		mg/Kg	4		6010B	Total/NA
Arsenic	5.5		3.6		mg/Kg	4		6010B	Total/NA
Copper	34		5.5		mg/Kg	4		6010B	Total/NA
Cobalt	17		0.73		mg/Kg	4		6010B	Total/NA

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111 — Lab Sample ID: 720-38506-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	110		1.0		mg/Kg	1		8015B	Silica Gel Clean
Motor Oil Range Organics [C24-C36]	94		50		mg/Kg	1		8015B	Silica Gel Clean
Chromium	92		1.9		mg/Kg	4		6010B	Total/NA
Nickel	140		1.9		mg/Kg	4		6010B	Total/NA
Lead	10		1.9		mg/Kg	4		6010B	Total/NA
Zinc	58		5.7		mg/Kg	4		6010B	Total/NA
Barium	200		1.9		mg/Kg	4		6010B	Total/NA
Vanadium	56		1.9		mg/Kg	4		6010B	Total/NA
Arsenic	5.8		3.8		mg/Kg	4		6010B	Total/NA
Copper	30		5.7		mg/Kg	4		6010B	Total/NA
Cobalt	19		0.76		mg/Kg	4		6010B	Total/NA

Client Sample ID: WG-2344-WATER-031111 — Lab Sample ID: 720-38506-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	50		50		ug/L	1		8260B/CA_LUFTM	Total/NA
Tetrachloroethene	1.2		0.50		ug/L	1		8260B/CA_LUFTM	Total/NA
Phenanthrene	1.3		0.11		ug/L	1		8270C SIM	Total/NA
Chrysene	0.41		0.11		ug/L	1		8270C SIM	Total/NA
Pyrene	0.32		0.11		ug/L	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	12000		260		ug/L	5		8015B	Silica Gel Clean
Motor Oil Range Organics [C24-C36]	6700		520		ug/L	5		8015B	Silica Gel Clean
Chromium	0.012		0.010		mg/L	1		6010B	Dissolved
Nickel	0.027		0.010		mg/L	1		6010B	Dissolved

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Date Collected: 11/03/11 16:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-1
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Acetone	ND		48		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Benzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Dichlorobromomethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Bromobenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Chlorobromomethane	ND		19		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Bromoform	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Bromomethane	ND		9.6		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
2-Butanone (MEK)	ND		48		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
n-Butylbenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
sec-Butylbenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
tert-Butylbenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Carbon disulfide	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Carbon tetrachloride	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Chlorobenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Chloroethane	ND		9.6		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Chloroform	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Chloromethane	ND		9.6		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
2-Chlorotoluene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
4-Chlorotoluene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Chlorodibromomethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,2-Dichlorobenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,3-Dichlorobenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,4-Dichlorobenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,3-Dichloropropane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,1-Dichloropropene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,2-Dibromo-3-Chloropropane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Ethylene Dibromide	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Dibromomethane	ND		9.6		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Dichlorodifluoromethane	ND		9.6		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,1-Dichloroethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,2-Dichloroethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,1-Dichloroethene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
cis-1,2-Dichloroethene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
trans-1,2-Dichloroethene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,2-Dichloropropane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
cis-1,3-Dichloropropene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
trans-1,3-Dichloropropene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Ethylbenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Hexachlorobutadiene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
2-Hexanone	ND		48		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Isopropylbenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
4-Isopropyltoluene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Methylene Chloride	ND		9.6		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
4-Methyl-2-pentanone (MIBK)	ND		48		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Naphthalene	ND		9.6		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
N-Propylbenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Styrene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,1,1,2-Tetrachloroethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,1,2,2-Tetrachloroethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Date Collected: 11/03/11 16:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-1
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Toluene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,2,3-Trichlorobenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,2,4-Trichlorobenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,1,1-Trichloroethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,1,2-Trichloroethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Trichloroethene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Trichlorofluoromethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,2,3-Trichloropropane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,2,4-Trimethylbenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
1,3,5-Trimethylbenzene	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Vinyl acetate	ND		48		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Vinyl chloride	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Xylenes, Total	ND		9.6		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
2,2-Dichloropropane	ND		4.8		ug/Kg		11/03/11 19:07	11/03/11 23:18	1
Gasoline Range Organics (GRO) -C5-C12	ND		240		ug/Kg		11/03/11 19:07	11/03/11 23:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*45 - 131*	*11/03/11 19:07*	*11/03/11 23:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*	*11/03/11 19:07*	*11/03/11 23:18*	*1*
Toluene-d8 (Surr)	*94*		*58 - 140*	*11/03/11 19:07*	*11/03/11 23:18*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**4.9**		0.99		mg/Kg		11/03/11 20:37	11/04/11 12:58	1
Motor Oil Range Organics [C24-C36]	ND		49		mg/Kg		11/03/11 20:37	11/04/11 12:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.009*		*0 - 1*	*11/03/11 20:37*	*11/04/11 12:58*	*1*
p-Terphenyl	*86*		*38 - 148*	*11/03/11 20:37*	*11/04/11 12:58*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.45		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Chromium	**90**		1.8		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Nickel	**130**		1.8		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Lead	**12**		1.8		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Zinc	**50**		5.5		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Antimony	**15**		1.8		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Beryllium	ND		0.36		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Barium	**180**		1.8		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Thallium	ND		1.8		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Molybdenum	ND		1.8		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Vanadium	**55**		1.8		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Silver	ND		0.91		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Arsenic	**5.5**		3.6		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Copper	**34**		5.5		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Selenium	ND		3.6		mg/Kg		11/03/11 21:45	11/04/11 12:44	4
Cobalt	**17**		0.73		mg/Kg		11/03/11 21:45	11/04/11 12:44	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111
Date Collected: 11/03/11 16:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-2
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Acetone	ND		50		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Benzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Dichlorobromomethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Bromobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Chlorobromomethane	ND		20		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Bromoform	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Bromomethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
2-Butanone (MEK)	ND		50		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
n-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
sec-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
tert-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Carbon disulfide	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Carbon tetrachloride	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Chlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Chloroethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Chloroform	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Chloromethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
2-Chlorotoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
4-Chlorotoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Chlorodibromomethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,3-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,1-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Ethylene Dibromide	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Dibromomethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,1-Dichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,2-Dichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,1-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,2-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Ethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Hexachlorobutadiene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
2-Hexanone	ND		50		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Isopropylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
4-Isopropyltoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Methylene Chloride	ND		10		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Naphthalene	ND		10		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
N-Propylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Styrene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111
Date Collected: 11/03/11 16:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-2
Matrix: Solid

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Toluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Trichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Trichlorofluoromethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Vinyl acetate	ND		50		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Vinyl chloride	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Xylenes, Total	ND		10		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
2,2-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 23:47	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/03/11 19:07	11/03/11 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*92*		*45 - 131*	*11/03/11 19:07*	*11/03/11 23:47*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*	*11/03/11 19:07*	*11/03/11 23:47*	*1*
Toluene-d8 (Surr)	*96*		*58 - 140*	*11/03/11 19:07*	*11/03/11 23:47*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**110**		1.0		mg/Kg		11/03/11 20:37	11/04/11 13:22	1
Motor Oil Range Organics [C24-C36]	**94**		50		mg/Kg		11/03/11 20:37	11/04/11 13:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.03*		*0 - 1*	*11/03/11 20:37*	*11/04/11 13:22*	*1*
p-Terphenyl	*41*		*38 - 148*	*11/03/11 20:37*	*11/04/11 13:22*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.48		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Chromium	**92**		1.9		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Nickel	**140**		1.9		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Lead	**10**		1.9		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Zinc	**58**		5.7		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Antimony	ND		1.9		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Beryllium	ND		0.38		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Barium	**200**		1.9		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Thallium	ND		1.9		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Molybdenum	ND		1.9		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Vanadium	**56**		1.9		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Silver	ND		0.95		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Arsenic	**5.8**		3.8		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Copper	**30**		5.7		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Selenium	ND		3.8		mg/Kg		11/03/11 21:45	11/04/11 12:57	4
Cobalt	**19**		0.76		mg/Kg		11/03/11 21:45	11/04/11 12:57	4

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: WG-2344-WATER-031111
Date Collected: 11/03/11 14:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-11
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			11/04/11 13:53	1
Acetone	**50**		50		ug/L			11/04/11 13:53	1
Benzene	ND		0.50		ug/L			11/04/11 13:53	1
Dichlorobromomethane	ND		0.50		ug/L			11/04/11 13:53	1
Bromobenzene	ND		1.0		ug/L			11/04/11 13:53	1
Chlorobromomethane	ND		1.0		ug/L			11/04/11 13:53	1
Bromoform	ND		1.0		ug/L			11/04/11 13:53	1
Bromomethane	ND		1.0		ug/L			11/04/11 13:53	1
2-Butanone (MEK)	ND		50		ug/L			11/04/11 13:53	1
n-Butylbenzene	ND		1.0		ug/L			11/04/11 13:53	1
sec-Butylbenzene	ND		1.0		ug/L			11/04/11 13:53	1
tert-Butylbenzene	ND		1.0		ug/L			11/04/11 13:53	1
Carbon disulfide	ND		5.0		ug/L			11/04/11 13:53	1
Carbon tetrachloride	ND		0.50		ug/L			11/04/11 13:53	1
Chlorobenzene	ND		0.50		ug/L			11/04/11 13:53	1
Chloroethane	ND		1.0		ug/L			11/04/11 13:53	1
Chloroform	ND		1.0		ug/L			11/04/11 13:53	1
Chloromethane	ND		1.0		ug/L			11/04/11 13:53	1
2-Chlorotoluene	ND		0.50		ug/L			11/04/11 13:53	1
4-Chlorotoluene	ND		0.50		ug/L			11/04/11 13:53	1
Chlorodibromomethane	ND		0.50		ug/L			11/04/11 13:53	1
1,2-Dichlorobenzene	ND		0.50		ug/L			11/04/11 13:53	1
1,3-Dichlorobenzene	ND		0.50		ug/L			11/04/11 13:53	1
1,4-Dichlorobenzene	ND		0.50		ug/L			11/04/11 13:53	1
1,3-Dichloropropane	ND		1.0		ug/L			11/04/11 13:53	1
1,1-Dichloropropene	ND		0.50		ug/L			11/04/11 13:53	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			11/04/11 13:53	1
Ethylene Dibromide	ND		0.50		ug/L			11/04/11 13:53	1
Dibromomethane	ND		0.50		ug/L			11/04/11 13:53	1
Dichlorodifluoromethane	ND		0.50		ug/L			11/04/11 13:53	1
1,1-Dichloroethane	ND		0.50		ug/L			11/04/11 13:53	1
1,2-Dichloroethane	ND		0.50		ug/L			11/04/11 13:53	1
1,1-Dichloroethene	ND		0.50		ug/L			11/04/11 13:53	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			11/04/11 13:53	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			11/04/11 13:53	1
1,2-Dichloropropane	ND		0.50		ug/L			11/04/11 13:53	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			11/04/11 13:53	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			11/04/11 13:53	1
Ethylbenzene	ND		0.50		ug/L			11/04/11 13:53	1
Hexachlorobutadiene	ND		1.0		ug/L			11/04/11 13:53	1
2-Hexanone	ND		50		ug/L			11/04/11 13:53	1
Isopropylbenzene	ND		0.50		ug/L			11/04/11 13:53	1
4-Isopropyltoluene	ND		1.0		ug/L			11/04/11 13:53	1
Methylene Chloride	ND		5.0		ug/L			11/04/11 13:53	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			11/04/11 13:53	1
Naphthalene	ND		1.0		ug/L			11/04/11 13:53	1
N-Propylbenzene	ND		1.0		ug/L			11/04/11 13:53	1
Styrene	ND		0.50		ug/L			11/04/11 13:53	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			11/04/11 13:53	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/04/11 13:53	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: WG-2344-WATER-031111
Date Collected: 11/03/11 14:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-11
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**1.2**		0.50		ug/L			11/04/11 13:53	1
Toluene	ND		0.50		ug/L			11/04/11 13:53	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/04/11 13:53	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/04/11 13:53	1
1,1,1-Trichloroethane	ND		0.50		ug/L			11/04/11 13:53	1
1,1,2-Trichloroethane	ND		0.50		ug/L			11/04/11 13:53	1
Trichloroethene	ND		0.50		ug/L			11/04/11 13:53	1
Trichlorofluoromethane	ND		1.0		ug/L			11/04/11 13:53	1
1,2,3-Trichloropropane	ND		0.50		ug/L			11/04/11 13:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			11/04/11 13:53	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			11/04/11 13:53	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			11/04/11 13:53	1
Vinyl acetate	ND		10		ug/L			11/04/11 13:53	1
Vinyl chloride	ND		0.50		ug/L			11/04/11 13:53	1
Xylenes, Total	ND		1.0		ug/L			11/04/11 13:53	1
2,2-Dichloropropane	ND		0.50		ug/L			11/04/11 13:53	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			11/04/11 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*100*		*67 - 130*		*11/04/11 13:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*75 - 138*		*11/04/11 13:53*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*11/04/11 13:53*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Acenaphthene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Acenaphthylene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Fluorene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Phenanthrene	**1.3**		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Anthracene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Benzo[a]anthracene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Chrysene	**0.41**		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Benzo[a]pyrene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Benzo[b]fluoranthene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Benzo[k]fluoranthene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Fluoranthene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Pyrene	**0.32**		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		11/03/11 22:04	11/04/11 13:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*59*		*29 - 120*	*11/03/11 22:04*	*11/04/11 13:32*	*1*
Terphenyl-d14	*93*		*45 - 120*	*11/03/11 22:04*	*11/04/11 13:32*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Bis(2-chloroethyl)ether	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: WG-2344-WATER-031111
Date Collected: 11/03/11 14:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-11
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorophenol	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
1,3-Dichlorobenzene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
1,4-Dichlorobenzene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Benzyl alcohol	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
1,2-Dichlorobenzene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
2-Methylphenol	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
4-Methylphenol	ND		8.3		ug/L		11/03/11 19:29	11/04/11 14:16	1
N-Nitrosodi-n-propylamine	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Hexachloroethane	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Nitrobenzene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Isophorone	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
2-Nitrophenol	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
2,4-Dimethylphenol	ND		3.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Bis(2-chloroethoxy)methane	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
2,4-Dichlorophenol	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
1,2,4-Trichlorobenzene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Naphthalene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
4-Chloroaniline	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Hexachlorobutadiene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
4-Chloro-3-methylphenol	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
2-Methylnaphthalene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Hexachlorocyclopentadiene	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
2,4,6-Trichlorophenol	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
2,4,5-Trichlorophenol	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
2-Chloronaphthalene	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
2-Nitroaniline	ND		10		ug/L		11/03/11 19:29	11/04/11 14:16	1
Dimethyl phthalate	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Acenaphthylene	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
3-Nitroaniline	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Acenaphthene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
2,4-Dinitrophenol	ND		10		ug/L		11/03/11 19:29	11/04/11 14:16	1
4-Nitrophenol	ND		10		ug/L		11/03/11 19:29	11/04/11 14:16	1
Dibenzofuran	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
2,4-Dinitrotoluene	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
2,6-Dinitrotoluene	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Diethyl phthalate	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
4-Chlorophenyl phenyl ether	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Fluorene	ND		4.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
4-Nitroaniline	ND		10		ug/L		11/03/11 19:29	11/04/11 14:16	1
2-Methyl-4,6-dinitrophenol	ND		10		ug/L		11/03/11 19:29	11/04/11 14:16	1
N-Nitrosodiphenylamine	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
4-Bromophenyl phenyl ether	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Hexachlorobenzene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Pentachlorophenol	ND		10		ug/L		11/03/11 19:29	11/04/11 14:16	1
Phenanthrene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Anthracene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Di-n-butyl phthalate	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Fluoranthene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Pyrene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Butyl benzyl phthalate	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1

Client Sample ID: WG-2344-WATER-031111
Date Collected: 11/03/11 14:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-11
Matrix: Water

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
3,3'-Dichlorobenzidine	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Benzo[a]anthracene	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Bis(2-ethylhexyl) phthalate	ND		10		ug/L		11/03/11 19:29	11/04/11 14:16	1
Chrysene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Di-n-octyl phthalate	ND		5.2		ug/L		11/03/11 19:29	11/04/11 14:16	1
Benzo[b]fluoranthene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Benzo[a]pyrene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Benzo[k]fluoranthene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Indeno[1,2,3-cd]pyrene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Benzo[g,h,i]perylene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Benzoic acid	ND		10		ug/L		11/03/11 19:29	11/04/11 14:16	1
Azobenzene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1
Dibenz(a,h)anthracene	ND		2.1		ug/L		11/03/11 19:29	11/04/11 14:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*73*		*25 - 102*	*11/03/11 19:29*	*11/04/11 14:16*	*1*
2-Fluorobiphenyl	*82*		*10 - 101*	*11/03/11 19:29*	*11/04/11 14:16*	*1*
Terphenyl-d14	*78*		*57 - 117*	*11/03/11 19:29*	*11/04/11 14:16*	*1*
2-Fluorophenol	*36*		*10 - 65*	*11/03/11 19:29*	*11/04/11 14:16*	*1*
Phenol-d5	*28*		*10 - 46*	*11/03/11 19:29*	*11/04/11 14:16*	*1*
2,4,6-Tribromophenol	*87*		*18 - 123*	*11/03/11 19:29*	*11/04/11 14:16*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**12000**		260		ug/L		11/03/11 19:43	11/04/11 14:32	5
Motor Oil Range Organics [C24-C36]	**6700**		520		ug/L		11/03/11 19:43	11/04/11 14:32	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 5*	*11/03/11 19:43*	*11/04/11 14:32*	*5*
p-Terphenyl	*0*	*X D*	*31 - 150*	*11/03/11 19:43*	*11/04/11 14:32*	*5*

Method: 6010B - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020		mg/L		11/04/11 08:49	11/04/11 14:52	1
Chromium	**0.012**		0.010		mg/L		11/04/11 08:49	11/04/11 14:52	1
Nickel	**0.027**		0.010		mg/L		11/04/11 08:49	11/04/11 14:52	1
Lead	ND		0.0050		mg/L		11/04/11 08:49	11/04/11 14:52	1
Zinc	ND		0.020		mg/L		11/04/11 08:49	11/04/11 14:52	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-102283/1-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Acetone	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Benzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Dichlorobromomethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Bromobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chlorobromomethane	ND		20		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Bromoform	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Bromomethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2-Butanone (MEK)	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
n-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
sec-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
tert-Butylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Carbon disulfide	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Carbon tetrachloride	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chloroethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chloroform	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chloromethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2-Chlorotoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
4-Chlorotoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Chlorodibromomethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,3-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,4-Dichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,3-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Ethylene Dibromide	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Dibromomethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Dichlorodifluoromethane	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1-Dichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2-Dichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
cis-1,2-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
trans-1,2-Dichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
cis-1,3-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
trans-1,3-Dichloropropene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Ethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Hexachlorobutadiene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2-Hexanone	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Isopropylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
4-Isopropyltoluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Methylene Chloride	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Naphthalene	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
N-Propylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Styrene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,1,2-Tetrachloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102283/1-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102283

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Tetrachloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Toluene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2,3-Trichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2,4-Trichlorobenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,1-Trichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,2-Trichloroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Trichloroethene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Trichlorofluoromethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2,3-Trichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,2,4-Trimethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
1,3,5-Trimethylbenzene	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Vinyl acetate	ND		50		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Vinyl chloride	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Xylenes, Total	ND		10		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
2,2-Dichloropropane	ND		5.0		ug/Kg		11/03/11 19:07	11/03/11 20:52	1
Gasoline Range Organics (GRO) -C5-C12	ND		250		ug/Kg		11/03/11 19:07	11/03/11 20:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*45 - 131*	*11/03/11 19:07*	*11/03/11 20:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*60 - 140*	*11/03/11 19:07*	*11/03/11 20:52*	*1*
Toluene-d8 (Surr)	*95*		*58 - 140*	*11/03/11 19:07*	*11/03/11 20:52*	*1*

Lab Sample ID: LCS 720-102283/2-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	53.6		ug/Kg		107	71 - 144
Acetone	250	212		ug/Kg		85	30 - 162
Benzene	50.0	46.8		ug/Kg		94	82 - 124
Dichlorobromomethane	50.0	51.4		ug/Kg		103	86 - 131
Bromobenzene	50.0	49.4		ug/Kg		99	88 - 120
Chlorobromomethane	50.0	49.8		ug/Kg		100	81 - 116
Bromoform	50.0	58.4		ug/Kg		117	59 - 158
Bromomethane	50.0	43.6		ug/Kg		87	59 - 132
2-Butanone (MEK)	250	223		ug/Kg		89	61 - 150
n-Butylbenzene	50.0	51.8		ug/Kg		104	80 - 142
sec-Butylbenzene	50.0	50.8		ug/Kg		102	85 - 136
tert-Butylbenzene	50.0	50.6		ug/Kg		101	71 - 130
Carbon disulfide	50.0	39.2		ug/Kg		78	60 - 136
Carbon tetrachloride	50.0	49.4		ug/Kg		99	70 - 138
Chlorobenzene	50.0	49.0		ug/Kg		98	87 - 113
Chloroethane	50.0	44.8		ug/Kg		90	65 - 126
Chloroform	50.0	46.8		ug/Kg		94	77 - 127
Chloromethane	50.0	40.8		ug/Kg		82	60 - 149
2-Chlorotoluene	50.0	51.2		ug/Kg		102	80 - 138
4-Chlorotoluene	50.0	50.2		ug/Kg		100	79 - 136

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102283/2-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorodibromomethane	50.0	55.2		ug/Kg		110	75 - 146
1,2-Dichlorobenzene	50.0	49.8		ug/Kg		100	84 - 130
1,3-Dichlorobenzene	50.0	50.0		ug/Kg		100	84 - 131
1,4-Dichlorobenzene	50.0	49.6		ug/Kg		99	85 - 125
1,3-Dichloropropane	50.0	51.6		ug/Kg		103	79 - 140
1,1-Dichloropropene	50.0	47.8		ug/Kg		96	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	55.6		ug/Kg		111	68 - 145
Ethylene Dibromide	50.0	54.6		ug/Kg		109	79 - 140
Dibromomethane	50.0	51.2		ug/Kg		102	80 - 139
Dichlorodifluoromethane	50.0	32.4		ug/Kg		65	37 - 158
1,1-Dichloroethane	50.0	45.4		ug/Kg		91	76 - 119
1,2-Dichloroethane	50.0	47.0		ug/Kg		94	72 - 130
1,1-Dichloroethene	50.0	41.4		ug/Kg		83	76 - 122
cis-1,2-Dichloroethene	50.0	53.0		ug/Kg		106	87 - 138
trans-1,2-Dichloroethene	50.0	39.6		ug/Kg		79	67 - 108
1,2-Dichloropropane	50.0	47.2		ug/Kg		94	73 - 127
cis-1,3-Dichloropropene	50.0	52.0		ug/Kg		104	68 - 147
trans-1,3-Dichloropropene	50.0	55.4		ug/Kg		111	84 - 136
Ethylbenzene	50.0	48.0		ug/Kg		96	80 - 137
Hexachlorobutadiene	50.0	49.4		ug/Kg		99	72 - 132
2-Hexanone	250	257		ug/Kg		103	60 - 161
Isopropylbenzene	50.0	51.6		ug/Kg		103	88 - 128
4-Isopropyltoluene	50.0	50.6		ug/Kg		101	85 - 133
Methylene Chloride	50.0	43.8		ug/Kg		88	72 - 134
4-Methyl-2-pentanone (MIBK)	250	262		ug/Kg		105	69 - 160
Naphthalene	50.0	51.4		ug/Kg		103	70 - 147
N-Propylbenzene	50.0	48.8		ug/Kg		98	72 - 125
Styrene	50.0	53.6		ug/Kg		107	89 - 126
1,1,1,2-Tetrachloroethane	50.0	52.4		ug/Kg		105	90 - 130
1,1,2,2-Tetrachloroethane	50.0	51.6		ug/Kg		103	82 - 146
Tetrachloroethene	50.0	50.4		ug/Kg		101	78 - 132
Toluene	50.0	47.4		ug/Kg		95	83 - 128
1,2,3-Trichlorobenzene	50.0	50.0		ug/Kg		100	82 - 135
1,2,4-Trichlorobenzene	50.0	49.6		ug/Kg		99	70 - 131
1,1,1-Trichloroethane	50.0	48.2		ug/Kg		96	70 - 130
1,1,2-Trichloroethane	50.0	51.0		ug/Kg		102	82 - 125
Trichloroethene	50.0	47.6		ug/Kg		95	81 - 133
Trichlorofluoromethane	50.0	47.0		ug/Kg		94	70 - 139
1,2,3-Trichloropropane	50.0	52.2		ug/Kg		104	76 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	44.4		ug/Kg		89	70 - 130
1,2,4-Trimethylbenzene	50.0	49.8		ug/Kg		100	84 - 130
1,3,5-Trimethylbenzene	50.0	51.2		ug/Kg		102	82 - 131
Vinyl acetate	50.0	54.4		ug/Kg		109	38 - 176
Vinyl chloride	50.0	40.2		ug/Kg		80	58 - 125
m-Xylene & p-Xylene	100	99.4		ug/Kg		99	79 - 146
o-Xylene	50.0	50.8		ug/Kg		102	84 - 140
2,2-Dichloropropane	50.0	52.8		ug/Kg		106	73 - 162

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102283/2-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102283

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Lab Sample ID: LCS 720-102283/4-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102283

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C5-C12			1000	825		ug/Kg		83	61 - 128		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*104*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Lab Sample ID: LCSD 720-102283/3-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102283

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			50.0	51.4		ug/Kg		103	71 - 144	4	20
Acetone			250	203		ug/Kg		81	30 - 162	4	30
Benzene			50.0	45.6		ug/Kg		91	82 - 124	3	20
Dichlorobromomethane			50.0	50.2		ug/Kg		100	86 - 131	2	20
Bromobenzene			50.0	48.0		ug/Kg		96	88 - 120	3	20
Chlorobromomethane			50.0	49.0		ug/Kg		98	81 - 116	2	20
Bromoform			50.0	57.2		ug/Kg		114	59 - 158	2	20
Bromomethane			50.0	41.4		ug/Kg		83	59 - 132	5	20
2-Butanone (MEK)			250	214		ug/Kg		86	61 - 150	4	20
n-Butylbenzene			50.0	49.8		ug/Kg		100	80 - 142	4	20
sec-Butylbenzene			50.0	48.6		ug/Kg		97	85 - 136	4	20
tert-Butylbenzene			50.0	48.4		ug/Kg		97	71 - 130	4	20
Carbon disulfide			50.0	37.8		ug/Kg		76	60 - 136	4	20
Carbon tetrachloride			50.0	47.0		ug/Kg		94	70 - 138	5	20
Chlorobenzene			50.0	47.0		ug/Kg		94	87 - 113	4	20
Chloroethane			50.0	43.4		ug/Kg		87	65 - 126	3	20
Chloroform			50.0	45.0		ug/Kg		90	77 - 127	4	20
Chloromethane			50.0	39.0		ug/Kg		78	60 - 149	5	20
2-Chlorotoluene			50.0	48.4		ug/Kg		97	80 - 138	6	20
4-Chlorotoluene			50.0	48.0		ug/Kg		96	79 - 136	4	20
Chlorodibromomethane			50.0	53.8		ug/Kg		108	75 - 146	3	20
1,2-Dichlorobenzene			50.0	48.2		ug/Kg		96	84 - 130	3	20
1,3-Dichlorobenzene			50.0	48.2		ug/Kg		96	84 - 131	4	20
1,4-Dichlorobenzene			50.0	47.8		ug/Kg		96	85 - 125	4	20
1,3-Dichloropropane			50.0	51.0		ug/Kg		102	79 - 140	1	20
1,1-Dichloropropene			50.0	46.2		ug/Kg		92	70 - 130	3	20
1,2-Dibromo-3-Chloropropane			50.0	53.0		ug/Kg		106	68 - 145	5	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102283/3-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102283

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylene Dibromide			50.0	53.8		ug/Kg		108	79 - 140	1	20
Dibromomethane			50.0	50.6		ug/Kg		101	80 - 139	1	20
Dichlorodifluoromethane			50.0	30.0		ug/Kg		60	37 - 158	8	20
1,1-Dichloroethane			50.0	43.8		ug/Kg		88	76 - 119	4	20
1,2-Dichloroethane			50.0	46.2		ug/Kg		92	72 - 130	2	20
1,1-Dichloroethene			50.0	40.0		ug/Kg		80	76 - 122	3	20
cis-1,2-Dichloroethene			50.0	51.2		ug/Kg		102	87 - 138	3	20
trans-1,2-Dichloroethene			50.0	38.4		ug/Kg		77	67 - 108	3	20
1,2-Dichloropropane			50.0	46.8		ug/Kg		94	73 - 127	1	20
cis-1,3-Dichloropropene			50.0	50.4		ug/Kg		101	68 - 147	3	20
trans-1,3-Dichloropropene			50.0	54.2		ug/Kg		108	84 - 136	2	20
Ethylbenzene			50.0	46.4		ug/Kg		93	80 - 137	3	20
Hexachlorobutadiene			50.0	46.8		ug/Kg		94	72 - 132	5	20
2-Hexanone			250	250		ug/Kg		100	60 - 161	3	20
Isopropylbenzene			50.0	49.8		ug/Kg		100	88 - 128	4	20
4-Isopropyltoluene			50.0	49.4		ug/Kg		99	85 - 133	2	20
Methylene Chloride			50.0	43.4		ug/Kg		87	72 - 134	1	20
4-Methyl-2-pentanone (MIBK)			250	256		ug/Kg		102	69 - 160	2	20
Naphthalene			50.0	48.8		ug/Kg		98	70 - 147	5	20
N-Propylbenzene			50.0	46.4		ug/Kg		93	72 - 125	5	20
Styrene			50.0	53.0		ug/Kg		106	89 - 126	1	20
1,1,1,2-Tetrachloroethane			50.0	51.0		ug/Kg		102	90 - 130	3	20
1,1,2,2-Tetrachloroethane			50.0	50.6		ug/Kg		101	82 - 146	2	20
Tetrachloroethene			50.0	48.2		ug/Kg		96	78 - 132	4	20
Toluene			50.0	46.4		ug/Kg		93	83 - 128	2	20
1,2,3-Trichlorobenzene			50.0	47.2		ug/Kg		94	82 - 135	6	20
1,2,4-Trichlorobenzene			50.0	47.0		ug/Kg		94	70 - 131	5	20
1,1,1-Trichloroethane			50.0	45.4		ug/Kg		91	70 - 130	6	20
1,1,2-Trichloroethane			50.0	51.0		ug/Kg		102	82 - 125	0	20
Trichloroethene			50.0	46.2		ug/Kg		92	81 - 133	3	20
Trichlorofluoromethane			50.0	43.2		ug/Kg		86	70 - 139	8	20
1,2,3-Trichloropropane			50.0	51.0		ug/Kg		102	76 - 146	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane			50.0	43.0		ug/Kg		86	70 - 130	3	20
1,2,4-Trimethylbenzene			50.0	47.8		ug/Kg		96	84 - 130	4	20
1,3,5-Trimethylbenzene			50.0	49.0		ug/Kg		98	82 - 131	4	20
Vinyl acetate			50.0	54.0		ug/Kg		108	38 - 176	1	20
Vinyl chloride			50.0	38.6		ug/Kg		77	58 - 125	4	20
m-Xylene & p-Xylene			100	95.6		ug/Kg		96	79 - 146	4	20
o-Xylene			50.0	48.8		ug/Kg		98	84 - 140	4	20
2,2-Dichloropropane			50.0	48.8		ug/Kg		98	73 - 162	8	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102283/5-A
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102283

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			1000	839		ug/Kg		84	61 - 128	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*103*		*60 - 140*
Toluene-d8 (Surr)	*99*		*58 - 140*

Lab Sample ID: 720-38506-1 MS
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	ND		50.0	53.4		ug/Kg		107	69 - 130
Acetone	ND		250	150		ug/Kg		60	37 - 150
Benzene	ND		50.0	45.6		ug/Kg		91	70 - 130
Dichlorobromomethane	ND		50.0	50.4		ug/Kg		101	64 - 135
Bromobenzene	ND		50.0	49.8		ug/Kg		100	70 - 130
Chlorobromomethane	ND		50.0	49.2		ug/Kg		98	65 - 130
Bromoform	ND		50.0	56.0		ug/Kg		112	58 - 132
Bromomethane	ND		50.0	41.6		ug/Kg		83	56 - 130
2-Butanone (MEK)	ND		250	187		ug/Kg		75	41 - 150
n-Butylbenzene	ND		50.0	49.8		ug/Kg		100	60 - 145
sec-Butylbenzene	ND		50.0	49.6		ug/Kg		99	64 - 137
tert-Butylbenzene	ND		50.0	50.6		ug/Kg		101	63 - 134
Carbon disulfide	ND		50.0	38.6		ug/Kg		77	10 - 150
Carbon tetrachloride	ND		50.0	46.8		ug/Kg		94	54 - 130
Chlorobenzene	ND		50.0	47.2		ug/Kg		94	70 - 130
Chloroethane	ND		50.0	43.0		ug/Kg		86	61 - 130
Chloroform	ND		50.0	46.2		ug/Kg		92	67 - 130
Chloromethane	ND		50.0	39.4		ug/Kg		79	50 - 131
2-Chlorotoluene	ND		50.0	50.6		ug/Kg		101	70 - 130
4-Chlorotoluene	ND		50.0	49.2		ug/Kg		98	70 - 130
Chlorodibromomethane	ND		50.0	53.4		ug/Kg		107	60 - 141
1,2-Dichlorobenzene	ND		50.0	47.2		ug/Kg		94	70 - 130
1,3-Dichlorobenzene	ND		50.0	48.0		ug/Kg		96	70 - 130
1,4-Dichlorobenzene	ND		50.0	47.4		ug/Kg		95	70 - 130
1,3-Dichloropropane	ND		50.0	50.6		ug/Kg		101	70 - 130
1,1-Dichloropropene	ND		50.0	45.4		ug/Kg		91	67 - 130
1,2-Dibromo-3-Chloropropane	ND		50.0	52.2		ug/Kg		104	57 - 130
Ethylene Dibromide	ND		50.0	53.2		ug/Kg		106	66 - 135
Dibromomethane	ND		50.0	50.6		ug/Kg		101	65 - 131
Dichlorodifluoromethane	ND		50.0	31.0		ug/Kg		62	38 - 130
1,1-Dichloroethane	ND		50.0	44.8		ug/Kg		90	67 - 130
1,2-Dichloroethane	ND		50.0	46.8		ug/Kg		94	70 - 130
1,1-Dichloroethene	ND		50.0	40.8		ug/Kg		82	64 - 130
cis-1,2-Dichloroethene	ND		50.0	51.4		ug/Kg		103	68 - 131
trans-1,2-Dichloroethene	ND		50.0	38.4		ug/Kg		77	70 - 130
1,2-Dichloropropane	ND		50.0	47.4		ug/Kg		95	65 - 133

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-38506-1 MS
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	ND		50.0	51.0		ug/Kg		102	46 - 139
trans-1,3-Dichloropropene	ND		50.0	53.0		ug/Kg		106	55 - 131
Ethylbenzene	ND		50.0	46.6		ug/Kg		93	65 - 130
Hexachlorobutadiene	ND		50.0	43.0		ug/Kg		86	58 - 132
2-Hexanone	ND		250	226		ug/Kg		90	44 - 150
Isopropylbenzene	ND		50.0	49.4		ug/Kg		99	65 - 130
4-Isopropyltoluene	ND		50.0	49.6		ug/Kg		99	69 - 134
Methylene Chloride	ND		50.0	44.2		ug/Kg		88	63 - 130
4-Methyl-2-pentanone (MIBK)	ND		250	242		ug/Kg		97	51 - 140
Naphthalene	ND		50.0	39.6		ug/Kg		79	45 - 146
N-Propylbenzene	ND		50.0	48.4		ug/Kg		97	70 - 130
Styrene	ND		50.0	51.0		ug/Kg		102	58 - 135
1,1,1,2-Tetrachloroethane	ND		50.0	51.8		ug/Kg		104	64 - 133
1,1,2,2-Tetrachloroethane	ND		50.0	52.6		ug/Kg		105	70 - 131
Tetrachloroethene	ND		50.0	47.6		ug/Kg		95	67 - 130
Toluene	ND		50.0	47.0		ug/Kg		94	70 - 130
1,2,3-Trichlorobenzene	ND		50.0	39.6		ug/Kg		79	58 - 138
1,2,4-Trichlorobenzene	ND		50.0	41.4		ug/Kg		83	49 - 144
1,1,1-Trichloroethane	ND		50.0	45.8		ug/Kg		92	57 - 133
1,1,2-Trichloroethane	ND		50.0	50.4		ug/Kg		101	68 - 132
Trichloroethene	ND		50.0	46.2		ug/Kg		92	66 - 130
Trichlorofluoromethane	ND		50.0	44.4		ug/Kg		89	61 - 130
1,2,3-Trichloropropane	ND		50.0	51.8		ug/Kg		104	62 - 150
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		50.0	43.6		ug/Kg		87	52 - 130
1,2,4-Trimethylbenzene	ND		50.0	48.8		ug/Kg		98	64 - 140
1,3,5-Trimethylbenzene	ND		50.0	51.0		ug/Kg		102	67 - 134
Vinyl acetate	ND		50.0	ND		ug/Kg		74	52 - 150
Vinyl chloride	ND		50.0	38.6		ug/Kg		77	62 - 130
m-Xylene & p-Xylene	ND		100	95.4		ug/Kg		95	70 - 130
o-Xylene	ND		50.0	49.2		ug/Kg		98	68 - 130
2,2-Dichloropropane	ND		50.0	50.0		ug/Kg		100	63 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*101*		*60 - 140*
Toluene-d8 (Surr)	*97*		*58 - 140*

Lab Sample ID: 720-38506-1 MSD
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	ND		48.6	48.1		ug/Kg		99	69 - 130	11	20
Acetone	ND		243	143		ug/Kg		59	37 - 150	5	20
Benzene	ND		48.6	44.9		ug/Kg		92	70 - 130	1	20
Dichlorobromomethane	ND		48.6	48.1		ug/Kg		99	64 - 135	5	20
Bromobenzene	ND		48.6	49.4		ug/Kg		102	70 - 130	1	20
Chlorobromomethane	ND		48.6	47.1		ug/Kg		97	65 - 130	4	20
Bromoform	ND		48.6	51.2		ug/Kg		105	58 - 132	9	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-38506-1 MSD
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane	ND		48.6	41.1		ug/Kg		84	56 - 130	1	20
2-Butanone (MEK)	ND		243	174		ug/Kg		71	41 - 150	7	20
n-Butylbenzene	ND		48.6	48.2		ug/Kg		99	60 - 145	3	20
sec-Butylbenzene	ND		48.6	48.8		ug/Kg		100	64 - 137	2	20
tert-Butylbenzene	ND		48.6	50.4		ug/Kg		104	63 - 134	0	20
Carbon disulfide	ND		48.6	37.4		ug/Kg		77	10 - 150	3	20
Carbon tetrachloride	ND		48.6	44.7		ug/Kg		92	54 - 130	4	20
Chlorobenzene	ND		48.6	45.5		ug/Kg		94	70 - 130	4	20
Chloroethane	ND		48.6	43.0		ug/Kg		88	61 - 130	0	20
Chloroform	ND		48.6	44.2		ug/Kg		91	67 - 130	5	20
Chloromethane	ND		48.6	39.5		ug/Kg		81	50 - 131	0	20
2-Chlorotoluene	ND		48.6	50.2		ug/Kg		103	70 - 130	1	20
4-Chlorotoluene	ND		48.6	49.0		ug/Kg		101	70 - 130	0	20
Chlorodibromomethane	ND		48.6	50.2		ug/Kg		103	60 - 141	6	20
1,2-Dichlorobenzene	ND		48.6	45.7		ug/Kg		94	70 - 130	3	20
1,3-Dichlorobenzene	ND		48.6	47.5		ug/Kg		98	70 - 130	1	20
1,4-Dichlorobenzene	ND		48.6	46.3		ug/Kg		95	70 - 130	2	20
1,3-Dichloropropane	ND		48.6	47.7		ug/Kg		98	70 - 130	6	20
1,1-Dichloropropene	ND		48.6	44.6		ug/Kg		92	67 - 130	2	20
1,2-Dibromo-3-Chloropropane	ND		48.6	46.7		ug/Kg		96	57 - 130	11	20
Ethylene Dibromide	ND		48.6	49.0		ug/Kg		101	66 - 135	8	20
Dibromomethane	ND		48.6	46.9		ug/Kg		96	65 - 131	8	20
Dichlorodifluoromethane	ND		48.6	29.4		ug/Kg		60	38 - 130	5	20
1,1-Dichloroethane	ND		48.6	43.2		ug/Kg		89	67 - 130	4	20
1,2-Dichloroethane	ND		48.6	43.4		ug/Kg		89	70 - 130	8	20
1,1-Dichloroethene	ND		48.6	39.5		ug/Kg		81	64 - 130	3	20
cis-1,2-Dichloroethene	ND		48.6	50.4		ug/Kg		104	68 - 131	2	20
trans-1,2-Dichloroethene	ND		48.6	37.4		ug/Kg		77	70 - 130	3	20
1,2-Dichloropropane	ND		48.6	46.3		ug/Kg		95	65 - 133	2	20
cis-1,3-Dichloropropene	ND		48.6	48.8		ug/Kg		100	46 - 139	4	20
trans-1,3-Dichloropropene	ND		48.6	50.2		ug/Kg		103	55 - 131	5	20
Ethylbenzene	ND		48.6	45.1		ug/Kg		93	65 - 130	3	20
Hexachlorobutadiene	ND		48.6	41.1		ug/Kg		84	58 - 132	5	20
2-Hexanone	ND		243	203		ug/Kg		83	44 - 150	11	20
Isopropylbenzene	ND		48.6	47.7		ug/Kg		98	65 - 130	4	20
4-Isopropyltoluene	ND		48.6	49.4		ug/Kg		102	69 - 134	0	20
Methylene Chloride	ND		48.6	43.2		ug/Kg		89	63 - 130	2	20
4-Methyl-2-pentanone (MIBK)	ND		243	221		ug/Kg		91	51 - 140	9	20
Naphthalene	ND		48.6	35.6		ug/Kg		73	45 - 146	11	20
N-Propylbenzene	ND		48.6	48.1		ug/Kg		99	70 - 130	1	20
Styrene	ND		48.6	49.4		ug/Kg		102	58 - 135	3	20
1,1,1,2-Tetrachloroethane	ND		48.6	49.2		ug/Kg		101	64 - 133	5	20
1,1,2,2-Tetrachloroethane	ND		48.6	49.4		ug/Kg		102	70 - 131	6	20
Tetrachloroethene	ND		48.6	45.9		ug/Kg		94	67 - 130	4	20
Toluene	ND		48.6	45.3		ug/Kg		93	70 - 130	4	20
1,2,3-Trichlorobenzene	ND		48.6	36.4		ug/Kg		75	58 - 138	8	20
1,2,4-Trichlorobenzene	ND		48.6	38.1		ug/Kg		78	49 - 144	8	20
1,1,1-Trichloroethane	ND		48.6	43.8		ug/Kg		90	57 - 133	5	20
1,1,2-Trichloroethane	ND		48.6	47.7		ug/Kg		98	68 - 132	6	20
Trichloroethene	ND		48.6	44.6		ug/Kg		92	66 - 130	4	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-38506-1 MSD
Matrix: Solid
Analysis Batch: 102272

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: Total/NA
Prep Batch: 102283

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane	ND		48.6	42.4		ug/Kg		87	61 - 130	5	20
1,2,3-Trichloropropane	ND		48.6	48.8		ug/Kg		100	62 - 150	6	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		48.6	41.8		ug/Kg		86	52 - 130	4	20
1,2,4-Trimethylbenzene	ND		48.6	48.8		ug/Kg		100	64 - 140	0	20
1,3,5-Trimethylbenzene	ND		48.6	50.6		ug/Kg		104	67 - 134	1	20
Vinyl acetate	ND		48.6	ND		ug/Kg		67	52 - 150	12	20
Vinyl chloride	ND		48.6	38.3		ug/Kg		79	62 - 130	1	20
m-Xylene & p-Xylene	ND		97.3	92.6		ug/Kg		95	70 - 130	3	20
o-Xylene	ND		48.6	47.5		ug/Kg		98	68 - 130	4	20
2,2-Dichloropropane	ND		48.6	47.1		ug/Kg		97	63 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*96*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*95*		*60 - 140*
Toluene-d8 (Surr)	*98*		*58 - 140*

Lab Sample ID: MB 720-102297/4
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50		ug/L			11/04/11 10:02	1
Acetone	ND		50		ug/L			11/04/11 10:02	1
Benzene	ND		0.50		ug/L			11/04/11 10:02	1
Dichlorobromomethane	ND		0.50		ug/L			11/04/11 10:02	1
Bromobenzene	ND		1.0		ug/L			11/04/11 10:02	1
Chlorobromomethane	ND		1.0		ug/L			11/04/11 10:02	1
Bromoform	ND		1.0		ug/L			11/04/11 10:02	1
Bromomethane	ND		1.0		ug/L			11/04/11 10:02	1
2-Butanone (MEK)	ND		50		ug/L			11/04/11 10:02	1
n-Butylbenzene	ND		1.0		ug/L			11/04/11 10:02	1
sec-Butylbenzene	ND		1.0		ug/L			11/04/11 10:02	1
tert-Butylbenzene	ND		1.0		ug/L			11/04/11 10:02	1
Carbon disulfide	ND		5.0		ug/L			11/04/11 10:02	1
Carbon tetrachloride	ND		0.50		ug/L			11/04/11 10:02	1
Chlorobenzene	ND		0.50		ug/L			11/04/11 10:02	1
Chloroethane	ND		1.0		ug/L			11/04/11 10:02	1
Chloroform	ND		1.0		ug/L			11/04/11 10:02	1
Chloromethane	ND		1.0		ug/L			11/04/11 10:02	1
2-Chlorotoluene	ND		0.50		ug/L			11/04/11 10:02	1
4-Chlorotoluene	ND		0.50		ug/L			11/04/11 10:02	1
Chlorodibromomethane	ND		0.50		ug/L			11/04/11 10:02	1
1,2-Dichlorobenzene	ND		0.50		ug/L			11/04/11 10:02	1
1,3-Dichlorobenzene	ND		0.50		ug/L			11/04/11 10:02	1
1,4-Dichlorobenzene	ND		0.50		ug/L			11/04/11 10:02	1
1,3-Dichloropropane	ND		1.0		ug/L			11/04/11 10:02	1
1,1-Dichloropropene	ND		0.50		ug/L			11/04/11 10:02	1
1,2-Dibromo-3-Chloropropane	ND		1.0		ug/L			11/04/11 10:02	1
Ethylene Dibromide	ND		0.50		ug/L			11/04/11 10:02	1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-102297/4
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.50		ug/L			11/04/11 10:02	1
Dichlorodifluoromethane	ND		0.50		ug/L			11/04/11 10:02	1
1,1-Dichloroethane	ND		0.50		ug/L			11/04/11 10:02	1
1,2-Dichloroethane	ND		0.50		ug/L			11/04/11 10:02	1
1,1-Dichloroethene	ND		0.50		ug/L			11/04/11 10:02	1
cis-1,2-Dichloroethene	ND		0.50		ug/L			11/04/11 10:02	1
trans-1,2-Dichloroethene	ND		0.50		ug/L			11/04/11 10:02	1
1,2-Dichloropropane	ND		0.50		ug/L			11/04/11 10:02	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			11/04/11 10:02	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			11/04/11 10:02	1
Ethylbenzene	ND		0.50		ug/L			11/04/11 10:02	1
Hexachlorobutadiene	ND		1.0		ug/L			11/04/11 10:02	1
2-Hexanone	ND		50		ug/L			11/04/11 10:02	1
Isopropylbenzene	ND		0.50		ug/L			11/04/11 10:02	1
4-Isopropyltoluene	ND		1.0		ug/L			11/04/11 10:02	1
Methylene Chloride	ND		5.0		ug/L			11/04/11 10:02	1
4-Methyl-2-pentanone (MIBK)	ND		50		ug/L			11/04/11 10:02	1
Naphthalene	ND		1.0		ug/L			11/04/11 10:02	1
N-Propylbenzene	ND		1.0		ug/L			11/04/11 10:02	1
Styrene	ND		0.50		ug/L			11/04/11 10:02	1
1,1,1,2-Tetrachloroethane	ND		0.50		ug/L			11/04/11 10:02	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			11/04/11 10:02	1
Tetrachloroethene	ND		0.50		ug/L			11/04/11 10:02	1
Toluene	ND		0.50		ug/L			11/04/11 10:02	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			11/04/11 10:02	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			11/04/11 10:02	1
1,1,1-Trichloroethane	ND		0.50		ug/L			11/04/11 10:02	1
1,1,2-Trichloroethane	ND		0.50		ug/L			11/04/11 10:02	1
Trichloroethene	ND		0.50		ug/L			11/04/11 10:02	1
Trichlorofluoromethane	ND		1.0		ug/L			11/04/11 10:02	1
1,2,3-Trichloropropane	ND		0.50		ug/L			11/04/11 10:02	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		0.50		ug/L			11/04/11 10:02	1
1,2,4-Trimethylbenzene	ND		0.50		ug/L			11/04/11 10:02	1
1,3,5-Trimethylbenzene	ND		0.50		ug/L			11/04/11 10:02	1
Vinyl acetate	ND		10		ug/L			11/04/11 10:02	1
Vinyl chloride	ND		0.50		ug/L			11/04/11 10:02	1
Xylenes, Total	ND		1.0		ug/L			11/04/11 10:02	1
2,2-Dichloropropane	ND		0.50		ug/L			11/04/11 10:02	1
Gasoline Range Organics (GRO) -C5-C12	ND		50		ug/L			11/04/11 10:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*97*		*67 - 130*		*11/04/11 10:02*	*1*
1,2-Dichloroethane-d4 (Surr)	*107*		*75 - 138*		*11/04/11 10:02*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*11/04/11 10:02*	*1*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102297/5
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	25.0	26.9		ug/L		108	62 - 130
Acetone	125	90.7		ug/L		73	26 - 180
Benzene	25.0	23.1		ug/L		92	79 - 120
Dichlorobromomethane	25.0	28.7		ug/L		115	70 - 130
Bromobenzene	25.0	25.4		ug/L		102	79 - 127
Chlorobromomethane	25.0	26.3		ug/L		105	70 - 130
Bromoform	25.0	30.8		ug/L		123	68 - 136
Bromomethane	25.0	23.4		ug/L		94	43 - 151
2-Butanone (MEK)	125	106		ug/L		85	54 - 124
n-Butylbenzene	25.0	24.2		ug/L		97	79 - 142
sec-Butylbenzene	25.0	23.9		ug/L		96	81 - 134
tert-Butylbenzene	25.0	24.8		ug/L		99	82 - 135
Carbon disulfide	25.0	19.4		ug/L		78	58 - 124
Carbon tetrachloride	25.0	29.9		ug/L		120	77 - 146
Chlorobenzene	25.0	24.3		ug/L		97	70 - 130
Chloroethane	25.0	22.5		ug/L		90	62 - 138
Chloroform	25.0	26.9		ug/L		108	70 - 130
Chloromethane	25.0	19.2		ug/L		77	52 - 175
2-Chlorotoluene	25.0	25.1		ug/L		100	70 - 130
4-Chlorotoluene	25.0	24.9		ug/L		100	70 - 130
Chlorodibromomethane	25.0	30.6		ug/L		122	78 - 145
1,2-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
1,3-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	25.2		ug/L		101	87 - 118
1,3-Dichloropropane	25.0	25.7		ug/L		103	75 - 124
1,1-Dichloropropene	25.0	25.1		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	27.8		ug/L		111	72 - 136
Ethylene Dibromide	25.0	27.8		ug/L		111	70 - 130
Dibromomethane	25.0	26.9		ug/L		108	70 - 130
Dichlorodifluoromethane	25.0	17.7		ug/L		71	34 - 132
1,1-Dichloroethane	25.0	24.7		ug/L		99	70 - 130
1,2-Dichloroethane	25.0	28.6		ug/L		114	70 - 126
1,1-Dichloroethene	25.0	20.8		ug/L		83	64 - 128
cis-1,2-Dichloroethene	25.0	29.4		ug/L		118	70 - 130
trans-1,2-Dichloroethene	25.0	20.4		ug/L		82	68 - 118
1,2-Dichloropropane	25.0	24.1		ug/L		96	70 - 130
cis-1,3-Dichloropropene	25.0	25.7		ug/L		103	81 - 126
trans-1,3-Dichloropropene	25.0	28.9		ug/L		116	83 - 140
Ethylbenzene	25.0	24.3		ug/L		97	84 - 120
Hexachlorobutadiene	25.0	28.7		ug/L		115	70 - 130
2-Hexanone	125	121		ug/L		97	60 - 164
Isopropylbenzene	25.0	26.1		ug/L		104	70 - 130
4-Isopropyltoluene	25.0	25.0		ug/L		100	70 - 130
Methylene Chloride	25.0	21.6		ug/L		86	73 - 147
4-Methyl-2-pentanone (MIBK)	125	127		ug/L		102	63 - 165
Naphthalene	25.0	26.4		ug/L		106	78 - 135
N-Propylbenzene	25.0	22.7		ug/L		91	70 - 130
Styrene	25.0	25.7		ug/L		103	70 - 130
1,1,1,2-Tetrachloroethane	25.0	28.4		ug/L		114	70 - 130

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-102297/5
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	25.0	22.4		ug/L		90	70 - 130
Tetrachloroethene	25.0	28.0		ug/L		112	70 - 130
Toluene	25.0	22.6		ug/L		90	80 - 113
1,2,3-Trichlorobenzene	25.0	29.0		ug/L		116	70 - 130
1,2,4-Trichlorobenzene	25.0	27.9		ug/L		112	70 - 130
1,1,1-Trichloroethane	25.0	29.0		ug/L		116	70 - 130
1,1,2-Trichloroethane	25.0	24.9		ug/L		100	78 - 125
Trichloroethene	25.0	26.1		ug/L		104	70 - 130
Trichlorofluoromethane	25.0	25.8		ug/L		103	66 - 132
1,2,3-Trichloropropane	25.0	25.8		ug/L		103	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.6		ug/L		102	42 - 162
1,2,4-Trimethylbenzene	25.0	24.3		ug/L		97	70 - 132
1,3,5-Trimethylbenzene	25.0	24.8		ug/L		99	70 - 130
Vinyl acetate	25.0	26.5		ug/L		106	43 - 163
Vinyl chloride	25.0	20.8		ug/L		83	63 - 125
m-Xylene & p-Xylene	50.0	50.4		ug/L		101	70 - 142
o-Xylene	25.0	25.7		ug/L		103	85 - 127
2,2-Dichloropropane	25.0	29.6		ug/L		118	70 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*99*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*75 - 138*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: LCS 720-102297/7
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C5-C12	500	517		ug/L		103	62 - 117

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*112*		*75 - 138*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: LCSD 720-102297/6
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	25.0	27.8		ug/L		111	62 - 130	3	20
Acetone	125	92.6		ug/L		74	26 - 180	2	30
Benzene	25.0	22.8		ug/L		91	79 - 120	1	20
Dichlorobromomethane	25.0	28.6		ug/L		114	70 - 130	0	20
Bromobenzene	25.0	25.7		ug/L		103	79 - 127	1	20
Chlorobromomethane	25.0	27.0		ug/L		108	70 - 130	3	20
Bromoform	25.0	31.3		ug/L		125	68 - 136	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102297/6
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane	25.0	23.2		ug/L		93	43 - 151	1	20
2-Butanone (MEK)	125	109		ug/L		87	54 - 124	2	20
n-Butylbenzene	25.0	24.0		ug/L		96	79 - 142	1	20
sec-Butylbenzene	25.0	23.8		ug/L		95	81 - 134	0	20
tert-Butylbenzene	25.0	24.5		ug/L		98	82 - 135	1	20
Carbon disulfide	25.0	18.9		ug/L		76	58 - 124	3	20
Carbon tetrachloride	25.0	29.4		ug/L		118	77 - 146	2	20
Chlorobenzene	25.0	24.3		ug/L		97	70 - 130	0	20
Chloroethane	25.0	22.1		ug/L		88	62 - 138	2	20
Chloroform	25.0	26.2		ug/L		105	70 - 130	3	20
Chloromethane	25.0	18.5		ug/L		74	52 - 175	4	20
2-Chlorotoluene	25.0	25.0		ug/L		100	70 - 130	0	20
4-Chlorotoluene	25.0	24.7		ug/L		99	70 - 130	1	20
Chlorodibromomethane	25.0	31.0		ug/L		124	78 - 145	1	20
1,2-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130	1	20
1,3-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130	0	20
1,4-Dichlorobenzene	25.0	25.4		ug/L		102	87 - 118	1	20
1,3-Dichloropropane	25.0	25.7		ug/L		103	75 - 124	0	20
1,1-Dichloropropene	25.0	24.6		ug/L		98	70 - 130	2	20
1,2-Dibromo-3-Chloropropane	25.0	28.6		ug/L		114	72 - 136	3	20
Ethylene Dibromide	25.0	28.5		ug/L		114	70 - 130	2	20
Dibromomethane	25.0	27.2		ug/L		109	70 - 130	1	20
Dichlorodifluoromethane	25.0	17.1		ug/L		68	34 - 132	3	20
1,1-Dichloroethane	25.0	24.3		ug/L		97	70 - 130	2	20
1,2-Dichloroethane	25.0	28.8		ug/L		115	70 - 126	1	20
1,1-Dichloroethene	25.0	20.8		ug/L		83	64 - 128	0	20
cis-1,2-Dichloroethene	25.0	28.8		ug/L		115	70 - 130	2	20
trans-1,2-Dichloroethene	25.0	20.6		ug/L		82	68 - 118	1	20
1,2-Dichloropropane	25.0	24.1		ug/L		96	70 - 130	0	20
cis-1,3-Dichloropropene	25.0	25.4		ug/L		102	81 - 126	1	20
trans-1,3-Dichloropropene	25.0	29.0		ug/L		116	83 - 140	0	20
Ethylbenzene	25.0	24.1		ug/L		96	84 - 120	1	20
Hexachlorobutadiene	25.0	28.4		ug/L		114	70 - 130	1	20
2-Hexanone	125	123		ug/L		98	60 - 164	1	20
Isopropylbenzene	25.0	25.5		ug/L		102	70 - 130	2	20
4-Isopropyltoluene	25.0	24.6		ug/L		98	70 - 130	2	20
Methylene Chloride	25.0	21.4		ug/L		86	73 - 147	1	20
4-Methyl-2-pentanone (MIBK)	125	130		ug/L		104	63 - 165	2	20
Naphthalene	25.0	27.3		ug/L		109	78 - 135	3	20
N-Propylbenzene	25.0	22.6		ug/L		90	70 - 130	0	20
Styrene	25.0	25.8		ug/L		103	70 - 130	0	20
1,1,1,2-Tetrachloroethane	25.0	28.7		ug/L		115	70 - 130	1	20
1,1,2,2-Tetrachloroethane	25.0	23.0		ug/L		92	70 - 130	3	20
Tetrachloroethene	25.0	27.7		ug/L		111	70 - 130	1	20
Toluene	25.0	22.6		ug/L		90	80 - 113	0	20
1,2,3-Trichlorobenzene	25.0	29.3		ug/L		117	70 - 130	1	20
1,2,4-Trichlorobenzene	25.0	28.2		ug/L		113	70 - 130	1	20
1,1,1-Trichloroethane	25.0	28.5		ug/L		114	70 - 130	2	20
1,1,2-Trichloroethane	25.0	25.1		ug/L		100	78 - 125	1	20
Trichloroethene	25.0	25.7		ug/L		103	70 - 130	2	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-102297/6
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Trichlorofluoromethane			25.0	25.2		ug/L		101	66 - 132	2	20
1,2,3-Trichloropropane			25.0	26.9		ug/L		108	70 - 130	4	20
1,1,2-Trichloro-1,2,2-trifluoroethane			25.0	25.0		ug/L		100	42 - 162	2	20
1,2,4-Trimethylbenzene			25.0	24.2		ug/L		97	70 - 132	0	20
1,3,5-Trimethylbenzene			25.0	24.8		ug/L		99	70 - 130	0	20
Vinyl acetate			25.0	26.7		ug/L		107	43 - 163	1	20
Vinyl chloride			25.0	20.7		ug/L		83	63 - 125	0	20
m-Xylene & p-Xylene			50.0	49.1		ug/L		98	70 - 142	3	20
o-Xylene			25.0	25.3		ug/L		101	85 - 127	2	20
2,2-Dichloropropane			25.0	29.3		ug/L		117	70 - 140	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*110*		*75 - 138*
Toluene-d8 (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 720-102297/8
Matrix: Water
Analysis Batch: 102297

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C5-C12			500	512		ug/L		102	62 - 117	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*108*		*75 - 138*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: 720-38506-11 MS
Matrix: Water
Analysis Batch: 102297

Client Sample ID: WG-2344-WATER-031111
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	ND		25.0	27.7		ug/L		110	60 - 138
Acetone	50		125	130		ug/L		64	60 - 140
Benzene	ND		25.0	23.0		ug/L		92	60 - 140
Dichlorobromomethane	ND		25.0	28.8		ug/L		115	60 - 140
Bromobenzene	ND		25.0	26.0		ug/L		104	60 - 140
Chlorobromomethane	ND		25.0	27.1		ug/L		108	60 - 140
Bromoform	ND		25.0	30.4		ug/L		122	56 - 140
Bromomethane	ND		25.0	23.3		ug/L		93	23 - 140
2-Butanone (MEK)	ND		125	105		ug/L		84	60 - 140
n-Butylbenzene	ND		25.0	23.8		ug/L		95	60 - 140
sec-Butylbenzene	ND		25.0	23.5		ug/L		94	60 - 140
tert-Butylbenzene	ND		25.0	24.3		ug/L		97	60 - 140
Carbon disulfide	ND		25.0	19.1		ug/L		76	38 - 140
Carbon tetrachloride	ND		25.0	28.6		ug/L		114	60 - 140
Chlorobenzene	ND		25.0	24.0		ug/L		96	60 - 140

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-38506-11 MS
Matrix: Water
Analysis Batch: 102297

Client Sample ID: WG-2344-WATER-031111
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	ND		25.0	22.9		ug/L		92	51 - 140
Chloroform	ND		25.0	26.7		ug/L		107	60 - 140
Chloromethane	ND		25.0	17.3		ug/L		69	52 - 140
2-Chlorotoluene	ND		25.0	24.8		ug/L		99	60 - 140
4-Chlorotoluene	ND		25.0	24.7		ug/L		99	60 - 140
Chlorodibromomethane	ND		25.0	30.6		ug/L		122	60 - 140
1,2-Dichlorobenzene	ND		25.0	25.7		ug/L		103	60 - 140
1,3-Dichlorobenzene	ND		25.0	25.6		ug/L		102	60 - 140
1,4-Dichlorobenzene	ND		25.0	25.5		ug/L		102	60 - 140
1,3-Dichloropropane	ND		25.0	25.9		ug/L		104	60 - 140
1,1-Dichloropropene	ND		25.0	24.2		ug/L		97	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	27.3		ug/L		109	60 - 140
Ethylene Dibromide	ND		25.0	28.0		ug/L		112	60 - 140
Dibromomethane	ND		25.0	27.0		ug/L		108	60 - 140
Dichlorodifluoromethane	ND		25.0	17.0		ug/L		68	38 - 140
1,1-Dichloroethane	ND		25.0	24.5		ug/L		98	60 - 140
1,2-Dichloroethane	ND		25.0	28.2		ug/L		113	60 - 140
1,1-Dichloroethene	ND		25.0	21.1		ug/L		84	60 - 140
cis-1,2-Dichloroethene	ND		25.0	28.9		ug/L		116	60 - 140
trans-1,2-Dichloroethene	ND		25.0	20.6		ug/L		82	60 - 140
1,2-Dichloropropane	ND		25.0	24.6		ug/L		98	60 - 140
cis-1,3-Dichloropropene	ND		25.0	26.0		ug/L		104	60 - 140
trans-1,3-Dichloropropene	ND		25.0	29.0		ug/L		116	60 - 140
Ethylbenzene	ND		25.0	23.7		ug/L		95	60 - 140
Hexachlorobutadiene	ND		25.0	27.8		ug/L		111	60 - 140
2-Hexanone	ND		125	114		ug/L		91	60 - 140
Isopropylbenzene	ND		25.0	25.0		ug/L		100	60 - 140
4-Isopropyltoluene	ND		25.0	24.5		ug/L		98	60 - 140
Methylene Chloride	ND		25.0	22.3		ug/L		89	40 - 140
4-Methyl-2-pentanone (MIBK)	ND		125	121		ug/L		97	60 - 140
Naphthalene	ND		25.0	26.4		ug/L		106	56 - 140
N-Propylbenzene	ND		25.0	22.3		ug/L		89	60 - 140
Styrene	ND		25.0	25.0		ug/L		100	60 - 140
1,1,1,2-Tetrachloroethane	ND		25.0	28.1		ug/L		112	60 - 140
1,1,2,2-Tetrachloroethane	ND		25.0	22.2		ug/L		89	60 - 140
Tetrachloroethene	1.2		25.0	28.8		ug/L		110	60 - 140
Toluene	ND		25.0	22.2		ug/L		89	60 - 140
1,2,3-Trichlorobenzene	ND		25.0	29.2		ug/L		117	60 - 140
1,2,4-Trichlorobenzene	ND		25.0	28.4		ug/L		114	60 - 140
1,1,1-Trichloroethane	ND		25.0	28.4		ug/L		114	60 - 140
1,1,2-Trichloroethane	ND		25.0	24.8		ug/L		99	60 - 140
Trichloroethene	ND		25.0	26.1		ug/L		104	60 - 140
Trichlorofluoromethane	ND		25.0	25.4		ug/L		102	60 - 140
1,2,3-Trichloropropane	ND		25.0	25.2		ug/L		101	60 - 140
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	25.0		ug/L		100	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	23.7		ug/L		95	60 - 140
1,3,5-Trimethylbenzene	ND		25.0	24.5		ug/L		98	60 - 140
Vinyl acetate	ND		25.0	25.2		ug/L		101	40 - 140
Vinyl chloride	ND		25.0	20.8		ug/L		83	58 - 140

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-38506-11 MS
Matrix: Water
Analysis Batch: 102297

Client Sample ID: WG-2344-WATER-031111
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
m-Xylene & p-Xylene	ND		50.0	48.9		ug/L		98	60 - 140
o-Xylene	ND		25.0	25.1		ug/L		100	60 - 140
2,2-Dichloropropane	ND		25.0	28.1		ug/L		112	60 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*97*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*108*		*75 - 138*
Toluene-d8 (Surr)	*97*		*70 - 130*

Lab Sample ID: 720-38506-11 MSD
Matrix: Water
Analysis Batch: 102297

Client Sample ID: WG-2344-WATER-031111
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether	ND		25.0	27.1		ug/L		108	60 - 138	2	20
Acetone	50		125	126		ug/L		60	60 - 140	3	20
Benzene	ND		25.0	23.0		ug/L		92	60 - 140	0	20
Dichlorobromomethane	ND		25.0	28.5		ug/L		114	60 - 140	1	20
Bromobenzene	ND		25.0	25.5		ug/L		102	60 - 140	2	20
Chlorobromomethane	ND		25.0	26.4		ug/L		106	60 - 140	3	20
Bromoform	ND		25.0	30.3		ug/L		121	56 - 140	0	20
Bromomethane	ND		25.0	23.1		ug/L		92	23 - 140	1	20
2-Butanone (MEK)	ND		125	101		ug/L		81	60 - 140	4	20
n-Butylbenzene	ND		25.0	23.6		ug/L		94	60 - 140	1	20
sec-Butylbenzene	ND		25.0	23.7		ug/L		95	60 - 140	1	20
tert-Butylbenzene	ND		25.0	24.6		ug/L		98	60 - 140	1	20
Carbon disulfide	ND		25.0	19.2		ug/L		77	38 - 140	1	20
Carbon tetrachloride	ND		25.0	28.9		ug/L		116	60 - 140	1	20
Chlorobenzene	ND		25.0	24.4		ug/L		98	60 - 140	2	20
Chloroethane	ND		25.0	22.7		ug/L		91	51 - 140	1	20
Chloroform	ND		25.0	26.2		ug/L		105	60 - 140	2	20
Chloromethane	ND		25.0	16.6		ug/L		66	52 - 140	4	20
2-Chlorotoluene	ND		25.0	24.8		ug/L		99	60 - 140	0	20
4-Chlorotoluene	ND		25.0	24.5		ug/L		98	60 - 140	1	20
Chlorodibromomethane	ND		25.0	29.8		ug/L		119	60 - 140	3	20
1,2-Dichlorobenzene	ND		25.0	25.6		ug/L		102	60 - 140	0	20
1,3-Dichlorobenzene	ND		25.0	25.3		ug/L		101	60 - 140	1	20
1,4-Dichlorobenzene	ND		25.0	25.4		ug/L		102	60 - 140	0	20
1,3-Dichloropropane	ND		25.0	25.1		ug/L		100	60 - 140	3	20
1,1-Dichloropropene	ND		25.0	24.9		ug/L		100	60 - 140	3	20
1,2-Dibromo-3-Chloropropane	ND		25.0	26.0		ug/L		104	60 - 140	5	20
Ethylene Dibromide	ND		25.0	27.4		ug/L		110	60 - 140	2	20
Dibromomethane	ND		25.0	26.9		ug/L		108	60 - 140	0	20
Dichlorodifluoromethane	ND		25.0	16.2		ug/L		65	38 - 140	5	20
1,1-Dichloroethane	ND		25.0	24.6		ug/L		98	60 - 140	0	20
1,2-Dichloroethane	ND		25.0	27.9		ug/L		112	60 - 140	1	20
1,1-Dichloroethene	ND		25.0	20.7		ug/L		83	60 - 140	2	20
cis-1,2-Dichloroethene	ND		25.0	28.7		ug/L		115	60 - 140	1	20
trans-1,2-Dichloroethene	ND		25.0	20.5		ug/L		82	60 - 140	0	20

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: 720-38506-11 MSD
Matrix: Water
Analysis Batch: 102297

Client Sample ID: WG-2344-WATER-031111
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dichloropropane	ND		25.0	24.0		ug/L		96	60 - 140	2	20
cis-1,3-Dichloropropene	ND		25.0	25.6		ug/L		102	60 - 140	2	20
trans-1,3-Dichloropropene	ND		25.0	28.6		ug/L		114	60 - 140	1	20
Ethylbenzene	ND		25.0	24.3		ug/L		97	60 - 140	3	20
Hexachlorobutadiene	ND		25.0	25.8		ug/L		103	60 - 140	7	20
2-Hexanone	ND		125	109		ug/L		87	60 - 140	4	20
Isopropylbenzene	ND		25.0	25.8		ug/L		103	60 - 140	3	20
4-Isopropyltoluene	ND		25.0	24.5		ug/L		98	60 - 140	0	20
Methylene Chloride	ND		25.0	22.1		ug/L		88	40 - 140	1	20
4-Methyl-2-pentanone (MIBK)	ND		125	117		ug/L		94	60 - 140	4	20
Naphthalene	ND		25.0	25.8		ug/L		103	56 - 140	2	20
N-Propylbenzene	ND		25.0	22.6		ug/L		90	60 - 140	1	20
Styrene	ND		25.0	24.9		ug/L		100	60 - 140	0	20
1,1,1,2-Tetrachloroethane	ND		25.0	28.6		ug/L		114	60 - 140	2	20
1,1,2,2-Tetrachloroethane	ND		25.0	22.1		ug/L		88	60 - 140	0	20
Tetrachloroethene	1.2		25.0	28.9		ug/L		111	60 - 140	0	20
Toluene	ND		25.0	22.7		ug/L		91	60 - 140	2	20
1,2,3-Trichlorobenzene	ND		25.0	27.7		ug/L		111	60 - 140	5	20
1,2,4-Trichlorobenzene	ND		25.0	26.9		ug/L		108	60 - 140	5	20
1,1,1-Trichloroethane	ND		25.0	28.5		ug/L		114	60 - 140	0	20
1,1,2-Trichloroethane	ND		25.0	24.4		ug/L		98	60 - 140	2	20
Trichloroethene	ND		25.0	26.0		ug/L		104	60 - 140	0	20
Trichlorofluoromethane	ND		25.0	25.1		ug/L		100	60 - 140	1	20
1,2,3-Trichloropropane	ND		25.0	24.8		ug/L		99	60 - 140	2	20
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	24.8		ug/L		99	60 - 140	1	20
1,2,4-Trimethylbenzene	ND		25.0	23.4		ug/L		94	60 - 140	1	20
1,3,5-Trimethylbenzene	ND		25.0	24.1		ug/L		96	60 - 140	2	20
Vinyl acetate	ND		25.0	24.2		ug/L		97	40 - 140	4	20
Vinyl chloride	ND		25.0	20.2		ug/L		81	58 - 140	3	20
m-Xylene & p-Xylene	ND		50.0	49.7		ug/L		99	60 - 140	2	20
o-Xylene	ND		25.0	25.6		ug/L		102	60 - 140	2	20
2,2-Dichloropropane	ND		25.0	29.4		ug/L		118	60 - 140	5	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*98*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*109*		*75 - 138*
Toluene-d8 (Surr)	*99*		*70 - 130*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-102254/1-A
Matrix: Water
Analysis Batch: 102326

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102254

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Bis(2-chloroethyl)ether	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2-Chlorophenol	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-102254/1-A
Matrix: Water
Analysis Batch: 102326

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102254

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
1,4-Dichlorobenzene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Benzyl alcohol	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
1,2-Dichlorobenzene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2-Methylphenol	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
4-Methylphenol	ND		8.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
N-Nitrosodi-n-propylamine	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Hexachloroethane	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Nitrobenzene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Isophorone	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2-Nitrophenol	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2,4-Dimethylphenol	ND		3.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Bis(2-chloroethoxy)methane	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2,4-Dichlorophenol	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
1,2,4-Trichlorobenzene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Naphthalene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
4-Chloroaniline	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Hexachlorobutadiene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
4-Chloro-3-methylphenol	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2-Methylnaphthalene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Hexachlorocyclopentadiene	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2,4,6-Trichlorophenol	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2,4,5-Trichlorophenol	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2-Chloronaphthalene	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2-Nitroaniline	ND		10		ug/L		11/03/11 14:18	11/04/11 13:53	1
Dimethyl phthalate	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Acenaphthylene	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
3-Nitroaniline	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Acenaphthene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2,4-Dinitrophenol	ND		10		ug/L		11/03/11 14:18	11/04/11 13:53	1
4-Nitrophenol	ND		10		ug/L		11/03/11 14:18	11/04/11 13:53	1
Dibenzofuran	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2,4-Dinitrotoluene	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
2,6-Dinitrotoluene	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Diethyl phthalate	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
4-Chlorophenyl phenyl ether	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Fluorene	ND		4.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
4-Nitroaniline	ND		10		ug/L		11/03/11 14:18	11/04/11 13:53	1
2-Methyl-4,6-dinitrophenol	ND		10		ug/L		11/03/11 14:18	11/04/11 13:53	1
N-Nitrosodiphenylamine	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
4-Bromophenyl phenyl ether	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Hexachlorobenzene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Pentachlorophenol	ND		10		ug/L		11/03/11 14:18	11/04/11 13:53	1
Phenanthrene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Anthracene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Di-n-butyl phthalate	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Fluoranthene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Pyrene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Butyl benzyl phthalate	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
3,3'-Dichlorobenzidine	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-102254/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 102326 — **Prep Batch: 102254**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Bis(2-ethylhexyl) phthalate	ND		10		ug/L		11/03/11 14:18	11/04/11 13:53	1
Chrysene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Di-n-octyl phthalate	ND		5.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Benzo[b]fluoranthene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Benzo[a]pyrene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Benzo[k]fluoranthene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Indeno[1,2,3-cd]pyrene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Benzo[g,h,i]perylene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Benzoic acid	ND		10		ug/L		11/03/11 14:18	11/04/11 13:53	1
Azobenzene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1
Dibenz(a,h)anthracene	ND		2.0		ug/L		11/03/11 14:18	11/04/11 13:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*55*		*25 - 102*	*11/03/11 14:18*	*11/04/11 13:53*	*1*
2-Fluorobiphenyl	*56*		*10 - 101*	*11/03/11 14:18*	*11/04/11 13:53*	*1*
Terphenyl-d14	*93*		*57 - 117*	*11/03/11 14:18*	*11/04/11 13:53*	*1*
2-Fluorophenol	*28*		*10 - 65*	*11/03/11 14:18*	*11/04/11 13:53*	*1*
Phenol-d5	*21*		*10 - 46*	*11/03/11 14:18*	*11/04/11 13:53*	*1*
2,4,6-Tribromophenol	*63*		*18 - 123*	*11/03/11 14:18*	*11/04/11 13:53*	*1*

Lab Sample ID: LCS 720-102254/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 102326 — **Prep Batch: 102254**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Phenol	50.0	13.3		ug/L		27	10 - 115
Bis(2-chloroethyl)ether	50.0	32.2		ug/L		64	12 - 115
2-Chlorophenol	50.0	28.3		ug/L		57	14 - 115
1,3-Dichlorobenzene	50.0	25.6		ug/L		51	13 - 115
1,4-Dichlorobenzene	50.0	26.9		ug/L		54	14 - 115
Benzyl alcohol	50.0	27.3		ug/L		55	19 - 115
1,2-Dichlorobenzene	50.0	27.0		ug/L		54	17 - 115
2-Methylphenol	50.0	26.6		ug/L		53	13 - 115
4-Methylphenol	100	46.4		ug/L		46	10 - 115
N-Nitrosodi-n-propylamine	50.0	34.0		ug/L		68	17 - 115
Hexachloroethane	50.0	25.1		ug/L		50	9 - 115
Nitrobenzene	50.0	33.8		ug/L		68	18 - 115
Isophorone	50.0	35.3		ug/L		71	18 - 134
2-Nitrophenol	50.0	33.1		ug/L		66	14 - 115
2,4-Dimethylphenol	50.0	32.2		ug/L		64	10 - 119
Bis(2-chloroethoxy)methane	50.0	33.5		ug/L		67	10 - 119
2,4-Dichlorophenol	50.0	34.9		ug/L		70	13 - 118
1,2,4-Trichlorobenzene	50.0	29.6		ug/L		59	17 - 115
Naphthalene	50.0	32.3		ug/L		65	12 - 115
4-Chloroaniline	50.0	36.6		ug/L		73	26 - 115
Hexachlorobutadiene	50.0	27.8		ug/L		56	12 - 115
4-Chloro-3-methylphenol	50.0	38.8		ug/L		78	19 - 128
2-Methylnaphthalene	50.0	34.0		ug/L		68	16 - 115

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-102254/2-A
Matrix: Water
Analysis Batch: 102326

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102254

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Hexachlorocyclopentadiene	50.0	23.1		ug/L		46	10 - 115
2,4,6-Trichlorophenol	50.0	39.6		ug/L		79	20 - 120
2,4,5-Trichlorophenol	50.0	40.8		ug/L		82	22 - 117
2-Chloronaphthalene	50.0	35.8		ug/L		72	17 - 115
2-Nitroaniline	50.0	46.0		ug/L		92	37 - 119
Dimethyl phthalate	50.0	46.2		ug/L		92	48 - 127
Acenaphthylene	50.0	40.0		ug/L		80	29 - 129
3-Nitroaniline	50.0	48.5		ug/L		97	40 - 115
Acenaphthene	50.0	38.9		ug/L		78	25 - 115
2,4-Dinitrophenol	50.0	50.7		ug/L		101	44 - 116
4-Nitrophenol	50.0	24.6		ug/L		49	20 - 115
Dibenzofuran	50.0	39.9		ug/L		80	28 - 115
2,4-Dinitrotoluene	50.0	52.0		ug/L		104	61 - 118
2,6-Dinitrotoluene	50.0	47.9		ug/L		96	46 - 119
Diethyl phthalate	50.0	49.1		ug/L		98	59 - 115
4-Chlorophenyl phenyl ether	50.0	44.4		ug/L		89	32 - 115
Fluorene	50.0	42.5		ug/L		85	39 - 115
4-Nitroaniline	50.0	53.0		ug/L		106	67 - 115
2-Methyl-4,6-dinitrophenol	50.0	50.3		ug/L		101	53 - 115
N-Nitrosodiphenylamine	50.0	43.0		ug/L		86	57 - 115
4-Bromophenyl phenyl ether	50.0	43.1		ug/L		86	42 - 115
Hexachlorobenzene	50.0	45.1		ug/L		90	49 - 115
Pentachlorophenol	50.0	49.0		ug/L		98	54 - 115
Phenanthrene	50.0	45.1		ug/L		90	54 - 115
Anthracene	50.0	46.5		ug/L		93	54 - 115
Di-n-butyl phthalate	50.0	46.6		ug/L		93	58 - 115
Fluoranthene	50.0	46.0		ug/L		92	65 - 115
Pyrene	50.0	49.2		ug/L		98	64 - 122
Butyl benzyl phthalate	50.0	52.8		ug/L		106	37 - 115
3,3'-Dichlorobenzidine	50.0	25.3		ug/L		51	24 - 110
Benzo[a]anthracene	50.0	48.3		ug/L		97	63 - 116
Bis(2-ethylhexyl) phthalate	50.0	48.8		ug/L		98	59 - 115
Chrysene	50.0	45.2		ug/L		90	70 - 115
Di-n-octyl phthalate	50.0	51.5		ug/L		103	12 - 115
Benzo[b]fluoranthene	50.0	43.3		ug/L		87	66 - 115
Benzo[a]pyrene	50.0	42.5		ug/L		85	62 - 121
Benzo[k]fluoranthene	50.0	49.9		ug/L		100	66 - 115
Indeno[1,2,3-cd]pyrene	50.0	45.3		ug/L		91	68 - 115
Benzo[g,h,i]perylene	50.0	47.6		ug/L		95	67 - 128
Benzoic acid	50.0	16.7		ug/L		33	10 - 115
Azobenzene	50.0	45.9		ug/L		92	42 - 115
Dibenz(a,h)anthracene	50.0	49.4		ug/L		99	65 - 121

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*69*		*25 - 102*
2-Fluorobiphenyl	*71*		*10 - 101*
Terphenyl-d14	*106*		*57 - 117*
2-Fluorophenol	*35*		*10 - 65*
Phenol-d5	*26*		*10 - 46*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-102254/2-A
Matrix: Water
Analysis Batch: 102326

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102254

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol	*97*		*18 - 123*

Lab Sample ID: LCSD 720-102254/3-A
Matrix: Water
Analysis Batch: 102326

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102254

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Phenol			50.0	15.4		ug/L		31	10 - 115	15	51
Bis(2-chloroethyl)ether			50.0	33.7		ug/L		67	12 - 115	5	35
2-Chlorophenol			50.0	32.0		ug/L		64	14 - 115	12	40
1,3-Dichlorobenzene			50.0	29.6		ug/L		59	13 - 115	14	40
1,4-Dichlorobenzene			50.0	28.0		ug/L		56	14 - 115	4	41
Benzyl alcohol			50.0	31.7		ug/L		63	19 - 115	15	35
1,2-Dichlorobenzene			50.0	30.1		ug/L		60	17 - 115	11	35
2-Methylphenol			50.0	30.4		ug/L		61	13 - 115	13	35
4-Methylphenol			100	51.9		ug/L		52	10 - 115	11	35
N-Nitrosodi-n-propylamine			50.0	37.4		ug/L		75	17 - 115	10	34
Hexachloroethane			50.0	26.9		ug/L		54	9 - 115	7	35
Nitrobenzene			50.0	36.7		ug/L		73	18 - 115	8	43
Isophorone			50.0	38.6		ug/L		77	18 - 134	9	39
2-Nitrophenol			50.0	36.4		ug/L		73	14 - 115	9	46
2,4-Dimethylphenol			50.0	35.1		ug/L		70	10 - 119	9	44
Bis(2-chloroethoxy)methane			50.0	37.2		ug/L		74	10 - 119	10	46
2,4-Dichlorophenol			50.0	38.4		ug/L		77	13 - 118	10	38
1,2,4-Trichlorobenzene			50.0	31.9		ug/L		64	17 - 115	7	51
Naphthalene			50.0	35.3		ug/L		71	12 - 115	9	42
4-Chloroaniline			50.0	39.3		ug/L		79	26 - 115	7	49
Hexachlorobutadiene			50.0	31.1		ug/L		62	12 - 115	11	46
4-Chloro-3-methylphenol			50.0	40.6		ug/L		81	19 - 128	5	40
2-Methylnaphthalene			50.0	36.0		ug/L		72	16 - 115	6	45
Hexachlorocyclopentadiene			50.0	27.6		ug/L		55	10 - 115	18	63
2,4,6-Trichlorophenol			50.0	41.3		ug/L		83	20 - 120	4	43
2,4,5-Trichlorophenol			50.0	41.1		ug/L		82	22 - 117	1	41
2-Chloronaphthalene			50.0	37.4		ug/L		75	17 - 115	4	49
2-Nitroaniline			50.0	47.0		ug/L		94	37 - 119	2	29
Dimethyl phthalate			50.0	46.4		ug/L		93	48 - 127	0	29
Acenaphthylene			50.0	42.8		ug/L		86	29 - 129	7	40
3-Nitroaniline			50.0	48.2		ug/L		96	40 - 115	1	30
Acenaphthene			50.0	41.6		ug/L		83	25 - 115	7	40
2,4-Dinitrophenol			50.0	51.0		ug/L		102	44 - 116	1	21
4-Nitrophenol			50.0	24.2		ug/L		48	20 - 115	2	32
Dibenzofuran			50.0	41.9		ug/L		84	28 - 115	5	46
2,4-Dinitrotoluene			50.0	51.1		ug/L		102	61 - 118	2	19
2,6-Dinitrotoluene			50.0	47.7		ug/L		95	46 - 119	0	26
Diethyl phthalate			50.0	47.5		ug/L		95	59 - 115	3	24
4-Chlorophenyl phenyl ether			50.0	45.7		ug/L		91	32 - 115	3	38
Fluorene			50.0	43.2		ug/L		86	39 - 115	2	39
4-Nitroaniline			50.0	52.3		ug/L		105	67 - 115	1	23
2-Methyl-4,6-dinitrophenol			50.0	50.7		ug/L		101	53 - 115	1	19

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-102254/3-A
Matrix: Water
Analysis Batch: 102326

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102254

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
N-Nitrosodiphenylamine			50.0	43.4		ug/L		87	57 - 115	1	27
4-Bromophenyl phenyl ether			50.0	43.8		ug/L		88	42 - 115	2	29
Hexachlorobenzene			50.0	44.5		ug/L		89	49 - 115	1	28
Pentachlorophenol			50.0	47.9		ug/L		96	54 - 115	2	22
Phenanthrene			50.0	45.3		ug/L		91	54 - 115	0	35
Anthracene			50.0	45.1		ug/L		90	54 - 115	3	25
Di-n-butyl phthalate			50.0	47.1		ug/L		94	58 - 115	1	26
Fluoranthene			50.0	46.2		ug/L		92	65 - 115	0	26
Pyrene			50.0	46.1		ug/L		92	64 - 122	7	22
Butyl benzyl phthalate			50.0	50.3		ug/L		101	37 - 115	5	21
3,3'-Dichlorobenzidine			50.0	24.7		ug/L		49	24 - 110	2	30
Benzo[a]anthracene			50.0	46.4		ug/L		93	63 - 116	4	24
Bis(2-ethylhexyl) phthalate			50.0	46.5		ug/L		93	59 - 115	5	30
Chrysene			50.0	43.7		ug/L		87	70 - 115	3	24
Di-n-octyl phthalate			50.0	48.7		ug/L		97	12 - 115	6	27
Benzo[b]fluoranthene			50.0	42.0		ug/L		84	66 - 115	3	31
Benzo[a]pyrene			50.0	41.7		ug/L		83	62 - 121	2	23
Benzo[k]fluoranthene			50.0	49.4		ug/L		99	66 - 115	1	39
Indeno[1,2,3-cd]pyrene			50.0	44.0		ug/L		88	68 - 115	3	19
Benzo[g,h,i]perylene			50.0	46.0		ug/L		92	67 - 128	3	35
Benzoic acid			50.0	17.5		ug/L		35	10 - 115	5	56
Azobenzene			50.0	46.6		ug/L		93	42 - 115	2	35
Dibenz(a,h)anthracene			50.0	47.2		ug/L		94	65 - 121	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenzene-d5	*74*		*25 - 102*
2-Fluorobiphenyl	*79*		*10 - 101*
Terphenyl-d14	*103*		*57 - 117*
2-Fluorophenol	*38*		*10 - 65*
Phenol-d5	*28*		*10 - 46*
2,4,6-Tribromophenol	*93*		*18 - 123*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-102290/1-A
Matrix: Water
Analysis Batch: 102325

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102290

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Acenaphthene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Acenaphthylene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Fluorene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Phenanthrene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Anthracene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Benzo[a]anthracene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Chrysene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Benzo[a]pyrene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Benzo[b]fluoranthene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: MB 720-102290/1-A
Matrix: Water
Analysis Batch: 102325

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102290

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Fluoranthene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Pyrene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		11/03/11 22:04	11/04/11 13:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*67*		*29 - 120*	*11/03/11 22:04*	*11/04/11 13:08*	*1*
Terphenyl-d14	*87*		*45 - 120*	*11/03/11 22:04*	*11/04/11 13:08*	*1*

Lab Sample ID: LCS 720-102290/2-A
Matrix: Water
Analysis Batch: 102325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102290

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	6.64		ug/L		66	33 - 120
Acenaphthene	10.0	6.33		ug/L		63	37 - 120
Acenaphthylene	10.0	6.12		ug/L		61	36 - 120
Fluorene	10.0	6.51		ug/L		65	22 - 120
Phenanthrene	10.0	6.94		ug/L		69	44 - 120
Anthracene	10.0	7.32		ug/L		73	45 - 120
Benzo[a]anthracene	10.0	7.42		ug/L		74	48 - 120
Chrysene	10.0	5.40		ug/L		54	40 - 94
Benzo[a]pyrene	10.0	7.03		ug/L		70	50 - 120
Benzo[b]fluoranthene	10.0	7.57		ug/L		76	48 - 120
Benzo[k]fluoranthene	10.0	6.49		ug/L		65	50 - 120
Benzo[g,h,i]perylene	10.0	6.52		ug/L		65	39 - 121
Indeno[1,2,3-cd]pyrene	10.0	6.60		ug/L		66	40 - 126
Fluoranthene	10.0	7.46		ug/L		75	46 - 120
Pyrene	10.0	7.51		ug/L		75	50 - 120
Dibenz(a,h)anthracene	10.0	6.87		ug/L		69	37 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*65*		*29 - 120*
Terphenyl-d14	*78*		*45 - 120*

Lab Sample ID: LCSD 720-102290/3-A
Matrix: Water
Analysis Batch: 102325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102290

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	10.0	7.06		ug/L		71	33 - 120	6	35
Acenaphthene	10.0	6.98		ug/L		70	37 - 120	10	35
Acenaphthylene	10.0	6.75		ug/L		68	36 - 120	10	35
Fluorene	10.0	7.28		ug/L		73	22 - 120	11	35
Phenanthrene	10.0	7.61		ug/L		76	44 - 120	9	35
Anthracene	10.0	8.10		ug/L		81	45 - 120	10	35
Benzo[a]anthracene	10.0	7.75		ug/L		78	48 - 120	4	35

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-102290/3-A
Matrix: Water
Analysis Batch: 102325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102290

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chrysene			10.0	5.86		ug/L		59	40 - 94	8	35
Benzo[a]pyrene			10.0	7.63		ug/L		76	50 - 120	8	35
Benzo[b]fluoranthene			10.0	8.60		ug/L		86	48 - 120	13	35
Benzo[k]fluoranthene			10.0	7.09		ug/L		71	50 - 120	9	35
Benzo[g,h,i]perylene			10.0	7.24		ug/L		72	39 - 121	10	35
Indeno[1,2,3-cd]pyrene			10.0	7.37		ug/L		74	40 - 126	11	35
Fluoranthene			10.0	8.17		ug/L		82	46 - 120	9	35
Pyrene			10.0	8.07		ug/L		81	50 - 120	7	35
Dibenz(a,h)anthracene			10.0	7.65		ug/L		77	37 - 125	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*69*		*29 - 120*
Terphenyl-d14	*87*		*45 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-102256/1-A
Matrix: Water
Analysis Batch: 102310

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 102256

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		11/03/11 14:25	11/04/11 12:29	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		11/03/11 14:25	11/04/11 12:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.04*		*0 - 5*	*11/03/11 14:25*	*11/04/11 12:29*	*1*
p-Terphenyl	*83*		*31 - 150*	*11/03/11 14:25*	*11/04/11 12:29*	*1*

Lab Sample ID: LCS 720-102256/2-A
Matrix: Water
Analysis Batch: 102310

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 102256

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1480		ug/L		59	32 - 119		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*99*		*31 - 150*

Lab Sample ID: LCSD 720-102256/3-A
Matrix: Water
Analysis Batch: 102310

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 102256

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1730		ug/L		69	32 - 119	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*108*		*31 - 150*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: MB 720-102284/1-A
Matrix: Solid
Analysis Batch: 102302

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 102284

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		11/03/11 20:37	11/04/11 13:04	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		11/03/11 20:37	11/04/11 13:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.004*		*0 - 1*	*11/03/11 20:37*	*11/04/11 13:04*	*1*
p-Terphenyl	*79*		*38 - 148*	*11/03/11 20:37*	*11/04/11 13:04*	*1*

Lab Sample ID: LCS 720-102284/2-A
Matrix: Solid
Analysis Batch: 102302

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 102284

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			82.9	60.2		mg/Kg		73	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*91*		*38 - 148*

Lab Sample ID: LCSD 720-102284/3-A
Matrix: Solid
Analysis Batch: 102302

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 102284

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.8	63.9		mg/Kg		77	50 - 150	6	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*94*		*38 - 148*

Lab Sample ID: 720-38506-1 MS
Matrix: Solid
Analysis Batch: 102310

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: Silica Gel Cleanup
Prep Batch: 102284

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	4.9		83.1	64.4		mg/Kg		72	50 - 150		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
p-Terphenyl	*79*		*38 - 148*

Lab Sample ID: 720-38506-1 MSD
Matrix: Solid
Analysis Batch: 102310

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: Silica Gel Cleanup
Prep Batch: 102284

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	4.9		83.3	51.1	F	mg/Kg		55	50 - 150	23	20

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: 720-38506-1 MSD
Matrix: Solid
Analysis Batch: 102310

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: Silica Gel Cleanup
Prep Batch: 102284

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
p-Terphenyl	*64*		*38 - 148*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-102289/1-A
Matrix: Solid
Analysis Batch: 102347

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102289

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.13		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Chromium	ND		0.50		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Nickel	ND		0.50		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Lead	ND		0.50		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Zinc	ND		1.5		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Antimony	ND		0.50		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Beryllium	ND		0.10		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Barium	ND		0.50		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Thallium	ND		0.50		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Molybdenum	ND		0.50		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Vanadium	ND		0.50		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Silver	ND		0.25		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Arsenic	ND		1.0		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Copper	ND		1.5		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Selenium	ND		1.0		mg/Kg		11/03/11 21:45	11/04/11 12:06	1
Cobalt	ND		0.20		mg/Kg		11/03/11 21:45	11/04/11 12:06	1

Lab Sample ID: LCS 720-102289/2-A
Matrix: Solid
Analysis Batch: 102347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102289

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	50.0	49.0		mg/Kg		98	80 - 120
Chromium	50.0	50.2		mg/Kg		100	80 - 120
Nickel	50.0	50.7		mg/Kg		101	80 - 120
Lead	50.0	50.6		mg/Kg		101	80 - 120
Zinc	50.0	50.5		mg/Kg		101	80 - 120
Antimony	50.0	48.1		mg/Kg		96	80 - 120
Beryllium	50.0	49.7		mg/Kg		99	80 - 120
Barium	50.0	50.6		mg/Kg		101	80 - 120
Thallium	50.0	50.5		mg/Kg		101	80 - 120
Molybdenum	50.0	50.9		mg/Kg		102	80 - 120
Vanadium	50.0	49.1		mg/Kg		98	80 - 120
Silver	25.0	24.7		mg/Kg		99	80 - 120
Arsenic	50.0	50.2		mg/Kg		100	80 - 120
Copper	50.0	49.9		mg/Kg		100	80 - 120
Selenium	50.0	48.1		mg/Kg		96	80 - 120
Cobalt	50.0	51.7		mg/Kg		103	80 - 120

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCSD 720-102289/3-A
Matrix: Solid
Analysis Batch: 102347

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102289

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	50.0	48.2		mg/Kg		96	80 - 120	2	20
Chromium	50.0	49.6		mg/Kg		99	80 - 120	1	20
Nickel	50.0	49.9		mg/Kg		100	80 - 120	2	20
Lead	50.0	49.9		mg/Kg		100	80 - 120	1	20
Zinc	50.0	50.2		mg/Kg		100	80 - 120	1	20
Antimony	50.0	48.2		mg/Kg		96	80 - 120	0	20
Beryllium	50.0	49.0		mg/Kg		98	80 - 120	1	20
Barium	50.0	50.4		mg/Kg		101	80 - 120	0	20
Thallium	50.0	49.8		mg/Kg		100	80 - 120	1	20
Molybdenum	50.0	50.3		mg/Kg		101	80 - 120	1	20
Vanadium	50.0	48.1		mg/Kg		96	80 - 120	2	20
Silver	25.0	24.9		mg/Kg		99	80 - 120	1	20
Arsenic	50.0	49.9		mg/Kg		100	80 - 120	1	20
Copper	50.0	49.7		mg/Kg		99	80 - 120	0	20
Selenium	50.0	47.7		mg/Kg		95	80 - 120	1	20
Cobalt	50.0	51.4		mg/Kg		103	80 - 120	1	20

Lab Sample ID: LCSSRM 720-102289/25-A
Matrix: Solid
Analysis Batch: 102347

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102289

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	48.3	41.6		mg/Kg		86	67 - 118
Chromium	171	155		mg/Kg		90	67 - 121
Nickel	76.0	66.8		mg/Kg		88	65 - 117
Lead	181	156		mg/Kg		86	62 - 113
Zinc	256	234		mg/Kg		91	62 - 110
Antimony	105	75.3		mg/Kg		72	11 - 101
Beryllium	304	271		mg/Kg		89	56 - 102
Barium	391	321		mg/Kg		82	61 - 117
Thallium	192	167		mg/Kg		87	64 - 124
Molybdenum	156	148		mg/Kg		95	62 - 128
Vanadium	213	197		mg/Kg		92	67 - 123
Silver	29.1	26.9		mg/Kg		93	51 - 130
Arsenic	79.4	75.3		mg/Kg		95	69 - 119
Copper	327	295		mg/Kg		90	68 - 126
Selenium	76.9	67.1		mg/Kg		87	63 - 126
Cobalt	59.2	54.9		mg/Kg		93	64 - 133

Lab Sample ID: MB 720-102312/1-A
Matrix: Water
Analysis Batch: 102345

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 102312

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020		mg/L		11/04/11 08:46	11/04/11 11:10	1
Chromium	ND		0.010		mg/L		11/04/11 08:46	11/04/11 11:10	1
Nickel	ND		0.010		mg/L		11/04/11 08:46	11/04/11 11:10	1
Lead	ND		0.0050		mg/L		11/04/11 08:46	11/04/11 11:10	1
Zinc	ND		0.020		mg/L		11/04/11 08:46	11/04/11 11:10	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 720-102312/2-A
Matrix: Water
Analysis Batch: 102345

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 102312

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cadmium	1.00	0.984		mg/L		98	80 - 120
Chromium	1.00	1.03		mg/L		103	80 - 120
Nickel	1.00	1.00		mg/L		100	80 - 120
Lead	1.00	1.00		mg/L		100	80 - 120
Zinc	1.00	1.00		mg/L		100	80 - 120

Lab Sample ID: LCSD 720-102312/3-A
Matrix: Water
Analysis Batch: 102345

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 102312

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cadmium	1.00	1.00		mg/L		100	80 - 120	2	20
Chromium	1.00	0.990		mg/L		99	80 - 120	4	20
Nickel	1.00	1.02		mg/L		102	80 - 120	2	20
Lead	1.00	1.02		mg/L		102	80 - 120	2	20
Zinc	1.00	1.02		mg/L		102	80 - 120	1	20

Lab Sample ID: MB 720-102287/1-B
Matrix: Water
Analysis Batch: 102353

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 102312

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0020		mg/L		11/04/11 08:46	11/04/11 14:47	1
Chromium	ND		0.010		mg/L		11/04/11 08:46	11/04/11 14:47	1
Nickel	ND		0.010		mg/L		11/04/11 08:46	11/04/11 14:47	1
Lead	ND		0.0050		mg/L		11/04/11 08:46	11/04/11 14:47	1
Zinc	ND		0.020		mg/L		11/04/11 08:46	11/04/11 14:47	1

GC/MS VOA

Analysis Batch: 102272

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102283
720-38506-1 MS	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102283
720-38506-1 MSD	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102283
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Total/NA	Solid	8260B/CA_LUFT MS	102283
LCS 720-102283/2-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102283
LCS 720-102283/4-A	Lab Control Sample	Total/NA	Solid	8260B/CA_LUFT MS	102283
LCSD 720-102283/3-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102283
LCSD 720-102283/5-A	Lab Control Sample Dup	Total/NA	Solid	8260B/CA_LUFT MS	102283
MB 720-102283/1-A	Method Blank	Total/NA	Solid	8260B/CA_LUFT MS	102283

Prep Batch: 102283

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	5030B	
720-38506-1 MS	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	5030B	
720-38506-1 MSD	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	5030B	
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Total/NA	Solid	5030B	
LCS 720-102283/2-A	Lab Control Sample	Total/NA	Solid	5030B	
LCS 720-102283/4-A	Lab Control Sample	Total/NA	Solid	5030B	
LCSD 720-102283/3-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
LCSD 720-102283/5-A	Lab Control Sample Dup	Total/NA	Solid	5030B	
MB 720-102283/1-A	Method Blank	Total/NA	Solid	5030B	

Analysis Batch: 102297

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	8260B/CA_LUFT MS	
720-38506-11 MS	WG-2344-WATER-031111	Total/NA	Water	8260B/CA_LUFT MS	
720-38506-11 MSD	WG-2344-WATER-031111	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-102297/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-102297/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-102297/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-102297/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-102297/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

GC/MS Semi VOA

Prep Batch: 102254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	3510C	
LCS 720-102254/2-A	Lab Control Sample	Total/NA	Water	3510C	

GC/MS Semi VOA (Continued)

Prep Batch: 102254 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 720-102254/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-102254/1-A	Method Blank	Total/NA	Water	3510C	

Prep Batch: 102290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	3510C	
LCS 720-102290/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-102290/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-102290/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 102325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	8270C SIM	102290
LCS 720-102290/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	102290
LCSD 720-102290/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	102290
MB 720-102290/1-A	Method Blank	Total/NA	Water	8270C SIM	102290

Analysis Batch: 102326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	8270C	102254
LCS 720-102254/2-A	Lab Control Sample	Total/NA	Water	8270C	102254
LCSD 720-102254/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	102254
MB 720-102254/1-A	Method Blank	Total/NA	Water	8270C	102254

GC Semi VOA

Prep Batch: 102256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-102256/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-102256/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-102256/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Prep Batch: 102284

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-1 MS	SO-2344-WASTE 1 (COMP)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-1 MSD	SO-2344-WASTE 1 (COMP)-031111	Silica Gel Cleanup	Solid	3546	
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Silica Gel Cleanup	Solid	3546	
LCS 720-102284/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-102284/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-102284/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 102302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-102284/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	102284
LCSD 720-102284/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	102284
MB 720-102284/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	102284

Analysis Batch: 102310

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Silica Gel Cleanup	Solid	8015B	102284

GC Semi VOA (Continued)

Analysis Batch: 102310 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1 MS	SO-2344-WASTE 1 (COMP)-031111	Silica Gel Cleanup	Solid	8015B	102284
720-38506-1 MSD	SO-2344-WASTE 1 (COMP)-031111	Silica Gel Cleanup	Solid	8015B	102284
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Silica Gel Cleanup	Solid	8015B	102284
720-38506-11	WG-2344-WATER-031111	Silica Gel Cleanup	Water	8015B	102256
LCS 720-102256/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	102256
LCSD 720-102256/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	102256
MB 720-102256/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	102256

Metals

Prep Batch: 102289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	3050B	
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Total/NA	Solid	3050B	
LCS 720-102289/2-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 720-102289/3-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
LCSSRM 720-102289/25-A	Lab Control Sample	Total/NA	Solid	3050B	
MB 720-102289/1-A	Method Blank	Total/NA	Solid	3050B	

Prep Batch: 102312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Dissolved	Water	3005A	
LCS 720-102312/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 720-102312/3-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	
MB 720-102287/1-B	Method Blank	Dissolved	Water	3005A	
MB 720-102312/1-A	Method Blank	Total Recoverable	Water	3005A	

Analysis Batch: 102345

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-102312/2-A	Lab Control Sample	Total Recoverable	Water	6010B	102312
LCSD 720-102312/3-A	Lab Control Sample Dup	Total Recoverable	Water	6010B	102312
MB 720-102312/1-A	Method Blank	Total Recoverable	Water	6010B	102312

Analysis Batch: 102347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	6010B	102289
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Total/NA	Solid	6010B	102289
LCS 720-102289/2-A	Lab Control Sample	Total/NA	Solid	6010B	102289
LCSD 720-102289/3-A	Lab Control Sample Dup	Total/NA	Solid	6010B	102289
LCSSRM 720-102289/25-A	Lab Control Sample	Total/NA	Solid	6010B	102289
MB 720-102289/1-A	Method Blank	Total/NA	Solid	6010B	102289

Analysis Batch: 102353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Dissolved	Water	6010B	102312
MB 720-102287/1-B	Method Blank	Dissolved	Water	6010B	102312

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111

Lab Sample ID: 720-38506-1

Date Collected: 11/03/11 16:00

Matrix: Solid

Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			102283	11/03/11 19:07	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102272	11/03/11 23:18	AC	TAL SF
Silica Gel Cleanup	Prep	3546			102284	11/03/11 20:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102310	11/04/11 12:58	DH	TAL SF
Total/NA	Prep	3050B			102289	11/03/11 21:45	SK	TAL SF
Total/NA	Analysis	6010B		4	102347	11/04/11 12:44	CAM	TAL SF

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111

Lab Sample ID: 720-38506-2

Date Collected: 11/03/11 16:00

Matrix: Solid

Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			102283	11/03/11 19:07	PGM	TAL SF
Total/NA	Analysis	8260B/CA_LUFTMS		1	102272	11/03/11 23:47	AC	TAL SF
Silica Gel Cleanup	Prep	3546			102284	11/03/11 20:37	NP	TAL SF
Silica Gel Cleanup	Analysis	8015B		1	102310	11/04/11 13:22	DH	TAL SF
Total/NA	Prep	3050B			102289	11/03/11 21:45	SK	TAL SF
Total/NA	Analysis	6010B		4	102347	11/04/11 12:57	CAM	TAL SF

Client Sample ID: WG-2344-WATER-031111

Lab Sample ID: 720-38506-11

Date Collected: 11/03/11 14:00

Matrix: Water

Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	102297	11/04/11 13:53	LL	TAL SF
Total/NA	Prep	3510C			102290	11/03/11 22:04	RU	TAL SF
Total/NA	Analysis	8270C SIM		1	102325	11/04/11 13:32	JZ	TAL SF
Total/NA	Prep	3510C			102254	11/03/11 19:29	RU	TAL SF
Total/NA	Analysis	8270C		1	102326	11/04/11 14:16	JZ	TAL SF
Silica Gel Cleanup	Prep	3510C SGC			102256	11/03/11 19:43	RU	TAL SF
Silica Gel Cleanup	Analysis	8015B		5	102310	11/04/11 14:32	DH	TAL SF
Dissolved	Prep	3005A			102312	11/04/11 08:49	ET	TAL SF
Dissolved	Analysis	6010B		1	102353	11/04/11 14:52	CAM	TAL SF

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL SF
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SF
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL SF
6010B	Metals (ICP)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Solid	11/03/11 16:00	11/03/11 18:34
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Solid	11/03/11 16:00	11/03/11 18:34
720-38506-11	WG-2344-WATER-031111	Water	11/03/11 14:00	11/03/11 18:34

Test America- Pleasanton

134711

720-38506

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-Rev1-20110926
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Stephen Meninger	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO, BTEX, and MTBE by EPA 8260	DRO by EPA 8015 (with Silica Gel Cleaup)	Motor Oil by EPA 8015	CA LUFT 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	SVOCs by EPA 8270	PAHs	JOCS 8260		Special Instructions
SO-2344-Wastel(comp)-031111	SO	Glass	1	11/3 16:00	—	X	X	X	X					24 hr turn
SO-2344-Waster(comp)-031111	SO	Glass	1	11/3 16:00	—	X	X	X	X					24 hr turn
SO-EWA(7)-031111	SO	Vartos	4	11/3 15:35	—	X	X	X	X					
SO-2344-SSA(9)-031111	SO	Vartos	4	11/3 15:35	—	X	X	X	X					
SO-2344-NWA(5)-031111	SO	Vartos	4	11/3 15:15	—	X	X	X	X					
SO-2344-SWD(15)-031111	SO	Vartos	4	11/3 14:30	—	X	X	X	X					
SO-2344-WWD(15)-031111	SO	Vartos	4	11/3 14:30	—	X	X	X	X					
SO-2344-NWD(15)-031111	SO	Vartos	4	11/3 15:05	—	X	X	X	X					
SO-2344-WWA(7)-031111	SO	Vartos	4	11/3 14:40	—	X	X	X	X					
SO-EWD(15)-031111	SO	Vartos	4	11/3 14:20	—	X	X	X	X					
WQ-2344-Water-031111	SO	Vartos	11	11/3 14:00	—	X	X	X	X	X	X	X		24 hr turn Field Filtered
									dissolved metals.					

11/4/2011

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Relinquished By: Date/Time: Stephen Meninger 11/3/2011 18:34	Received by: Date/Time:	Turnaround Time: (check) Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time:	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Date/Time: 11/3/11 1834 TMSF	Sample Integrity: (Check) Intact On Ice: Custody

Temp 4.7°

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

Sharma, Dimple

From: Lia Holden [Lia.Holden@anteagroup.com]
Sent: Friday, November 04, 2011 12:00 PM
To: Sharma, Dimple
Subject: RE: Sample Login Confirmation for 720-38506, UPRR- Santa Rosa
Importance: High

Hello Dimple,
Please run all soil samples on this COC (Including rushed samples) for PAHs and VOCs. If you cannot report PAHs on the rush samples until later, just include the PAHs for the samples in the final standard TAT report.

Additionally, please run the three rush samples on this COC (two soil, one waste water) for CAM 17 metals, rather than LUFT 5. I understand that mercury may not be ready until Monday, but get us what you can today so that we can arrange for transport/disposal as quickly as possible. Metals in water must be total metals.

Thanks Dimple,

Please call me if anything here isn't clear.

Lia Holden, PG | Geologist - Project Manager | USA
Antea™Group
Direct: +1 408 826 1863| Mobile: +1 408 410 9781| Fax: +1 408 225 8506
312 Piercy Road, San Jose California 95138

anteagroup
Member of Inogen® | www.inogenet.com

From: Sharma, Dimple [mailto:dimple.sharma@testamericainc.com]
Sent: Friday, November 04, 2011 10:26 AM
To: Lia Holden; UPRR SysDat
Subject: Sample Login Confirmation for 720-38506, UPRR- Santa Rosa

Sample for metals analysis did not appear to be field filtered. Filtered metal in the lab.

DIMPLE SHARMA

TestAmerica San Francisco
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484.1919
www.testamericainc.com

Reference: [092785]
Attachments: 5

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-38506-2

Login Number: 38506

List Source: TestAmerica San Francisco

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-38506-3
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
11/8/2011 10:54:39 AM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

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Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Job ID: 720-38506-3

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-38506-3

Comments
No additional comments.

Receipt
Sample for metals analysis does not appear to be field filtered.. Gave to lab to filter.

All other samples were received in good condition within temperature requirements.

GC/MS Semi VOA
No analytical or quality issues were noted.

Metals
Method 3010A: The following sample(720-38506-L-11) submitted for metals analysis was received with insufficient preservation (pH >2): preseved the sample on 11/4/11@11:40am w/nitric loT J4103

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111 — Lab Sample ID: 720-38506-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.052		0.010		mg/Kg	1		7471A	Total/NA

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111 — Lab Sample ID: 720-38506-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	0.077		0.0094		mg/Kg	1		7471A	Total/NA

Client Sample ID: WG-2344-WATER-031111 — Lab Sample ID: 720-38506-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.25		0.0050		mg/L	1		6010B	Total/NA
Chromium	0.080		0.010		mg/L	1		6010B	Total/NA
Cobalt	0.011		0.0020		mg/L	1		6010B	Total/NA
Copper	0.033		0.020		mg/L	1		6010B	Total/NA
Lead	0.025		0.0050		mg/L	1		6010B	Total/NA
Nickel	0.11		0.010		mg/L	1		6010B	Total/NA
Vanadium	0.053		0.010		mg/L	1		6010B	Total/NA
Zinc	0.056		0.020		mg/L	1		6010B	Total/NA

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Date Collected: 11/03/11 16:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-1
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Chrysene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Fluorene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1
Pyrene	ND		5.0		ug/Kg		11/04/11 14:34	11/07/11 16:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*78*		*33 - 120*	*11/04/11 14:34*	*11/07/11 16:11*	*1*
Terphenyl-d14	*81*		*35 - 146*	*11/04/11 14:34*	*11/07/11 16:11*	*1*

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.052**		0.010		mg/Kg		11/04/11 10:55	11/04/11 18:49	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111
Date Collected: 11/03/11 16:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-2
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Acenaphthylene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Anthracene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Benzo[a]anthracene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Benzo[a]pyrene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Benzo[b]fluoranthene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Benzo[g,h,i]perylene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Benzo[k]fluoranthene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Chrysene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Dibenz(a,h)anthracene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Fluoranthene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Fluorene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Indeno[1,2,3-cd]pyrene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Naphthalene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Phenanthrene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1
Pyrene	ND		4.9		ug/Kg		11/04/11 14:34	11/07/11 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*73*		*33 - 120*	*11/04/11 14:34*	*11/07/11 16:34*	*1*
Terphenyl-d14	*84*		*35 - 146*	*11/04/11 14:34*	*11/07/11 16:34*	*1*

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.077**		0.0094		mg/Kg		11/04/11 10:55	11/04/11 18:51	1

Client Sample Results

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Client Sample ID: WG-2344-WATER-031111
Date Collected: 11/03/11 14:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-11
Matrix: Water

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		11/07/11 08:16	11/07/11 15:04	1
Arsenic	ND		0.010		mg/L		11/07/11 08:16	11/07/11 15:04	1
Barium	**0.25**		0.0050		mg/L		11/07/11 08:16	11/07/11 15:04	1
Beryllium	ND		0.0020		mg/L		11/07/11 08:16	11/07/11 15:04	1
Cadmium	ND		0.0025		mg/L		11/07/11 08:16	11/07/11 15:04	1
Chromium	**0.080**		0.010		mg/L		11/07/11 08:16	11/07/11 15:04	1
Cobalt	**0.011**		0.0020		mg/L		11/07/11 08:16	11/07/11 15:04	1
Copper	**0.033**		0.020		mg/L		11/07/11 08:16	11/07/11 15:04	1
Lead	**0.025**		0.0050		mg/L		11/07/11 08:16	11/07/11 15:04	1
Molybdenum	ND		0.010		mg/L		11/07/11 08:16	11/07/11 15:04	1
Nickel	**0.11**		0.010		mg/L		11/07/11 08:16	11/07/11 15:04	1
Selenium	ND		0.020		mg/L		11/07/11 08:16	11/07/11 15:04	1
Silver	ND		0.0050		mg/L		11/07/11 08:16	11/07/11 15:04	1
Thallium	ND		0.010		mg/L		11/07/11 08:16	11/07/11 15:04	1
Vanadium	**0.053**		0.010		mg/L		11/07/11 08:16	11/07/11 15:04	1
Zinc	**0.056**		0.020		mg/L		11/07/11 08:16	11/07/11 15:04	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		11/07/11 10:54	11/07/11 16:26	1

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-102317/1-A
Matrix: Solid
Analysis Batch: 102325

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102317

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Acenaphthylene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Anthracene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[a]anthracene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[a]pyrene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[b]fluoranthene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[g,h,i]perylene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Benzo[k]fluoranthene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Chrysene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Dibenz(a,h)anthracene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Fluoranthene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Fluorene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Indeno[1,2,3-cd]pyrene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Naphthalene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Phenanthrene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1
Pyrene	ND		5.0		ug/Kg		11/04/11 11:01	11/04/11 17:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*79*		*33 - 120*	*11/04/11 11:01*	*11/04/11 17:17*	*1*
Terphenyl-d14	*90*		*35 - 146*	*11/04/11 11:01*	*11/04/11 17:17*	*1*

Lab Sample ID: LCS 720-102317/2-A
Matrix: Solid
Analysis Batch: 102325

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102317

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	332	265		ug/Kg		80	49 - 120
Acenaphthylene	332	244		ug/Kg		74	52 - 120
Anthracene	332	279		ug/Kg		84	52 - 120
Benzo[a]anthracene	332	273		ug/Kg		82	52 - 120
Benzo[a]pyrene	332	293		ug/Kg		88	54 - 120
Benzo[b]fluoranthene	332	301		ug/Kg		91	51 - 120
Benzo[g,h,i]perylene	332	306		ug/Kg		92	48 - 120
Benzo[k]fluoranthene	332	267		ug/Kg		80	56 - 120
Chrysene	332	223		ug/Kg		67	40 - 120
Dibenz(a,h)anthracene	332	316		ug/Kg		95	50 - 120
Fluoranthene	332	285		ug/Kg		86	57 - 120
Fluorene	332	263		ug/Kg		79	52 - 120
Indeno[1,2,3-cd]pyrene	332	309		ug/Kg		93	48 - 120
Naphthalene	332	249		ug/Kg		75	46 - 120
Phenanthrene	332	261		ug/Kg		79	48 - 120
Pyrene	332	300		ug/Kg		90	53 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*74*		*33 - 120*
Terphenyl-d14	*97*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-102317/3-A
Matrix: Solid
Analysis Batch: 102325

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102317

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene			329	233		ug/Kg		71	49 - 120	13	20
Acenaphthylene			329	237		ug/Kg		72	52 - 120	3	20
Anthracene			329	280		ug/Kg		85	52 - 120	1	20
Benzo[a]anthracene			329	274		ug/Kg		83	52 - 120	0	20
Benzo[a]pyrene			329	295		ug/Kg		90	54 - 120	1	20
Benzo[b]fluoranthene			329	301		ug/Kg		92	51 - 120	0	20
Benzo[g,h,i]perylene			329	302		ug/Kg		92	48 - 120	1	20
Benzo[k]fluoranthene			329	273		ug/Kg		83	56 - 120	2	20
Chrysene			329	219		ug/Kg		67	40 - 120	2	20
Dibenz(a,h)anthracene			329	320		ug/Kg		97	50 - 120	1	20
Fluoranthene			329	285		ug/Kg		87	57 - 120	0	20
Fluorene			329	252		ug/Kg		77	52 - 120	4	20
Indeno[1,2,3-cd]pyrene			329	316		ug/Kg		96	48 - 120	2	20
Naphthalene			329	247		ug/Kg		75	46 - 120	1	20
Phenanthrene			329	266		ug/Kg		81	48 - 120	2	20
Pyrene			329	296		ug/Kg		90	53 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*81*		*33 - 120*
Terphenyl-d14	*94*		*35 - 146*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-102418/1-A
Matrix: Water
Analysis Batch: 102456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.010		mg/L		11/07/11 08:16	11/07/11 14:52	1
Arsenic	ND		0.010		mg/L		11/07/11 08:16	11/07/11 14:52	1
Barium	ND		0.0050		mg/L		11/07/11 08:16	11/07/11 14:52	1
Beryllium	ND		0.0020		mg/L		11/07/11 08:16	11/07/11 14:52	1
Cadmium	ND		0.0025		mg/L		11/07/11 08:16	11/07/11 14:52	1
Chromium	ND		0.010		mg/L		11/07/11 08:16	11/07/11 14:52	1
Cobalt	ND		0.0020		mg/L		11/07/11 08:16	11/07/11 14:52	1
Copper	ND		0.020		mg/L		11/07/11 08:16	11/07/11 14:52	1
Lead	ND		0.0050		mg/L		11/07/11 08:16	11/07/11 14:52	1
Molybdenum	ND		0.010		mg/L		11/07/11 08:16	11/07/11 14:52	1
Nickel	ND		0.010		mg/L		11/07/11 08:16	11/07/11 14:52	1
Selenium	ND		0.020		mg/L		11/07/11 08:16	11/07/11 14:52	1
Silver	ND		0.0050		mg/L		11/07/11 08:16	11/07/11 14:52	1
Thallium	ND		0.010		mg/L		11/07/11 08:16	11/07/11 14:52	1
Vanadium	ND		0.010		mg/L		11/07/11 08:16	11/07/11 14:52	1
Zinc	ND		0.020		mg/L		11/07/11 08:16	11/07/11 14:52	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 720-102418/2-A
Matrix: Water
Analysis Batch: 102456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 102418

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	1.00	1.01		mg/L		101	80 - 120
Arsenic	1.00	1.02		mg/L		102	80 - 120
Barium	1.00	1.02		mg/L		102	80 - 120
Beryllium	1.00	1.01		mg/L		101	80 - 120
Cadmium	1.00	1.01		mg/L		101	80 - 120
Chromium	1.00	1.04		mg/L		104	80 - 120
Cobalt	1.00	1.04		mg/L		104	80 - 120
Copper	1.00	1.03		mg/L		103	80 - 120
Lead	1.00	1.04		mg/L		104	80 - 120
Molybdenum	1.00	1.04		mg/L		104	80 - 120
Nickel	1.00	1.04		mg/L		104	80 - 120
Selenium	1.00	0.995		mg/L		99	80 - 120
Silver	0.500	0.507		mg/L		101	80 - 120
Thallium	1.00	1.04		mg/L		104	80 - 120
Vanadium	1.00	1.02		mg/L		102	80 - 120
Zinc	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: LCSD 720-102418/3-A
Matrix: Water
Analysis Batch: 102456

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 102418

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	1.00	0.993		mg/L		99	80 - 120	1	20
Arsenic	1.00	1.01		mg/L		101	80 - 120	1	20
Barium	1.00	1.03		mg/L		103	80 - 120	1	20
Beryllium	1.00	1.01		mg/L		101	80 - 120	0	20
Cadmium	1.00	0.994		mg/L		99	80 - 120	2	20
Chromium	1.00	1.03		mg/L		103	80 - 120	1	20
Cobalt	1.00	1.03		mg/L		103	80 - 120	1	20
Copper	1.00	1.02		mg/L		102	80 - 120	1	20
Lead	1.00	1.02		mg/L		102	80 - 120	1	20
Molybdenum	1.00	1.02		mg/L		102	80 - 120	1	20
Nickel	1.00	1.02		mg/L		102	80 - 120	2	20
Selenium	1.00	0.983		mg/L		98	80 - 120	1	20
Silver	0.500	0.512		mg/L		102	80 - 120	1	20
Thallium	1.00	1.02		mg/L		102	80 - 120	1	20
Vanadium	1.00	1.00		mg/L		100	80 - 120	2	20
Zinc	1.00	1.02		mg/L		102	80 - 120	1	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 720-102427/1-A
Matrix: Water
Analysis Batch: 102463

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 102427

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		11/07/11 10:54	11/07/11 16:19	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 720-102427/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 102463 — **Prep Batch: 102427**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.0100	0.0101		mg/L		101	85 - 115

Lab Sample ID: LCSD 720-102427/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 102463 — **Prep Batch: 102427**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.0100	0.0103		mg/L		103	85 - 115	2	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 720-102316/1-A — **Client Sample ID: Method Blank**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 102370 — **Prep Batch: 102316**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.010		mg/Kg		11/04/11 10:55	11/04/11 18:15	1

Lab Sample ID: LCS 720-102316/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 102370 — **Prep Batch: 102316**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.669		mg/Kg		80	80 - 120

Lab Sample ID: LCSD 720-102316/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Solid — **Prep Type: Total/NA**
Analysis Batch: 102370 — **Prep Batch: 102316**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.833	0.679		mg/Kg		82	80 - 120	1	20

GC/MS Semi VOA

Prep Batch: 102317

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	3546	
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Total/NA	Solid	3546	
LCS 720-102317/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-102317/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-102317/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 102325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-102317/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	102317
LCSD 720-102317/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	102317
MB 720-102317/1-A	Method Blank	Total/NA	Solid	8270C SIM	102317

Analysis Batch: 102429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	8270C SIM	102317
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Total/NA	Solid	8270C SIM	102317

Metals

Prep Batch: 102316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	7471A	
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Total/NA	Solid	7471A	
LCS 720-102316/2-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 720-102316/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
MB 720-102316/1-A	Method Blank	Total/NA	Solid	7471A	

Analysis Batch: 102370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Total/NA	Solid	7471A	102316
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Total/NA	Solid	7471A	102316
LCS 720-102316/2-A	Lab Control Sample	Total/NA	Solid	7471A	102316
LCSD 720-102316/3-A	Lab Control Sample Dup	Total/NA	Solid	7471A	102316
MB 720-102316/1-A	Method Blank	Total/NA	Solid	7471A	102316

Prep Batch: 102418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	3010A	
LCS 720-102418/2-A	Lab Control Sample	Total/NA	Water	3010A	
LCSD 720-102418/3-A	Lab Control Sample Dup	Total/NA	Water	3010A	
MB 720-102418/1-A	Method Blank	Total/NA	Water	3010A	

Prep Batch: 102427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	7470A	
LCS 720-102427/2-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 720-102427/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	
MB 720-102427/1-A	Method Blank	Total/NA	Water	7470A	

Analysis Batch: 102456

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	6010B	102418

Metals (Continued)

Analysis Batch: 102456 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-102418/2-A	Lab Control Sample	Total/NA	Water	6010B	102418
LCSD 720-102418/3-A	Lab Control Sample Dup	Total/NA	Water	6010B	102418
MB 720-102418/1-A	Method Blank	Total/NA	Water	6010B	102418

Analysis Batch: 102463

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-11	WG-2344-WATER-031111	Total/NA	Water	7470A	102427
LCS 720-102427/2-A	Lab Control Sample	Total/NA	Water	7470A	102427
LCSD 720-102427/3-A	Lab Control Sample Dup	Total/NA	Water	7470A	102427
MB 720-102427/1-A	Method Blank	Total/NA	Water	7470A	102427

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111

Lab Sample ID: 720-38506-1

Date Collected: 11/03/11 16:00
Matrix: Solid
Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 16:11	JZ	TAL SF
Total/NA	Prep	7471A			102316	11/04/11 10:55	ET	TAL SF
Total/NA	Analysis	7471A		1	102370	11/04/11 18:49	SK	TAL SF

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111

Lab Sample ID: 720-38506-2

Date Collected: 11/03/11 16:00
Matrix: Solid
Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			102317	11/04/11 14:34	AM	TAL SF
Total/NA	Analysis	8270C SIM		1	102429	11/07/11 16:34	JZ	TAL SF
Total/NA	Prep	7471A			102316	11/04/11 10:55	ET	TAL SF
Total/NA	Analysis	7471A		1	102370	11/04/11 18:51	SK	TAL SF

Client Sample ID: WG-2344-WATER-031111

Lab Sample ID: 720-38506-11

Date Collected: 11/03/11 14:00
Matrix: Water
Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3010A			102418	11/07/11 08:16	ET	TAL SF
Total/NA	Analysis	6010B		1	102456	11/07/11 15:04	BA	TAL SF
Total/NA	Prep	7470A			102427	11/07/11 10:54	ET	TAL SF
Total/NA	Analysis	7470A		1	102463	11/07/11 16:26	CAM	TAL SF

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL SF
6010B	Metals (ICP)	SW846	TAL SF
7470A	Mercury (CVAA)	SW846	TAL SF
7471A	Mercury (CVAA)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-3

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Solid	11/03/11 16:00	11/03/11 18:34
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Solid	11/03/11 16:00	11/03/11 18:34
720-38506-11	WG-2344-WATER-031111	Water	11/03/11 14:00	11/03/11 18:34

Test America- Pleasanton

134711

720-38506

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-Rev1-20110926
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Stephen Meninger	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO, BTEX, and MTBE by EPA 8260	DRO by EPA 8015 (with Silica Gel Cleaup)	Motor Oil by EPA 8015	CA LUFT 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	SVOCs by EPA 8270	PAHs	JOCS 8260		Special Instructions
SO-2344-Wastel(comp)-031111	SO	Glass	1	11/3 16:00	—	X	X	X	X					24 hr turn
SO-2344-Waster(comp)-031111	SO	Glass	1	11/3 16:00	—	X	X	X	X					24 hr turn
SO-EWA(7)-031111	SO	Vartos	4	11/3 15:35	—	X	X	X	X					
SO-2344-SSA(9)-031111	SO	Vartos	4	11/3 15:35	—	X	X	X	X					
SO-2344-NWA(5)-031111	SO	Vartos	4	11/3 15:15	—	X	X	X	X					
SO-2344-SWB(15)-031111	SO	Vartos	4	11/3 14:30	—	X	X	X	X					
SO-2344-WWB(15)-031111	SO	Vartos	4	11/3 14:30	—	X	X	X	X					
SO-2344-NWB(15)-031111	SO	Vartos	4	11/3 15:05	—	X	X	X	X					
SO-2344-WWA(7)-031111	SO	Vartos	4	11/3 14:40	—	X	X	X	X					
SO-EWB(15)-031111	SO	Vartos	4	11/3 14:20	—	X	X	X	X					
WG-2344-Water-031111	SO	Vartos	11	11/3 14:00	—	X	X	X	X	X	X	X		24 hr turn Field Filtered
									dissolved metals.					

BUCY

Relinquished By:	Received by:	Turnaround Time: (check)
Date/Time: Stephen Meninger 11/3/2011 15:34	Date/Time:	Same Day _____ 72 Hours _____
Relinquished By:	Received by:	24 Hours _____ 5 days _____
Date/Time:	Date/Time:	48 hours _____ normal X
Relinquished By:	Received in Lab by: TMSF	Sample Integrity: (Check)
Date/Time:	Date/Time: 11/3/11 1834	Intact On Ice: Custody

Temp 4.7°

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

11/8/2011

Sharma, Dimple

From: Lia Holden [Lia.Holden@anteagroup.com]
Sent: Friday, November 04, 2011 12:00 PM
To: Sharma, Dimple
Subject: RE: Sample Login Confirmation for 720-38506, UPRR- Santa Rosa
Importance: High

Hello Dimple,
Please run all soil samples on this COC (Including rushed samples) for PAHs and VOCs. If you cannot report PAHs on the rush samples until later, just include the PAHs for the samples in the final standard TAT report.

Additionally, please run the three rush samples on this COC (two soil, one waste water) for CAM 17 metals, rather than LUFT 5. I understand that mercury may not be ready until Monday, but get us what you can today so that we can arrange for transport/disposal as quickly as possible. Metals in water must be total metals.

Thanks Dimple,

Please call me if anything here isn't clear.

Lia Holden, PG | Geologist - Project Manager | USA
Antea™Group
Direct: +1 408 826 1863| Mobile: +1 408 410 9781| Fax: +1 408 225 8506
312 Piercy Road, San Jose California 95138

anteagroup
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From: Sharma, Dimple [mailto:dimple.sharma@testamericainc.com]
Sent: Friday, November 04, 2011 10:26 AM
To: Lia Holden; UPRR SysDat
Subject: Sample Login Confirmation for 720-38506, UPRR- Santa Rosa

Sample for metals analysis did not appear to be field filtered. Filtered metal in the lab.

DIMPLE SHARMA

TestAmerica San Francisco
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484.1919
www.testamericainc.com

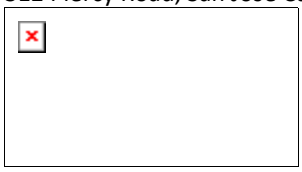
Reference: [092785]
Attachments: 5

Sharma, Dimple

From: Lia Holden [Lia.Holden@anteagroup.com]
Sent: Friday, November 04, 2011 11:04 AM
To: Sharma, Dimple
Subject: RE: Sample Login Confirmation for 720-38506, UPRR- Santa Rosa

Dimple,
Please run PAHs and VOCs on all soil listed on this COC.

Lia Holden, PG | Geologist - Project Manager | USA
Antea™Group
Direct: +1 408 826 1863| Mobile: +1 408 410 9781| Fax: +1 408 225 8506
312 Piercy Road, San Jose California 95138



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From: Sharma, Dimple [mailto:dimple.sharma@testamericainc.com]
Sent: Friday, November 04, 2011 10:26 AM
To: Lia Holden; UPRR SysDat
Subject: Sample Login Confirmation for 720-38506, UPRR- Santa Rosa

Sample for metals analysis did not appear to be field filtered. Filtered metal in the lab.

DIMPLE SHARMA

TestAmerica San Francisco
THE LEADER IN ENVIRONMENTAL TESTING

Tel: 925.484,1919
www.testamericainc.com

Reference: [092785]
Attachments: 5

This e-mail is personal. For our full disclaimer, please visit http://www.anteagroup.com/confidentiality.

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-38506-3

Login Number: 38506

List Source: TestAmerica San Francisco

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica San Francisco
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-38506-4
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
312 Piercy Road
San Jose, California 95138

Attn: Ms. Lia Holden

Authorized for release by:
11/10/2011 3:53:05 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
RL	Reporting Limit
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Job ID: 720-38506-4

Laboratory: TestAmerica San Francisco

Narrative

Job Narrative
720-38506-4

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

Metals
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111 **Lab Sample ID: 720-38506-1**

No Detections

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111 **Lab Sample ID: 720-38506-2**

No Detections

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Date Collected: 11/03/11 16:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-1
Matrix: Solid

Method: 6010B - Metals (ICP) - STLC Citrate

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.25		mg/L		11/10/11 09:18	11/10/11 11:52	2.5

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111
Date Collected: 11/03/11 16:00
Date Received: 11/03/11 18:34

Lab Sample ID: 720-38506-2
Matrix: Solid

Method: 6010B - Metals (ICP) - STLC Citrate

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.25		mg/L		11/10/11 09:18	11/10/11 12:01	2.5

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-102664/1-A
Matrix: Solid
Analysis Batch: 102686

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 102664

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.010		mg/L		11/10/11 09:18	11/10/11 11:25	1

Lab Sample ID: LCS 720-102664/2-A
Matrix: Solid
Analysis Batch: 102686

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 102664

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	1.00	0.990		mg/L		99	80 - 120

Lab Sample ID: LCSD 720-102664/3-A
Matrix: Solid
Analysis Batch: 102686

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 102664

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	1.00	0.966		mg/L		97	80 - 120	2	20

Lab Sample ID: LB4 720-102424/1-B LB4
Matrix: Solid
Analysis Batch: 102686

Client Sample ID: Method Blank
Prep Type: STLC Citrate
Prep Batch: 102664

Analyte	LB4 Result	LB4 Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.25		mg/L		11/10/11 09:18	11/10/11 11:38	2.5

Lab Sample ID: 720-38506-1 MS
Matrix: Solid
Analysis Batch: 102686

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: STLC Citrate
Prep Batch: 102664

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chromium	ND		10.0	11.4		mg/L		112	75 - 125

Lab Sample ID: 720-38506-1 MSD
Matrix: Solid
Analysis Batch: 102686

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111
Prep Type: STLC Citrate
Prep Batch: 102664

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chromium	ND		10.0	11.0		mg/L		108	75 - 125	4	20

QC Association Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Metals

Leach Batch: 102424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	CA WET Citrate	
720-38506-1 MS	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	CA WET Citrate	
720-38506-1 MSD	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	CA WET Citrate	
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	STLC Citrate	Solid	CA WET Citrate	
LB4 720-102424/1-B LB4	Method Blank	STLC Citrate	Solid	CA WET Citrate	

Prep Batch: 102664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	3005A	102424
720-38506-1 MS	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	3005A	102424
720-38506-1 MSD	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	3005A	102424
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	STLC Citrate	Solid	3005A	102424
LB4 720-102424/1-B LB4	Method Blank	STLC Citrate	Solid	3005A	102424
LCS 720-102664/2-A	Lab Control Sample	Total Recoverable	Solid	3005A	
LCSD 720-102664/3-A	Lab Control Sample Dup	Total Recoverable	Solid	3005A	
MB 720-102664/1-A	Method Blank	Total Recoverable	Solid	3005A	

Analysis Batch: 102686

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	6010B	102664
720-38506-1 MS	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	6010B	102664
720-38506-1 MSD	SO-2344-WASTE 1 (COMP)-031111	STLC Citrate	Solid	6010B	102664
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	STLC Citrate	Solid	6010B	102664
LB4 720-102424/1-B LB4	Method Blank	STLC Citrate	Solid	6010B	102664
LCS 720-102664/2-A	Lab Control Sample	Total Recoverable	Solid	6010B	102664
LCSD 720-102664/3-A	Lab Control Sample Dup	Total Recoverable	Solid	6010B	102664
MB 720-102664/1-A	Method Blank	Total Recoverable	Solid	6010B	102664

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Client Sample ID: SO-2344-WASTE 1 (COMP)-031111

Lab Sample ID: 720-38506-1

Date Collected: 11/03/11 16:00

Matrix: Solid

Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
STLC Citrate	Leach	CA WET Citrate			102424	11/07/11 10:43	JR	TAL SF
STLC Citrate	Prep	3005A			102664	11/10/11 09:18	ET	TAL SF
STLC Citrate	Analysis	6010B		2.5	102686	11/10/11 11:52	EFH	TAL SF

Client Sample ID: SO-2344-WASTE 2 (COMP)-031111

Lab Sample ID: 720-38506-2

Date Collected: 11/03/11 16:00

Matrix: Solid

Date Received: 11/03/11 18:34

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
STLC Citrate	Leach	CA WET Citrate			102424	11/07/11 10:43	JR	TAL SF
STLC Citrate	Prep	3005A			102664	11/10/11 09:18	ET	TAL SF
STLC Citrate	Analysis	6010B		2.5	102686	11/10/11 12:01	EFH	TAL SF

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Laboratory	Authority	Program	EPA Region	Certification ID
TestAmerica San Francisco	California	State Program	9	2496

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL SF

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SF = TestAmerica San Francisco, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-38506-4

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-38506-1	SO-2344-WASTE 1 (COMP)-031111	Solid	11/03/11 16:00	11/03/11 18:34
720-38506-2	SO-2344-WASTE 2 (COMP)-031111	Solid	11/03/11 16:00	11/03/11 18:34

Test America- Pleasanton

134711

720-38506

11/10/2011

Client Name/Address:	Project / PO Number:
Antea Group/UPRR 312 Piercy Road San Jose, CA 95138	Santa Rosa CA-2 Fourth Street and 34 Sixth Street Antea Group Project No. UPR8248 PEDD-2344-Rev1-20110926
Project Manager/Phone Number: Lia Holden / 408-826-1863 Sampler: Stephen Meninger	Phone Number: Fax Number:

Sample Description	Sample Matrix	Container Type	# of Containers	Sampling Date/Time	Preservation	GRO, BTEX, and MTBE by EPA 8260	DRO by EPA 8015 (with Silica Gel Cleaup)	Motor Oil by EPA 8015	CA LUFT 5 Metals (Cd, Cr, Pb, Ni, Zn) by EPA 6010B	SVOCs by EPA 8270	PAHs	JOCS 8260		Special Instructions
SO-2344-Wastel(comp)-031111	SO	Glass	1	11/3 16:00	—	X	X	X	X					24 hr turn
SO-2344-Waster(comp)-031111	SO	Glass	1	11/3 16:00	—	X	X	X	X					24 hr turn
SO-EWA(7)-031111	SO	Vartos	4	11/3 15:35	—	X	X	X	X					
SO-2344-SSA(9)-031111	SO	Vartos	4	11/3 15:35	—	X	X	X	X					
SO-2344-NWA(5)-031111	SO	Vartos	4	11/3 15:15	—	X	X	X	X					
SO-2344-SWD(15)-031111	SO	Vartos	4	11/3 14:30	—	X	X	X	X					
SO-2344-WWD(15)-031111	SO	Vartos	4	11/3 14:30	—	X	X	X	X					
SO-2344-NWD(15)-031111	SO	Vartos	4	11/3 15:05	—	X	X	X	X					
SO-2344-WWA(7)-031111	SO	Vartos	4	11/3 14:40	—	X	X	X	X					
SO-EWD(15)-031111	SO	Vartos	4	11/3 14:20	—	X	X	X	X					
WQ-2344-Water-031111	SO	Vartos	11	11/3 14:00	—	X	X	X	X	X	X	X		24 hr turn Field Filtered
									dissolved metals.					

X BUCY

Relinquished By:	Received by:	Turnaround Time: (check)
Date/Time: Stephen Meninger 11/3/2011 18:34	Date/Time:	Same Day _____ 72 Hours _____ 24 Hours _____ 5 days _____ 48 hours _____ normal X
Relinquished By: Date/Time:	Received by: Date/Time:	
Relinquished By: Date/Time:	Received in Lab by: Date/Time: 11/3/11 1834 TMSF	Sample Integrity: (Check) Intact On Ice: Custody

Temp 4.7°

Note: By relinquishing samples to Test America, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

720-38506-4

Sharma, Dimple

From: Lia Holden [Lia.Holden@anteagroup.com]
Sent: Monday, November 07, 2011 9:08 AM
To: Sharma, Dimple
Cc: bobrico
Subject: RE: Files from 720-38506-2 UPRR- Santa Rosa

Hi Dimple,

Soil samples: Please run STLC on chromium and vanadium.

Could you cc Bob Rico on the results as well?

We will need a 24 hr turn around on the STLC results.

Lia Holden, PG | Geologist - Project Manager | USA
Antea™Group
Direct: +1 408 826 1863| Mobile: +1 408 410 9781| Fax: +1 408 225 8506
312 Piercy Road, San Jose California 95138
Member of Inogen® | www.inogenet.com

RUSH

This e-mail is personal. For our full disclaimer, please visit http://www.anteagroup.com/confidentiality.

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-38506-4

Login Number: 38506

List Source: TestAmerica San Francisco

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 720-38430-1

Job Description: UPRR-Santa Rosa

For:
United Pumping Service
14000 Valley Boulevard
City of Industry, CA 91746

Attention: Mr. Bob Rico



Approved for release.
Dimple Sharma
Project Manager I
11/2/2011 5:21 PM

Dimple Sharma
Project Manager I
dimple.sharma@testamericainc.com
11/02/2011

CA ELAP Certification # 2496
The Chain(s) of Custody are included and are an integral part of this report.
The report shall not be reproduced except in full, without the written approval of the laboratory. The client, by accepting this report, also agrees not to alter any reports whether in the hard copy or electronic format and to use reasonable efforts to preserve the reports in the form and substance originally provided by TestAmerica.
A trip blank is required to be provided for volatile analyses. If trip blank results are not included in the report, either the trip blank was not submitted or requested to be analyzed.

Job Narrative
720-38430-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

GC/MS VOA
No analytical or quality issues were noted.

GC Semi VOA
Method 8082: The following sample was diluted due to color, appearance, viscosity, etc.>>: 001 (720-38430-1). Elevated reporting limits (RL) are provided.

No other analytical or quality issues were noted.

Metals
Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for prep batch 102078 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method 6010B: The following sample was diluted due to the nature of the sample matrix: 720-38430-a-1. Elevated reporting limits (RLs) are provided.

Method 7471A: The following sample was diluted due to the nature of the sample matrix: 720-38430-a-1. Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: United Pumping Service

Job Number: 720-38430-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
720-38430-1	**001**					
Diesel Range Organics [C10-C28]		7000		600	mg/Kg	8015B
Motor Oil Range Organics [C24-C36]		140000		10000	mg/Kg	8015B

METHOD SUMMARY

Client: United Pumping Service | Job Number: 720-38430-1

Description	Lab Location	Method	Preparation Method
Matrix Waste			
Volatile Organic Compounds (GC/MS)	TAL SF	SW846 8260B	
Purge and Trap	TAL SF		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL SF	SW846 8015B	
Waste Dilution	TAL SF		SW846 3580A
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL SF	SW846 8082	
Waste Dilution	TAL SF		SW846 3580A
Metals (ICP)	TAL SF	SW846 6010B	
Preparation, Metals	TAL SF		SW846 3050B
Mercury (CVAA)	TAL SF	SW846 7471A	
Preparation, Mercury	TAL SF		SW846 7471A

Lab References:

TAL SF = TestAmerica San Francisco

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: United Pumping Service

Job Number: 720-38430-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
720-38430-1	001	Waste	11/01/2011 0930	11/01/2011 1230

Client: United Pumping Service | Job Number: 720-38430-1

Client Sample ID: **001**

Lab Sample ID: 720-38430-1 | Date Sampled: 11/01/2011 0930
Client Matrix: Waste | Date Received: 11/01/2011 1230

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	720-102118	Instrument ID:	HP4
Prep Method:	5030B	Prep Batch:	720-102101	Lab File ID:	110211007.D
Dilution:	100			Initial Weight/Volume:	1.04 g
Analysis Date:	11/02/2011 1200			Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
Methyl tert-butyl ether		ND		4800
Acetone		ND		48000
Benzene		ND		4800
Dichlorobromomethane		ND		4800
Bromobenzene		ND		4800
Chlorobromomethane		ND		19000
Bromoform		ND		4800
Bromomethane		ND		9600
2-Butanone (MEK)		ND		48000
n-Butylbenzene		ND		4800
sec-Butylbenzene		ND		4800
tert-Butylbenzene		ND		4800
Carbon disulfide		ND		4800
Carbon tetrachloride		ND		4800
Chlorobenzene		ND		4800
Chloroethane		ND		9600
Chloroform		ND		4800
Chloromethane		ND		9600
2-Chlorotoluene		ND		4800
4-Chlorotoluene		ND		4800
Chlorodibromomethane		ND		4800
1,2-Dichlorobenzene		ND		4800
1,3-Dichlorobenzene		ND		4800
1,4-Dichlorobenzene		ND		4800
1,3-Dichloropropane		ND		4800
1,1-Dichloropropene		ND		4800
1,2-Dibromo-3-Chloropropane		ND		48000
Ethylene Dibromide		ND		4800
Dibromomethane		ND		9600
Dichlorodifluoromethane		ND		9600
1,1-Dichloroethane		ND		4800
1,2-Dichloroethane		ND		4800
1,1-Dichloroethene		ND		4800
cis-1,2-Dichloroethene		ND		4800
trans-1,2-Dichloroethene		ND		4800
1,2-Dichloropropane		ND		4800
cis-1,3-Dichloropropene		ND		4800
trans-1,3-Dichloropropene		ND		4800
Ethylbenzene		ND		4800
Hexachlorobutadiene		ND		4800
2-Hexanone		ND		48000
Isopropylbenzene		ND		4800
4-Isopropyltoluene		ND		4800
Methylene Chloride		ND		9600
4-Methyl-2-pentanone (MIBK)		ND		48000
Naphthalene		ND		9600

Client: United Pumping Service | Job Number: 720-38430-1

Client Sample ID: **001**

Lab Sample ID: 720-38430-1 | Date Sampled: 11/01/2011 0930
Client Matrix: Waste | Date Received: 11/01/2011 1230

8260B Volatile Organic Compounds (GC/MS)

Analysis Method:	8260B	Analysis Batch:	720-102118	Instrument ID:	HP4
Prep Method:	5030B	Prep Batch:	720-102101	Lab File ID:	110211007.D
Dilution:	100			Initial Weight/Volume:	1.04 g
Analysis Date:	11/02/2011 1200			Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
N-Propylbenzene		ND		4800
Styrene		ND		4800
1,1,1,2-Tetrachloroethane		ND		4800
1,1,2,2-Tetrachloroethane		ND		4800
Tetrachloroethene		ND		4800
Toluene		ND		4800
1,2,3-Trichlorobenzene		ND		4800
1,2,4-Trichlorobenzene		ND		4800
1,1,1-Trichloroethane		ND		4800
1,1,2-Trichloroethane		ND		4800
Trichloroethene		ND		4800
Trichlorofluoromethane		ND		4800
1,2,3-Trichloropropane		ND		4800
1,1,2-Trichloro-1,2,2-trifluoroethane		ND		4800
1,2,4-Trimethylbenzene		ND		4800
1,3,5-Trimethylbenzene		ND		4800
Vinyl acetate		ND		48000
Vinyl chloride		ND		4800
Xylenes, Total		ND		9600
2,2-Dichloropropane		ND		4800
Gasoline Range Organics (GRO)-C5-C12		ND		240000

Surrogate	%Rec	Qualifier	Acceptance Limits
4-Bromofluorobenzene	102		66 - 148
1,2-Dichloroethane-d4 (Surr)	105		62 - 137
Toluene-d8 (Surr)	100		65 - 141

Client: United Pumping Service | Job Number: 720-38430-1

Client Sample ID: **001**

Lab Sample ID: 720-38430-1 | Date Sampled: 11/01/2011 0930
Client Matrix: Waste | Date Received: 11/01/2011 1230

8015B Diesel Range Organics (DRO) (GC)

Analysis Method:	8015B	Analysis Batch:	720-102043	Instrument ID:	CHDRO5
Prep Method:	3580A	Prep Batch:	720-102096	Initial Weight/Volume:	0.2005 g
Dilution:	2.0			Final Weight/Volume:	10 mL
Analysis Date:	11/01/2011 1951			Injection Volume:	1 uL
Prep Date:	11/01/2011 1900			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Diesel Range Organics [C10-C28]		7000		600
Motor Oil Range Organics [C24-C36]		140000		10000

Surrogate	%Rec	Qualifier	Acceptance Limits
p-Terphenyl	112		50 - 130

Client: United Pumping Service | Job Number: 720-38430-1

Client Sample ID: **001**

Lab Sample ID: 720-38430-1 | Date Sampled: 11/01/2011 0930
Client Matrix: Waste | Date Received: 11/01/2011 1230

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analysis Method:	8082	Analysis Batch:	720-102127	Instrument ID:	CHPCB # 2
Prep Method:	3580A	Prep Batch:	720-102095	Initial Weight/Volume:	0.2344 g
Dilution:	10			Final Weight/Volume:	10 mL
Analysis Date:	11/02/2011 1142			Injection Volume:	1 uL
Prep Date:	11/01/2011 1858			Result Type:	PRIMARY

Analyte	DryWt Corrected: N	Result (ug/Kg)	Qualifier	RL
PCB-1016		ND		11000
PCB-1221		ND		11000
PCB-1232		ND		11000
PCB-1242		ND		11000
PCB-1248		ND		11000
PCB-1254		ND		11000
PCB-1260		ND		11000

Surrogate	%Rec	Qualifier	Acceptance Limits
Tetrachloro-m-xylene	111		42 - 147
DCB Decachlorobiphenyl	130		30 - 148

Client: United Pumping Service | Job Number: 720-38430-1

Client Sample ID: **001**

Lab Sample ID: 720-38430-1 | Date Sampled: 11/01/2011 0930
Client Matrix: Waste | Date Received: 11/01/2011 1230

6010B Metals (ICP)

Analysis Method:	6010B	Analysis Batch:	720-102169	Instrument ID:	Thermo ICP2
Prep Method:	3050B	Prep Batch:	720-102078	Lab File ID:	11021103.asc
Dilution:	10			Initial Weight/Volume:	1.02 g
Analysis Date:	11/02/2011 1542			Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1528				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Antimony		ND		4.9
Arsenic		ND		9.8
Barium		ND		4.9
Beryllium		ND		0.98
Cadmium		ND		1.2
Chromium		ND		4.9
Cobalt		ND		2.0
Copper		ND		15
Lead		ND		4.9
Molybdenum		ND		4.9
Nickel		ND		4.9
Selenium		ND		9.8
Silver		ND		2.5
Thallium		ND		4.9
Vanadium		ND		4.9
Zinc		ND		15

7471A Mercury (CVAA)

Analysis Method:	7471A	Analysis Batch:	720-102144	Instrument ID:	LL_HG Analyzer
Prep Method:	7471A	Prep Batch:	720-102098	Lab File ID:	S110211A.PRN
Dilution:	10			Initial Weight/Volume:	0.69 g
Analysis Date:	11/02/2011 1004			Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1931				

Analyte	DryWt Corrected: N	Result (mg/Kg)	Qualifier	RL
Mercury		ND		0.087

DATA REPORTING QUALIFIERS

Client: United Pumping Service Job Number: 720-38430-1

Lab Section	Qualifier	Description
Metals		
	F	MS or MSD exceeds the control limits

Client: United Pumping Service

Job Number: 720-38430-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:720-102086					
LCS 720-102101/2-A	Lab Control Sample	T	Waste	8260B	720-102101
LCS 720-102101/4-A	Lab Control Sample	T	Waste	8260B	720-102101
LCSD 720-102101/3-A	Lab Control Sample Duplicate	T	Waste	8260B	720-102101
LCSD 720-102101/5-A	Lab Control Sample Duplicate	T	Waste	8260B	720-102101
MB 720-102101/1-A	Method Blank	T	Waste	8260B	720-102101
Prep Batch: 720-102101					
LCS 720-102101/2-A	Lab Control Sample	T	Waste	5030B	
LCS 720-102101/4-A	Lab Control Sample	T	Waste	5030B	
LCSD 720-102101/3-A	Lab Control Sample Duplicate	T	Waste	5030B	
LCSD 720-102101/5-A	Lab Control Sample Duplicate	T	Waste	5030B	
MB 720-102101/1-A	Method Blank	T	Waste	5030B	
720-38430-1	001	T	Waste	5030B	
Analysis Batch:720-102118					
720-38430-1	001	T	Waste	8260B	720-102101

Report Basis

T = Total

Client: United Pumping Service

Job Number: 720-38430-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC Semi VOA					
Analysis Batch:720-102043					
720-38430-1	001	T	Waste	8015B	720-102096
720-38430-1DU	Duplicate	T	Waste	8015B	720-102096
Analysis Batch:720-102044					
LCS 720-102096/2-A	Lab Control Sample	T	Waste	8015B	720-102096
LCSD 720-102096/3-A	Lab Control Sample Duplicate	T	Waste	8015B	720-102096
MB 720-102096/1-A	Method Blank	T	Waste	8015B	720-102096
Analysis Batch:720-102069					
LCS 720-102095/2-A	Lab Control Sample	T	Waste	8082	720-102095
LCSD 720-102095/3-A	Lab Control Sample Duplicate	T	Waste	8082	720-102095
MB 720-102095/1-A	Method Blank	T	Waste	8082	720-102095
Prep Batch: 720-102095					
LCS 720-102095/2-A	Lab Control Sample	T	Waste	3580A	
LCSD 720-102095/3-A	Lab Control Sample Duplicate	T	Waste	3580A	
MB 720-102095/1-A	Method Blank	T	Waste	3580A	
720-38430-1	001	T	Waste	3580A	
720-38430-1DU	Duplicate	T	Waste	3580A	
Prep Batch: 720-102096					
LCS 720-102096/2-A	Lab Control Sample	T	Waste	3580A	
LCSD 720-102096/3-A	Lab Control Sample Duplicate	T	Waste	3580A	
MB 720-102096/1-A	Method Blank	T	Waste	3580A	
720-38430-1	001	T	Waste	3580A	
720-38430-1DU	Duplicate	T	Waste	3580A	
Analysis Batch:720-102127					
720-38430-1	001	T	Waste	8082	720-102095
720-38430-1DU	Duplicate	T	Waste	8082	720-102095

Report Basis

T = Total

Client: United Pumping Service

Job Number: 720-38430-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 720-102078					
LCS 720-102078/2-A	Lab Control Sample	T	Waste	3050B	
LCSD 720-102078/3-A	Lab Control Sample Duplicate	T	Waste	3050B	
MB 720-102078/1-A	Method Blank	T	Waste	3050B	
720-38430-1	001	T	Waste	3050B	
720-38430-1MS	Matrix Spike	T	Waste	3050B	
720-38430-1MSD	Matrix Spike Duplicate	T	Waste	3050B	
Prep Batch: 720-102098					
LCS 720-102098/2-A	Lab Control Sample	T	Waste	7471A	
LCSD 720-102098/3-A	Lab Control Sample Duplicate	T	Waste	7471A	
MB 720-102098/1-A	Method Blank	T	Waste	7471A	
720-38430-1	001	T	Waste	7471A	
720-38430-1MS	Matrix Spike	T	Waste	7471A	
720-38430-1MSD	Matrix Spike Duplicate	T	Waste	7471A	
Analysis Batch:720-102144					
LCS 720-102098/2-A	Lab Control Sample	T	Waste	7471A	720-102098
LCSD 720-102098/3-A	Lab Control Sample Duplicate	T	Waste	7471A	720-102098
MB 720-102098/1-A	Method Blank	T	Waste	7471A	720-102098
720-38430-1	001	T	Waste	7471A	720-102098
720-38430-1MS	Matrix Spike	T	Waste	7471A	720-102098
720-38430-1MSD	Matrix Spike Duplicate	T	Waste	7471A	720-102098
Analysis Batch:720-102154					
LCS 720-102078/2-A	Lab Control Sample	T	Waste	6010B	720-102078
LCSD 720-102078/3-A	Lab Control Sample Duplicate	T	Waste	6010B	720-102078
MB 720-102078/1-A	Method Blank	T	Waste	6010B	720-102078
Analysis Batch:720-102169					
720-38430-1	001	T	Waste	6010B	720-102078
720-38430-1MS	Matrix Spike	T	Waste	6010B	720-102078
720-38430-1MSD	Matrix Spike Duplicate	T	Waste	6010B	720-102078

Report Basis

T = Total

Client: United Pumping Service

Job Number: 720-38430-1

Method Blank - Batch: 720-102101

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 720-102101/1-A	Analysis Batch:	720-102086	Instrument ID:	HP12
Client Matrix:	Waste	Prep Batch:	720-102101	Lab File ID:	11011130.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	11/01/2011 2231	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Methyl tert-butyl ether	ND		500
Acetone	ND		5000
Benzene	ND		500
Dichlorobromomethane	ND		500
Bromobenzene	ND		500
Chlorobromomethane	ND		2000
Bromoform	ND		500
Bromomethane	ND		1000
2-Butanone (MEK)	ND		5000
n-Butylbenzene	ND		500
sec-Butylbenzene	ND		500
tert-Butylbenzene	ND		500
Carbon disulfide	ND		500
Carbon tetrachloride	ND		500
Chlorobenzene	ND		500
Chloroethane	ND		1000
Chloroform	ND		500
Chloromethane	ND		1000
2-Chlorotoluene	ND		500
4-Chlorotoluene	ND		500
Chlorodibromomethane	ND		500
1,2-Dichlorobenzene	ND		500
1,3-Dichlorobenzene	ND		500
1,4-Dichlorobenzene	ND		500
1,3-Dichloropropane	ND		500
1,1-Dichloropropene	ND		500
1,2-Dibromo-3-Chloropropane	ND		5000
Ethylene Dibromide	ND		500
Dibromomethane	ND		1000
Dichlorodifluoromethane	ND		1000
1,1-Dichloroethane	ND		500
1,2-Dichloroethane	ND		500
1,1-Dichloroethene	ND		500
cis-1,2-Dichloroethene	ND		500
trans-1,2-Dichloroethene	ND		500
1,2-Dichloropropane	ND		500
cis-1,3-Dichloropropene	ND		500
trans-1,3-Dichloropropene	ND		500
Ethylbenzene	ND		500
Hexachlorobutadiene	ND		500
2-Hexanone	ND		5000
Isopropylbenzene	ND		500
4-Isopropyltoluene	ND		500
Methylene Chloride	ND		1000
4-Methyl-2-pentanone (MIBK)	ND		5000

Client: United Pumping Service

Job Number: 720-38430-1

Method Blank - Batch: 720-102101

Method: 8260B
Preparation: 5030B

Lab Sample ID:	MB 720-102101/1-A	Analysis Batch:	720-102086	Instrument ID:	HP12
Client Matrix:	Waste	Prep Batch:	720-102101	Lab File ID:	11011130.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	11/01/2011 2231	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Naphthalene	ND		1000
N-Propylbenzene	ND		500
Styrene	ND		500
1,1,1,2-Tetrachloroethane	ND		500
1,1,2,2-Tetrachloroethane	ND		500
Tetrachloroethene	ND		500
Toluene	ND		500
1,2,3-Trichlorobenzene	ND		500
1,2,4-Trichlorobenzene	ND		500
1,1,1-Trichloroethane	ND		500
1,1,2-Trichloroethane	ND		500
Trichloroethene	ND		500
Trichlorofluoromethane	ND		500
1,2,3-Trichloropropane	ND		500
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		500
1,2,4-Trimethylbenzene	ND		500
1,3,5-Trimethylbenzene	ND		500
Vinyl acetate	ND		5000
Vinyl chloride	ND		500
m-Xylene & p-Xylene	ND		500
o-Xylene	ND		500
Xylenes, Total	ND		1000
2,2-Dichloropropane	ND		500
Gasoline Range Organics (GRO)-C5-C12	ND		25000

Surrogate	% Rec	Acceptance Limits
4-Bromofluorobenzene	98	66 - 148
1,2-Dichloroethane-d4 (Surr)	102	62 - 137
Toluene-d8 (Surr)	96	65 - 141

Client: United Pumping Service

Job Number: 720-38430-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-102101

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 720-102101/2-A	Analysis Batch:	720-102086	Instrument ID:	HP12
Client Matrix:	Waste	Prep Batch:	720-102101	Lab File ID:	11011131.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	11/01/2011 2300	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 720-102101/3-A	Analysis Batch:	720-102086	Instrument ID:	HP12
Client Matrix:	Waste	Prep Batch:	720-102101	Lab File ID:	11011132.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	11/01/2011 2329	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methyl tert-butyl ether	110	115	71 - 146	5	20		
Acetone	77	78	12 - 234	1	30		
Benzene	96	98	76 - 122	2	20		
Dichlorobromomethane	100	102	80 - 131	2	20		
Bromobenzene	100	102	77 - 125	2	20		
Chlorobromomethane	99	100	74 - 134	2	20		
Bromoform	102	100	54 - 149	2	20		
Bromomethane	81	68	14 - 175	18	20		
2-Butanone (MEK)	83	90	58 - 159	8	20		
n-Butylbenzene	100	99	57 - 164	1	20		
sec-Butylbenzene	98	99	62 - 153	0	20		
tert-Butylbenzene	99	100	72 - 136	1	20		
Carbon disulfide	78	80	13 - 151	3	20		
Carbon tetrachloride	88	87	72 - 136	1	20		
Chlorobenzene	97	98	81 - 128	1	20		
Chloroethane	85	75	53 - 124	12	20		
Chloroform	93	94	75 - 133	1	20		
Chloromethane	78	80	43 - 146	2	20		
2-Chlorotoluene	101	102	66 - 143	1	20		
4-Chlorotoluene	100	100	73 - 136	0	20		
Chlorodibromomethane	102	103	76 - 134	1	20		
1,2-Dichlorobenzene	100	102	77 - 140	2	20		
1,3-Dichlorobenzene	101	101	71 - 135	0	20		
1,4-Dichlorobenzene	99	100	76 - 130	1	20		
1,3-Dichloropropane	102	103	73 - 133	2	20		
1,1-Dichloropropene	91	92	81 - 134	1	20		
1,2-Dibromo-3-Chloropropane	98	96	52 - 156	2	20		
Ethylene Dibromide	104	105	80 - 138	1	20		
Dibromomethane	100	99	76 - 139	1	20		
Dichlorodifluoromethane	62	60	30 - 120	3	20		
1,1-Dichloroethane	93	96	79 - 125	3	20		
1,2-Dichloroethane	93	92	67 - 126	1	20		
1,1-Dichloroethene	82	83	74 - 122	2	20		
cis-1,2-Dichloroethene	108	109	77 - 132	1	20		
trans-1,2-Dichloroethene	80	81	74 - 128	2	20		

Client: United Pumping Service

Job Number: 720-38430-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-102101

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 720-102101/2-A	Analysis Batch:	720-102086	Instrument ID:	HP12
Client Matrix:	Waste	Prep Batch:	720-102101	Lab File ID:	11011131.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	11/01/2011 2300	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 720-102101/3-A	Analysis Batch:	720-102086	Instrument ID:	HP12
Client Matrix:	Waste	Prep Batch:	720-102101	Lab File ID:	11011132.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	11/01/2011 2329	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
1,2-Dichloropropane	98	102	84 - 129	4	20		
cis-1,3-Dichloropropene	104	106	79 - 144	2	20		
trans-1,3-Dichloropropene	106	108	78 - 144	2	20		
Ethylbenzene	94	95	76 - 137	0	20		
Hexachlorobutadiene	98	92	63 - 150	6	20		
2-Hexanone	91	92	63 - 165	1	20		
Isopropylbenzene	100	100	65 - 128	0	20		
4-Isopropyltoluene	99	98	62 - 153	1	20		
Methylene Chloride	102	106	79 - 128	4	20		
4-Methyl-2-pentanone (MIBK)	95	97	66 - 150	3	20		
Naphthalene	104	102	62 - 151	2	20		
N-Propylbenzene	94	96	65 - 144	2	20		
Styrene	108	110	79 - 139	1	20		
1,1,1,2-Tetrachloroethane	103	103	72 - 129	0	20		
1,1,2,2-Tetrachloroethane	94	98	69 - 133	4	20		
Tetrachloroethene	94	93	79 - 130	0	20		
Toluene	96	96	77 - 120	0	20		
1,2,3-Trichlorobenzene	109	104	72 - 159	5	20		
1,2,4-Trichlorobenzene	105	102	71 - 163	3	20		
1,1,1-Trichloroethane	90	89	69 - 132	1	20		
1,1,2-Trichloroethane	99	103	80 - 140	4	20		
Trichloroethene	94	95	69 - 129	0	20		
Trichlorofluoromethane	82	80	49 - 140	3	20		
1,2,3-Trichloropropane	95	94	74 - 135	1	20		
1,1,2-Trichloro-1,2,2-trifluoroethane	84	84	66 - 128	0	20		
1,2,4-Trimethylbenzene	98	100	62 - 155	2	20		
1,3,5-Trimethylbenzene	101	102	69 - 142	2	20		
Vinyl acetate	90	97	56 - 200	8	20		
Vinyl chloride	64	66	10 - 118	4	20		
m-Xylene & p-Xylene	96	97	71 - 142	1	20		
o-Xylene	100	100	71 - 142	1	20		
2,2-Dichloropropane	93	92	67 - 146	1	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	102	99	66 - 148
1,2-Dichloroethane-d4 (Surr)	96	94	62 - 137

Client: United Pumping Service

Job Number: 720-38430-1

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Toluene-d8 (Surr)	100	99	65 - 141

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-102101

Method: 8260B
Preparation: 5030B

LCS Lab Sample ID:	LCS 720-102101/4-A	Analysis Batch:	720-102086	Instrument ID:	HP12
Client Matrix:	Waste	Prep Batch:	720-102101	Lab File ID:	11011133.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	11/01/2011 2359	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 720-102101/5-A	Analysis Batch:	720-102086	Instrument ID:	HP12
Client Matrix:	Waste	Prep Batch:	720-102101	Lab File ID:	11011134.D
Dilution:	100	Leach Batch:	N/A	Initial Weight/Volume:	10 g
Analysis Date:	11/02/2011 0028	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 2010				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Gasoline Range Organics (GRO)-C5-C12	73	73	60 - 116	0	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
4-Bromofluorobenzene	101	99	66 - 148
1,2-Dichloroethane-d4 (Surr)	98	96	62 - 137
Toluene-d8 (Surr)	97	98	65 - 141

Client: United Pumping Service

Job Number: 720-38430-1

Method Blank - Batch: 720-102096

Method: 8015B
Preparation: 3580A

Lab Sample ID:	MB 720-102096/1-A	Analysis Batch:	720-102044	Instrument ID:	CHDRO5
Client Matrix:	Waste	Prep Batch:	720-102096	Lab File ID:	1101115b_029.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.2 g
Analysis Date:	11/01/2011 2051	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 1900			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		300
Motor Oil Range Organics [C24-C36]	ND		5000

Surrogate	% Rec	Acceptance Limits
p-Terphenyl	113	50 - 130

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-102096

Method: 8015B
Preparation: 3580A

LCS Lab Sample ID:	LCS 720-102096/2-A	Analysis Batch:	720-102044	Instrument ID:	CHDRO5
Client Matrix:	Waste	Prep Batch:	720-102096	Lab File ID:	1101115b_027.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.2 g
Analysis Date:	11/01/2011 1951	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 1900			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 720-102096/3-A	Analysis Batch:	720-102044	Instrument ID:	CHDRO5
Client Matrix:	Waste	Prep Batch:	720-102096	Lab File ID:	1101115b_028.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.2 g
Analysis Date:	11/01/2011 2015	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 1900			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Diesel Range Organics [C10-C28]	112	110	50 - 130	2	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
p-Terphenyl	121	120	50 - 130

Client: United Pumping Service

Job Number: 720-38430-1

Duplicate - Batch: 720-102096

Method: 8015B
Preparation: 3580A

Lab Sample ID:	720-38430-1	Analysis Batch:	720-102043	Instrument ID:	CHDRO5
Client Matrix:	Waste	Prep Batch:	720-102096	Lab File ID:	1101115a_028.d
Dilution:	2.0	Leach Batch:	N/A	Initial Weight/Volume:	0.2221 g
Analysis Date:	11/01/2011 2015	Units:	mg/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 1900			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Diesel Range Organics [C10-C28]	7000	7650	9.00		
Motor Oil Range Organics [C24-C36]	140000	165000	18.0		

Surrogate	% Rec	Acceptance Limits
p-Terphenyl	104	50 - 130

Client: United Pumping Service

Job Number: 720-38430-1

Method Blank - Batch: 720-102095

Method: 8082
Preparation: 3580A

Lab Sample ID:	MB 720-102095/1-A	Analysis Batch:	720-102069	Instrument ID:	CHPCB # 2
Client Matrix:	Waste	Prep Batch:	720-102095	Lab File ID:	m1101020.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.2 g
Analysis Date:	11/01/2011 2309	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 1858			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Result	Qual	RL
PCB-1016	ND		1300
PCB-1221	ND		1300
PCB-1232	ND		1300
PCB-1242	ND		1300
PCB-1248	ND		1300
PCB-1254	ND		1300
PCB-1260	ND		1300

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	106	42 - 147
DCB Decachlorobiphenyl	107	30 - 148

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-102095

Method: 8082
Preparation: 3580A

LCS Lab Sample ID:	LCS 720-102095/2-A	Analysis Batch:	720-102069	Instrument ID:	CHPCB # 2
Client Matrix:	Waste	Prep Batch:	720-102095	Lab File ID:	m1101021.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.2 g
Analysis Date:	11/01/2011 2327	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 1858			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY
LCSD Lab Sample ID:	LCSD 720-102095/3-A	Analysis Batch:	720-102069	Instrument ID:	CHPCB # 2
Client Matrix:	Waste	Prep Batch:	720-102095	Lab File ID:	m1101022.d
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.2 g
Analysis Date:	11/01/2011 2344	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 1858			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
PCB-1016	107	112	65 - 135	5	20		
PCB-1260	111	112	65 - 135	2	20		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
Tetrachloro-m-xylene	110	114	42 - 147
DCB Decachlorobiphenyl	114	117	30 - 148

Client: United Pumping Service

Job Number: 720-38430-1

Duplicate - Batch: 720-102095

Method: 8082
Preparation: 3580A

Lab Sample ID:	720-38430-1	Analysis Batch:	720-102127	Instrument ID:	CHPCB # 2
Client Matrix:	Waste	Prep Batch:	720-102095	Lab File ID:	m1102007.d
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	0.2188 g
Analysis Date:	11/02/2011 1159	Units:	ug/Kg	Final Weight/Volume:	10 mL
Prep Date:	11/01/2011 1858			Injection Volume:	1 uL
Leach Date:	N/A			Column ID:	PRIMARY

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
PCB-1016	ND	ND	NC		
PCB-1221	ND	ND	NC		
PCB-1232	ND	ND	NC		
PCB-1242	ND	ND	NC		
PCB-1248	ND	ND	NC		
PCB-1254	ND	ND	NC		
PCB-1260	ND	ND	NC		

Surrogate	% Rec	Acceptance Limits
Tetrachloro-m-xylene	110	42 - 147
DCB Decachlorobiphenyl	120	30 - 148

Client: United Pumping Service

Job Number: 720-38430-1

Method Blank - Batch: 720-102078

Method: 6010B
Preparation: 3050B

Lab Sample ID:	MB 720-102078/1-A	Analysis Batch:	720-102154	Instrument ID:	Thermo ICP2
Client Matrix:	Waste	Prep Batch:	720-102078	Lab File ID:	11021101.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	11/02/2011 1256	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1528				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Antimony	ND		0.50
Arsenic	ND		1.0
Barium	ND		0.50
Beryllium	ND		0.10
Cadmium	ND		0.13
Chromium	ND		0.50
Cobalt	ND		0.20
Copper	ND		1.5
Lead	ND		0.50
Molybdenum	ND		0.50
Nickel	ND		0.50
Selenium	ND		1.0
Silver	ND		0.25
Thallium	ND		0.50
Vanadium	ND		0.50
Zinc	ND		1.5

Client: United Pumping Service

Job Number: 720-38430-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-102078

Method: 6010B
Preparation: 3050B

LCS Lab Sample ID:	LCS 720-102078/2-A	Analysis Batch:	720-102154	Instrument ID:	Thermo ICP2
Client Matrix:	Waste	Prep Batch:	720-102078	Lab File ID:	11021101.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	11/02/2011 1300	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1528				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 720-102078/3-A	Analysis Batch:	720-102154	Instrument ID:	Thermo ICP2
Client Matrix:	Waste	Prep Batch:	720-102078	Lab File ID:	11021101.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	11/02/2011 1305	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1528				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Antimony	93	95	80 - 120	2	20		
Arsenic	97	97	80 - 120	0	20		
Barium	98	98	80 - 120	1	20		
Beryllium	99	99	80 - 120	0	20		
Cadmium	98	97	80 - 120	0	20		
Chromium	99	98	80 - 120	1	20		
Cobalt	100	100	80 - 120	0	20		
Copper	99	99	80 - 120	0	20		
Lead	99	99	80 - 120	0	20		
Molybdenum	101	101	80 - 120	1	20		
Nickel	99	99	80 - 120	0	20		
Selenium	94	94	80 - 120	1	20		
Silver	97	97	80 - 120	0	20		
Thallium	100	100	80 - 120	0	20		
Vanadium	98	98	80 - 120	0	20		
Zinc	97	98	80 - 120	0	20		

Client: United Pumping Service

Job Number: 720-38430-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-102078

Method: 6010B
Preparation: 3050B

MS Lab Sample ID:	720-38430-1	Analysis Batch:	720-102169	Instrument ID:	Thermo ICP2
Client Matrix:	Waste	Prep Batch:	720-102078	Lab File ID:	11021103.asc
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.00 g
Analysis Date:	11/02/2011 1533			Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1528				
Leach Date:	N/A				

MSD Lab Sample ID:	720-38430-1	Analysis Batch:	720-102169	Instrument ID:	Thermo ICP2
Client Matrix:	Waste	Prep Batch:	720-102078	Lab File ID:	11021103.asc
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	1.01 g
Analysis Date:	11/02/2011 1538			Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1528				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Antimony	72	67	75 - 125	8	20	F	F
Arsenic	88	82	75 - 125	8	20		
Barium	94	88	75 - 125	7	20		
Beryllium	93	87	75 - 125	7	20		
Cadmium	89	83	75 - 125	7	20		
Chromium	90	85	75 - 125	6	20		
Cobalt	95	90	75 - 125	7	20		
Copper	96	91	75 - 125	7	20		
Lead	92	87	75 - 125	6	20		
Molybdenum	88	84	75 - 125	5	20		
Nickel	93	87	75 - 125	7	20		
Selenium	89	84	75 - 125	7	20		
Silver	59	53	75 - 125	11	20	F	F
Thallium	88	83	75 - 125	7	20		
Vanadium	89	85	75 - 125	6	20		
Zinc	89	84	75 - 125	7	20		

Client: United Pumping Service

Job Number: 720-38430-1

Method Blank - Batch: 720-102098

Method: 7471A
Preparation: 7471A

Lab Sample ID:	MB 720-102098/1-A	Analysis Batch:	720-102144	Instrument ID:	LL_HG Analyzer
Client Matrix:	Waste	Prep Batch:	720-102098	Lab File ID:	S110211A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	11/02/2011 0953	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1931				
Leach Date:	N/A				

Analyte	Result	Qual	RL
Mercury	ND		0.010

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 720-102098

Method: 7471A
Preparation: 7471A

LCS Lab Sample ID:	LCS 720-102098/2-A	Analysis Batch:	720-102144	Instrument ID:	LL_HG Analyzer
Client Matrix:	Waste	Prep Batch:	720-102098	Lab File ID:	S110211A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	11/02/2011 0955	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1931				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 720-102098/3-A	Analysis Batch:	720-102144	Instrument ID:	LL_HG Analyzer
Client Matrix:	Waste	Prep Batch:	720-102098	Lab File ID:	S110211A.PRN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	0.60 g
Analysis Date:	11/02/2011 0958	Units:	mg/Kg	Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1931				
Leach Date:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Mercury	87	88	80 - 120	1	20		

Client: United Pumping Service

Job Number: 720-38430-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 720-102098

Method: 7471A
Preparation: 7471A

MS Lab Sample ID:	720-38430-1	Analysis Batch:	720-102144	Instrument ID:	LL_HG Analyzer
Client Matrix:	Waste	Prep Batch:	720-102098	Lab File ID:	S110211A.PRN
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	0.70 g
Analysis Date:	11/02/2011 1000			Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1931				
Leach Date:	N/A				

MSD Lab Sample ID:	720-38430-1	Analysis Batch:	720-102144	Instrument ID:	LL_HG Analyzer
Client Matrix:	Waste	Prep Batch:	720-102098	Lab File ID:	S110211A.PRN
Dilution:	10	Leach Batch:	N/A	Initial Weight/Volume:	0.64 g
Analysis Date:	11/02/2011 1002			Final Weight/Volume:	50 mL
Prep Date:	11/01/2011 1931				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Mercury	82	82	75 - 125	8	20		

~~West Sacramento~~
~~880 Riverside Parkway~~
~~West Sacramento, CA 95605~~
~~Phone 916.373.5600 fax 916.372.1059~~

1220 Quarry Ln.
Pleasanton, CA 94566
(925) 484-1919

Chain of Custody Record

720-38430

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc. 134639

Client Contact	Project Manager: Nic Quezada	Site Contact: Nic Quezada	Date: 11-1-11	COC No:
James E. Diel	Tel/Fax: (626) 890-7056	Lab Contact: Shannon	Carrier:	____ of ____ COCs
9451 Atkinson St.	Analysis Turnaround Time			Job No. None
Roseville, CA 95747	Calendar (C) or Work Days (W)			
Phone (916) 789-5184	TAT if different from Below ____			SDG No.
FAX (916) 789-5185	☐ 2 weeks			
Project Name: UPRR Santa Rosa	☐ 1 week			
Site: Santa Rosa	☐ 2 days			
PO #	☐ 1 day (5)			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	Cam 17 Metals	VOC's	PCB's	Total PCB Cas	Chrome VI Dissolved	Sample Specific Notes:
001	11-1-11	0930	Liquid		1		X	X	X	X	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant Poison B ☐ Unknown ☒

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:

Please fax results to Bob Rice (626) 961-3799

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	United Rigging	11-1-11 1230		TASF	11/1/11 1230
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

9.4° < 4hrs.

Login Sample Receipt Checklist

Client: United Pumping Service

Job Number: 720-38430-1

Login Number: 38430

List Source: TestAmerica San Francisco

List Number: 1

Creator: Mullen, Joan

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Appendix E

Waste Manifests

CREATIVE WORKSHOP, UKIAH, CA 421607-CZ

470 CALETTI AVE.
WINDSOR, CA 95492
(707) 838-9731

WEST COAST METALS

No. 25028

P.O. BOX 791
WINDSOR, CA 95492

PURCHASE INVOICE

CUSTOMER Union Pacific Railroad / City of Santa Rosa Fire Department DATE 11/2/11

ADDRESS 2nd & 4th Street DRIVER

CITY Santa Rosa CA STATE CA ZIP 95404

DRIVERS LIC. # VEHICLE LIC. #

TRANSACTION: CASH ☐ CHECK NO.

	WEIGHT	DESCRIPTION	GOLD NO.	W/NITRE	QC	AMOUNT
G		* Certificate of destruction / Recycling *				
T						No Charge
N	(2)	550 gallon Metal tanks for recycle				Ø
		- Permits Plus Tracking F11-0305				Recycled
		- Tank Cleanliness Certificate - OK				
		David Guzman - West Coast Metals				
					TOTAL	

I hereby state that I am the lawful owner of the material described hereon, that I have a right to sell same and that for payment received in full, hereby acknowledged, I sell and convey title of same to West Coast Metals, Inc.

X

WEST COAST METALS INC.

RECYCLERS

470 Caletti Ave • Windsor, CA 95492
PO Box 791 (707) 838-9731
Fax (707) 838-9741
David Guzman

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC002678696	1	(800) 424-9300	008133814 JJK

GENERATOR

5. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD - SANTA ROSA
BETWEEN 2 FOURTH ST & 3 4 6TH S
SANTA ROSA CA 95402
Generator's Phone: 916 789-5184

Generator's Site Address (if different than mailing address)
BETWEEN 2 FOURTH ST & 3 4 6TH S
SANTA ROSA CA 95402

6. Transporter 1 Company Name
ASHLEY ENVIRONMENTAL SERVICES

U.S. EPA ID Number
CAD022277036

7. Transporter 2 Company Name

U.S. EPA ID Number

8. Designated Facility Name and Site Address
DEMENNO / KERDOON
2000 NORTH ALAMEDA STREET
COMPTON CA 90222
Facility's Phone: (310)537-7100

U.S. EPA ID Number
CAT080013352

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON-RCRA HAZARDOUS WASTE, LIQUID (OILY WATER)	001	TT	110	G	223
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
NAERG# 981 : 171 * PROFILE # 981 : OILYWATER *EMERGENCY CONTACT: CHEMTREC 1-800-424-9300 * ADDITIONAL EPA CODES: 981 : , NONE * APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT
#100A
PO#4065014319

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DANIEL CAPEART Agent for UPRR
Signature:
Month 11 Day 01 Year 11

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: LEWALDO ANIMA
Signature:
Month 11 Day 01 Year 11

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator)
Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Authorized Agent
Signature:
Month 11 Day 02 Year 11

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: CAC002678696 | 2. Page 1 of: 1 | 3. Emergency Response Phone: 626/ 961-9326 | 4. Manifest Tracking Number: 005720534 JJK

GENERATOR

5. Generator's Name and Mailing Address
Union Pacific Rail Road - Rose
9451 Atkinson St Ste. 100
Roseville Ca 95747
Generator's Phone:

Generator's Site Address (if different than mailing address)
2 Fourth St. and 34 Sixth
Santa Rosa, CA 95402

6. Transporter 1 Company Name: UNITED PUMPING SERVICE, INC. | U.S. EPA ID Number: CAD072953771

7. Transporter 2 Company Name | U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Domenno Kerdoon
2000 N. Alameda St.
Compton, CA 90222
Facility's Phone: 3105377100 | U.S. EPA ID Number: CAT080013352

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. Non RCRA Hazardous waste liquid (Oily Water)	1	TT	500	G	221		
	2.							
	3.							
	4.							

14. Special Handling Instructions and Additional Information
9B(1) Oily Water
WEAR APPROPRIATE PROTECTIVE EQUIPMENT
EWO # 148962
EMERGENCY CONTACT CHEM TREC 800/424-9300

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Oscar Piña Agent per UPRR | Signature: O-P= | Month: 11 | Day: 4 | Year: 11

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Oscar Piña | Signature: O-P= | Month: 11 | Day: 4 | Year: 11

Transporter 2 Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) | U.S. EPA ID Number
Facility's Phone:

18c. Signature of Alternate Facility (or Generator) | Month | Day | Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name | Signature | Month | Day | Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

NO. 620100

DeMenno / Kerdoon

WEIGHTMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighted, measured, or counted by a weightmaster, whose signature is on the certificate, who is a recognized authority of accuracy. as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

BY _____ DEPUTY

BY _____ DEPUTY

	MO	DAY	YEAR
DATE	11	04	11

WEIGHTED AT:
2000 NO. ALAMEDA STREET
COMPTON, CA 90222

WEIGHTED FOR UPS

DELIVERED TO DK

CARRIER 221 - T11

TRUCK LICENSE NO.

TRAILER LICENSE NO.

DRIVER Oscar

BILL OF LADING NO. 723675

FEE $	CHARGE	PAID
$ 5.00		

FINAL WEIGHT OUT

23:52 11/04/2011 35560 lb G

INITIAL WEIGHT IN

21:11 11/04/2011 39240 lb G

3680

UNITS	COMMODITY	MARKS
5	Only 1120	

TRIPLICATE

DeMenno/Kerdoon

2000 North Alameda Street, Compton, California 90222-2799 (310) 537-7100

Receiving

No. 723677

PH _____ **Wt. No.** 6 20/00

Date 11 - 4 - 11

Received From: OPS

Job # _____ **P.O.** _____

Comments: _____

Quantity & Product 89 **Gals.** WOLT

B.S.%W _____ % (GRAVITY @60°F) _____ °API Temp _____ °F

Sediments _____ % Flash Pt. _____ °F. Halides _____ PPM

Hauler: OPS

Ticket No.: 005720534

Loader: _____ Driver: OSCAR

Tank No. V 10 Net Gal. _____

In 23 35 Out 2350

DeMenno/Kerdoon

2000 North Alameda Street, Compton, California 90222-2799 (310) 537-7100

Receiving

No. 723675

PH _____ **Wt. No.** 620100

Date 11-4-11

Received From: UPS
C-1

Job # _____ **P.O.** _____

Comments: H2O Phase
Pro# 343078

Quantity & Product 500 Gals. oily H2O

B.S.%W 98.0 % (GRAVITY @60°F) API 24 °API Temp 60 °F

Sediments 6.0 % Flash Pt. — °F. Halides — PPM

Hauler: UPS

Ticket No.: 005720534 JDK

Loader: Steven Driver: Oscar

Tank No. 2002 Net Gal. _____

In 2111 Out 2330

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
CAC002678696	1	626/961-9326	005723685 JJK

GENERATOR

5. Generator's Name and Mailing Address: Attn. Dir. Env. Ops. / UNION PACIFIC RAILROAD / 3001 Foothill Blvd. / Roseville, CA. 95747 / Generator's Phone: 916/789-5184

Generator's Site Address (if different than mailing address): 2nd&4th St. & 34 Sixth St. / Santa Rosa, CA. 95402 / Jim Diel

6. Transporter 1 Company Name: United Pumping Service, Inc. — U.S. EPA ID Number: CAD072953771

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: DeMenno kerdoon / 2000 N. Alameda St. / Compton, CA. 90222 / Facility's Phone: 310/537-7100 — U.S. EPA ID Number: CAT080013352

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. Non Rcra Hazardous Waste Liquid	1	TT	750	G	221
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information: 9b1. Oily water / W077984 / Wear Appropriate Protective Equipment / Emergency Contact ChemTrec 800/424-9300

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Noe Quezada — Signature: [signature] Agent for UPRR — Month: 11 Day: 1 Year: 11

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: OSCAR PINA — Signature: [signature] — Month: 11 Day: 1 Year: 11

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) — Month — Day — Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Fernando Marquez — Signature: [signature] — Month: 11 Day: 03 Year: 11

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY

NO. 620287

DeMenno / Kerdoon

WEIGHTMASTER CERTIFICATE

THIS IS TO CERTIFY that the following described commodity was weighted, measured, or counted by a weightmaster, whose signature is on the certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

BY _____ DEPUTY

BY _____ DEPUTY

DATE MO 11 DAY 3 YEAR 11

WEIGHTED AT:
2000 NO. ALAMEDA STREET
COMPTON, CA 90222

WEIGHTED FOR UPS

DELIVERED TO DK

CARRIER 221 T 11

TRUCK LICENSE NO.

TRAILER LICENSE NO.

DRIVER OSCAR

BILL OF LADING NO. 723

FEE $	CHARGE	PAID
$ 5.00	—	

FINAL WEIGHT OUT

13:27 11/03/2011 35620 lb G

INITIAL WEIGHT IN

09:13 11/03/2011 40700 lb G

5080

UNITS	COMMODITY	MARKS
lb	OIL Itic	

TRIPLICATE

DeMenno / Kerdoon • 2000 North Alameda Street, Compton, CA 90222-2799 • (310) 537-7100

DeMenno/Kerdoon

2000 North Alameda Street, Compton, California 90222-2799 (310) 537-7100

Receiving No. 723586

PH 7.0 Wt. No. 620

Date 11-03-11

Received From: UPS

C-1

Job # P.O.

Comments: H2O Phase Pro #344034

Quantity & Product 750 Gals. oily - H2O

B.S.%W 58.0 % (GRAVITY @60°F) SP 1.04 °API Temp 64 °F

Sediments 3.0 % Flash Pt. — °F. Halides — PPM

Hauler: UPS

Ticket No.: 005723685 JJK

Loader: Fernando Driver: OSCAR

Tank No. 2002 Net Gal.

In 0935 Out 1228

DeMenno/Kerdoon

2000 North Alameda Street, Compton, California 90222-2799 (310) 537-7100

Receiving

No. 723587

PH _____ **Wt. No.** 620

Date 11-03-11

Received From: UPS

_____

Job # _____ **P.O.** _____

Comments: _____

_____

_____

Cold H2O

Quantity & Product 374 **Gals.** w-out

B.S.%W _____ % (GRAVITY @60°F) _____ °API Temp _____ °F

Sediments _____ % Flash Pt. _____ °F. Halides _____ PPM

Hauler: UPS

Ticket No.: 005723685 WK

Loader: Fernando Driver: OSCAR

Tank No. V TK Net Gal. _____

In 1214 Out 1316

12475689

KELLER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674579
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: #4212118254 SOIL

SITE	TICKET	GRID
01	653093	

WEIGHMASTER: FELIPE C

DATE IN	TIME IN
16 November 2011	12:28 pm

DATE OUT	TIME OUT
16 November 2011	12:28 pm

VEHICLE	ROLL OFF
JJT707	

REFERENCE	ORIGIN
093689	PETALUMA

01 Gross Weight 51,240.00 lb
Stored Tare Weight 32,080.00 lb
Net Weight 19,160.00 lb 9.58 TN

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
9.58	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

NET AMOUNT

TENDERED
CHANGE
CHECK NO.

REPUBLIC SERVICES

REV 11/09

SIGNATURE

RS-1104

CLEAN UP LOAD (9) SMALL LOAD

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC028786986 | Manifest Document No. 3360 67 | 2. Page 1 of 1 | 093689

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILL BLVD
ROSEVILLE CA 95747
Att: JIM DIEL

2 FOURTH & 34 SIXTH STREET
SANTA ROSA CA 95402

4. Generator's Phone (916) 789-6481

5. Transporter 1 Company Name: T & J TRANS | 6. US EPA ID Number: CAR000220186 | A. Transporter's Phone: (707) 332-4562

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
KELLER CANYON LANDFILL
901 BAILEY RD
PITTSBURG CA 94565

10. US EPA ID Number | C. Facility's Phone: 925 458-9800

	11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a.	NON HAZARDOUS WASTE SOLID	0.01	D T.	1.8	Y
b.					
c.					
d.					

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P#
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626) 961-9326 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# 78275-1
PO# 4212118254
2.2 TON
TRUCK# 707
TRAILER# 148

16. GENERATOR'S CERTIFICATION: I Certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Type Name	Signature	Month	Day	Year
ON BEHALF OF GENERATOR ANGEL HERRERA		1	1	11

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year
OTH FRANCO		1	1	11

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt or waste materials covered by this manifest as noted in Item 19.

Printed/Type Name	Signature	Month	Day	Year
Felix Lomeli		1	1	11

GENERATOR / TRANSPORTER / FACILITY

TRANSPORTER #2

12475566

KELLER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674579
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: #4212118254 SOIL

SITE	TICKET	GRID
01	652970	

WEIGHMASTER: FELIPE C

DATE IN	TIME IN
16 November 2011	8:59 am

DATE OUT	TIME OUT
16 November 2011	8:59 am

VEHICLE	ROLL OFF
JJT707	

REFERENCE	ORIGIN
093693	PETALUMA

Gross Weight 82,100.00 lb
Stored Tare Weight 32,080.00 lb
Net Weight 50,020.00 lb 25.01 TN

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.01	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

NET AMOUNT

TENDERED

CHANGE

CHECK NO.

REPUBLIC SERVICES

REV 11/09

SIGNATURE

RS-F04

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CACO026788686 | Manifest Document No. 23087 | 2. Page 1 of 1 | 093693

GENERATOR

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILL BLVD
ROSEVILLE CA 95747
Attn: JIM DIEL
2 FOURTH & 34 SIXTH STREET
SANTA ROSA CA 95402

4. Generator's Phone (916) 789-5481

5. Transporter 1 Company Name	6. US EPA ID Number	A. Transporter's Phone
J&J TRANS	CAR000220186	(707)332-4562
7. Transporter 2 Company Name	8. US EPA ID Number	B. Transporter's Phone
9. Designated Facility Name and Site Address	10. US EPA ID Number	C. Facility's Phone
KELLER CANYON LANDFILL 901 BAILEY RD PITTSBURG CA 94565		925 458-9800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS WASTE SOLID	0.01	T	1.8	T
b.				
c.				
d.				

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P# c.
b. d.

E. Handling Codes for Wastes Listed Above
a. c.
b. d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626) 961-9325 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# 28225-1

624579 PO# 4212118254

16. GENERATOR'S CERTIFICATION: I Certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste:

Printed/Type Name	Signature	Month	Day	Year
Raul Esparza		11	16	11

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year
John FRANCO		11	16	11

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt or waste materials covered by this manifest as noted in Item 19.

Printed/Type Name	Signature	Month	Day	Year
Felipe Cornejo		11	16	11

TRANSPORTER #2

12475648

KELLER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674579
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: M4212111B254 SOIL

SITE	TICKET	GRID
01	4530552	

WEIGHMASTER: FELIPE C

DATE IN	TIME IN
16 November 2011	10:46 am

DATE OUT	TIME OUT
16 November 2011	11:08 am

VEHICLE	ROLL OFF
F5	

REFERENCE	ORIGIN
093698	SANTA ROSA

02 Gross Weight 79,380.00 lb
Stored Tare Weight 29,400.00 lb
Net Weight 49,980.00 lb 24.99 TN

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
24.99	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

NET AMOUNT
TENDERED
CHANGE

REPUBLIC SERVICES

CHECK NO.

[redacted]

(8)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CACO026788686 | Manifest Document No. | 2. Page 1 of 1 | 093698

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
Attn: JIM DIEL
10031 FOOTHILL BLVD
ROSEVILLE CA 95747

4. Generator's Phone (916) 789-5461

2 FOURTH & 34 SIXTH STREET
SANTA ROSA CA 95402

5. Transporter 1 Company Name: FRED'S TRUCKING | 6. US EPA ID Number | A. Transporter's Phone: 925 382-0605

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
KELLER CANYON LANDFILL
901 BAILEY RD
PITTSBURG CA 94565

10. US EPA ID Number | C. Facility's Phone: 925 458-9800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS WASTE SOLID	001	DT	18	T
b.				
c.				
d.				

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P#
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626) 961-9326 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# 78275-1
PO# 4212111825 4
Trk # F-5 / F-5
4212111825 4

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Type Name: ON BEHALF OF GENERATOR UPRR ANGEL HEARNES | Signature | Month 1 | Day 16 | Year 11

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Type Name: FRED KES | Signature | Month 1 | Day 16 | Year 11

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Type Name | Signature | Month | Day | Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt of waste materials covered by this manifest as noted in Item 19.
Printed/Type Name: Felipe Gomez | Signature | Month 1 | Day 16 | Year 11

GENERATOR / TRANSPORTER / FACILITY

TRANSPORTER #2

12475572

KELLER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674529
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: #4212111B254 SOIL

SITE	TICKET	GRID
01	6529976	

WEIGHTMASTER: FELIFE C

DATE IN	TIME IN
16 November 2011	9:13 am

DATE OUT	TIME OUT
16 November 2011	9:13 am

VEHICLE	ROLL OFF
JJT128	

REFERENCE	ORIGIN
093696	PETALUMA

01, Gross Weight 784,480.00 lb Inbound - SCALE TICKET
Stored Tare Weight 31,560.00 lb
Net Weight 52,920.00 lb 26.46 TN

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
26.46	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

REPUBLIC SERVICES

REV 11/09

SIGNATURE Rahmon D. Gordon

RS-F04

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC002678696 | Manifest Document No. 093696 | 2. Page 1 of 1

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILL BLVD
ROSEVILLE CA 95747
Attn: JIM DIEL

2 FOURTH & 34 SIXTH STREET
SANTA ROSA CA 95402

4. Generator's Phone (916) 789-5481

5. Transporter 1 Company Name: J & J TRANSPORTATION | 6. US EPA ID Number | A. Transporter's Phone: 707-280-5134

7. Transporter 2 Company Name: #128 Lic#9E40140 | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
KELLER CANYON LANDFILL
901 BAILEY RD
PITTSBURG CA 94565

10. US EPA ID Number | C. Facility's Phone: 925 458-9800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS WASTE SOLID	001	T	18	Y
b.				
c.				
d.				

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P#
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626)961-9326 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# 28275-1
TRK# 128/356- RDH
PO#2121118251

16. GENERATOR'S CERTIFICATION: I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Type Name: ANGEL HERRERA (AGENT FOR GENERATOR UPRR) | Signature | Month 11 Day 16 Year 11

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Type Name: RAHMAN D. HARDEN | Signature: Rahman D. Harden | Month 11 Day 16 Year 11

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Type Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt or waste materials covered by this manifest as noted in Item 19.
Printed/Type Name: Eppine Cornejo | Signature | Month 11 Day 16 Year 11

GENERATOR
TRANSPORTER
FACILITY

TRANSPORTER #2

12475621

KELLER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674572
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: M421211118254 SOIL

SITE	TICKET	GRID
01	653025	

WEIGHTMASTER: FELIFE C

DATE IN	TIME IN
16 November 2011	9:55 am

DATE OUT	TIME OUT
16 November 2011	10:29 am

VEHICLE	ROLL OFF
CST2	

REFERENCE	ORIGIN
093687	SANTA ROSA

00 Gross Weight 81,640.00 lb
Stored Tare Weight 30,340.00 lb
Net Weight 51,300.00 lb 25.65 TN

Inbound - SCALE TICKET

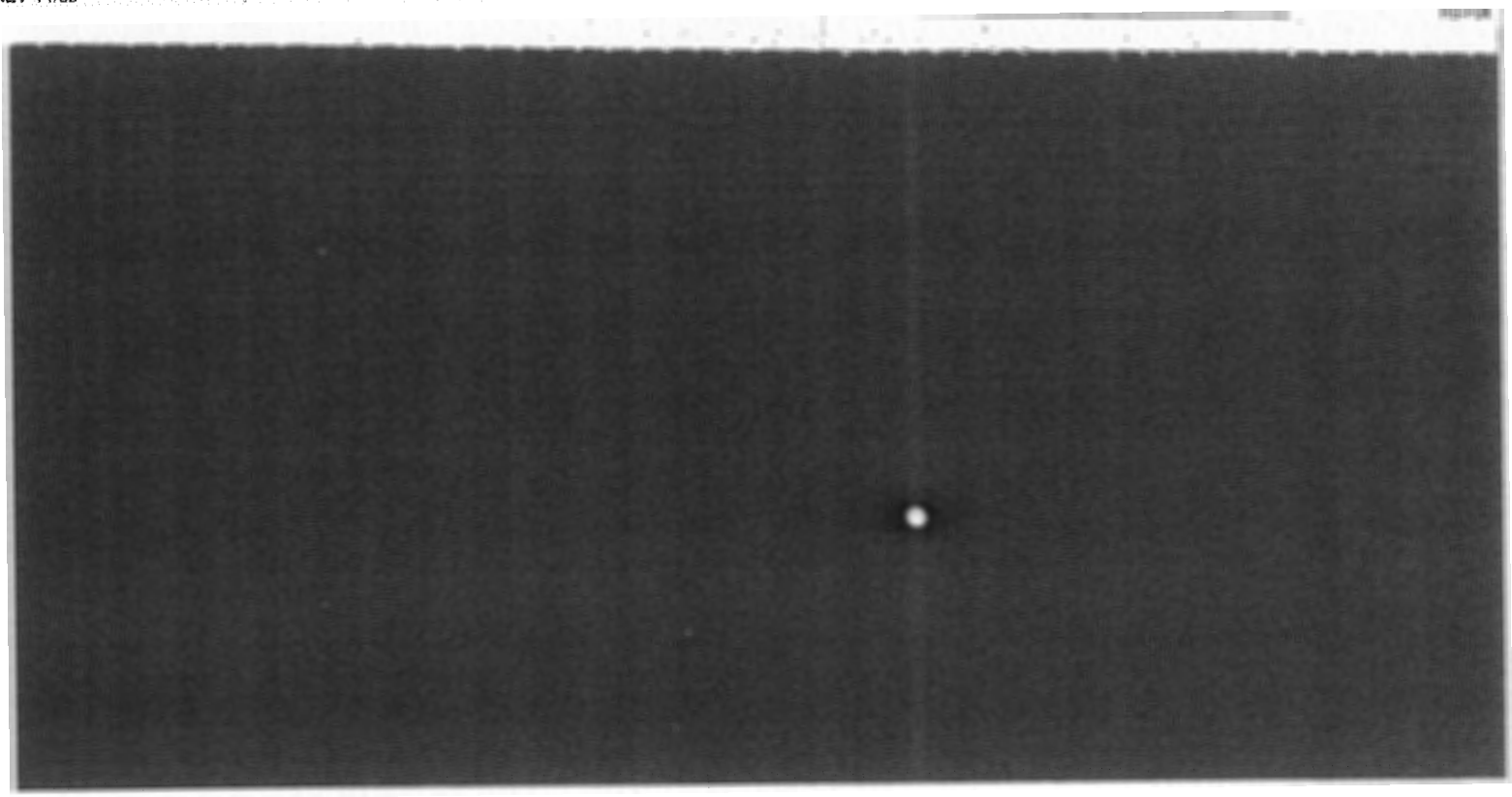
QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.65	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

REPUBLIC SERVICES

REV 11/09

SIGNATURE _____



(5)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	
CAC002786996	2007		093687

GENERATOR

3. Generator's Name and Mailing Address: UNION PACIFIC RAILROAD, 10031 FOOTHILL BLVD, ROSEVILLE CA 95747 — Att: JIM DIEL
4. Generator's Phone: (916) 789-5488
2 FOURTH & 34 SIXTH STREET, SANTA ROSA CA 96402

5. Transporter 1 Company Name: Mower & Gil's Chavez & Sons — 6. US EPA ID Number — A. Transporter's Phone: 7076781405

7. Transporter 2 Company Name: #T-2 Lic# 563975 — 8. US EPA ID Number — B. Transporter's Phone

9. Designated Facility Name and Site Address: KELLER CANYON LANDFILL, 901 BAILEY RD, PITTSBURG CA 94565 — 10. US EPA ID Number — C. Facility's Phone: 925 458-9800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS WASTE SOLID	001	DT	18	Y
b.				
c.				
d.				

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P#
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626) 961-3926 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# 78275-1
PO# 4212111185
TRUCK # T2

16. **GENERATOR'S CERTIFICATION:** I Certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Type Name	Signature	Month	Day	Year
ON BEHALF OF GENERATOR DAVID HERRERA		11	16	11

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year
		11	16	11

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt of waste materials covered by this manifest as noted in Item 19.

Printed/Type Name	Signature	Month	Day	Year
Felipe Cornejo		11	16	11

TRANSPORTER #2

12475582

KELLER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674579
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: #4212118254 SOIL

SITE	TICKET	GRID
01	652986	

WEIGHMASTER: FELIPE C

DATE IN	TIME IN
16 November 2011	9:31 am

DATE OUT	TIME OUT
16 November 2011	9:31 am

VEHICLE	ROLL OFF
CT175	

REFERENCE	ORIGIN
093694	SANTA ROSA

Gross Weight 81,500.00 lb
Stored Tare Weight 28,820.00 lb
Net Weight 52,680.00 lb 26.34 TN

Inbound - SCALE TICKET

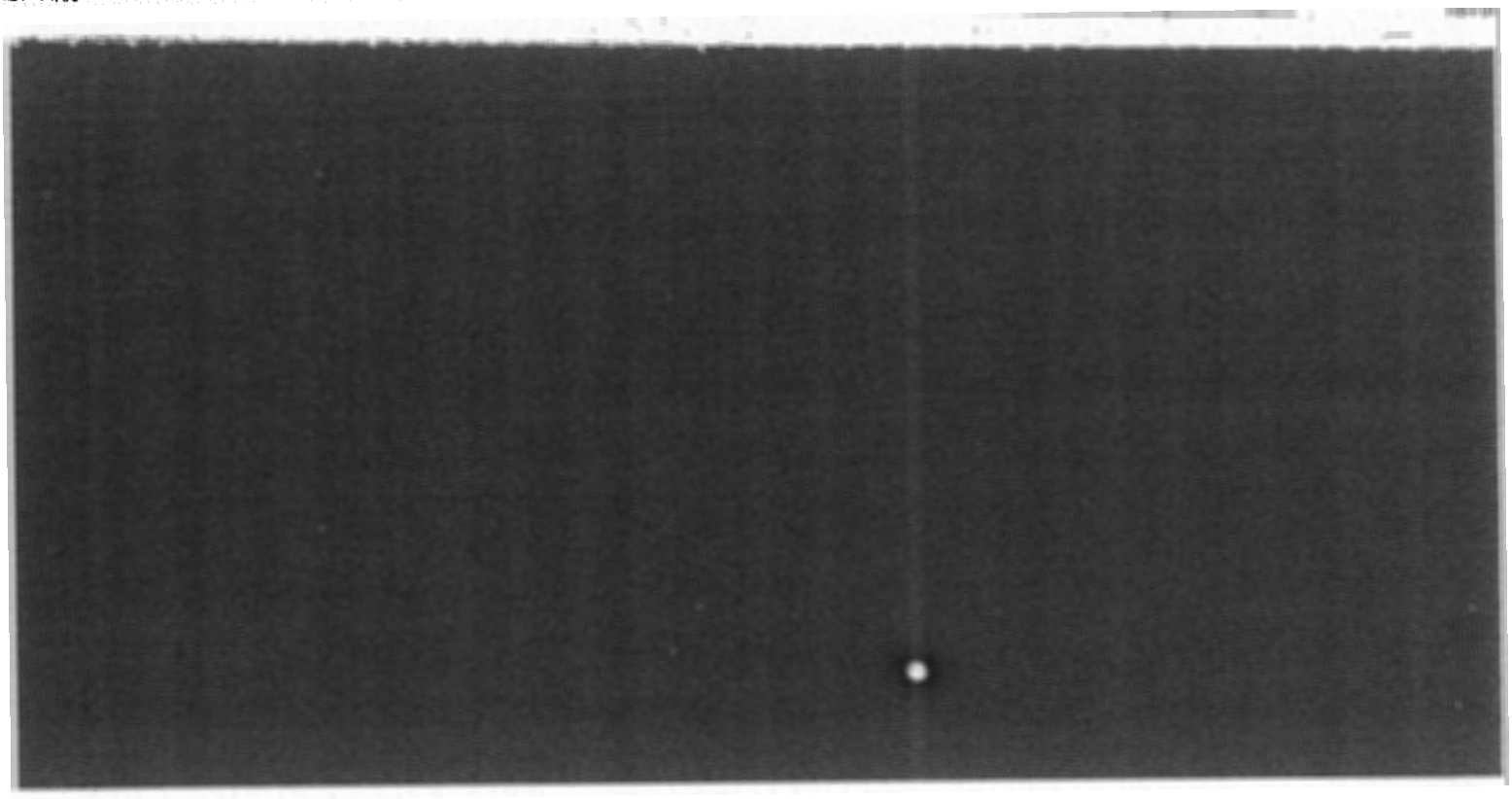
QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
26.34	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

NET AMOUNT
TENDERED
CHANGE
CHECK NO.

REPUBLIC SERVICES

REV 11/09

SIGNATURE



(4)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC020788690 | Manifest Document No. | 2. Page 1 of 1 | 093694

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILL BLVD
ROSEVILLE CA 95747

ATT: JIM LIZEL

2 FOURTH & 34 SIXTH STREET
SANTA ROSA CA 95402

4. Generator's Phone (916) 789-6481

5. Transporter 1 Company Name: CHANAL TRK (9D38885) | 6. US EPA ID Number: NO | A. Transporter's Phone: (408) 591-6430

7. Transporter 2 Company Name: # 175 LIC# | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
KELLER CANYON LANDFILL
901 BAILEY RD
PITTSBURG CA 94565

10. US EPA ID Number | C. Facility's Phone: 925 . 458-9800

11. Waste Shipping Name and Description	12. Containers No.	Type.	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS WASTE SOLID	001	T.	18	Y
b.				
c.				
d.				

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P#
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626) 961-9226 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# 28275-L
#175
P# 4212111825 4

16. GENERATOR'S CERTIFICATION: I Certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Type Name	Signature	Month	Day	Year
ON BEHALF OF GENERATOR OF UPRR ANDY HERRERA		11	16	11

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year
BALJIT S CHANAL		11	16	11

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt or waste materials covered by this manifest as noted in Item 19.

Printed/Type Name	Signature	Month	Day	Year
FRANK CORNEJO		11	16	11

GENERATOR / TRANSPORTER / FACILITY

T/S/D/F COPY

12475581

KEILER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674579
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: #4212111B254 SOIL

SITE	TICKET	GRID
01	652985	

WEIGHMASTER: FELIPE C

DATE IN	TIME IN
16 November 2011	9:29 am

DATE OUT	TIME OUT
16 November 2011	9:29 am

VEHICLE	ROLL OFF
SST7	

REFERENCE	ORIGIN
093695	SANTA ROSA

Gross Weight 77,700.00 lb
Stored Tare Weight 34,740.00 lb
Net Weight 42,960.00 lb 21.48 TN

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
21.48	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

NET AMOUNT

TENDERED

CHANGE

CHECK NO.

REPUBLIC SERVICES

EV 11/09

SIGNATURE

RS-F04

(3)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC002678696 | Manifest Document No. | 2. Page 1 of 1 | 093695

3. Generator's Name and Mailing Address
10031 FOOTHILL BLVD
ROSEVILLE CA 95747
4. Generator's Phone (916) 789-5481

2 FOURTH & 34 SIXTH STREET
SANTA ROSA CA 95402

5. Transporter 1 Company Name: S. SINGH TRUCKING | 6. US EPA ID Number | A. Transporter's Phone: 530 682 8524

7. Transporter 2 Company Name: 47 - LIC # 904503O | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
KELLER CANYON LANDFILL
901 BAILEY RD
PITTSBURG CA 94565

10. US EPA ID Number | C. Facility's Phone: 925 458-9800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS WASTE SOLID	0.01	T	1.8	Y
b.				
c.				
d.				

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P#
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626) 961-9326 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# Z8225-1
PW5211118254

16. GENERATOR'S CERTIFICATION: I Certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.
Printed/Type Name: ON BE HALF OF GENERATOR ANGEL HERRERA | Signature | Month 11 Day 16 Year 11

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Type Name: JAGTAR SINGH | Signature | Month 11 Day 16 Year 11

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Type Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt or waste materials covered by this manifest as noted in Item 19.
Printed/Type Name: [illegible] | Signature | Month 11 Day 16 Year 11

GENERATOR
TRANSPORTER
FACILITY

TRANSPORTER #2

12475623

KELLER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674579
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: #42121118254 SOIL

SITE	TICKET	GRID
01	653037	

WEIGHTMASTER: FELIPE C

DATE IN	TIME IN
16 November 2011	9:58 am

DATE OUT	TIME OUT
16 November 2011	10:32 am

VEHICLE	ROLL OFF
WSC1	

REFERENCE	ORIGIN
093688	SANTA ROSA

01 Gross Weight 82,040.00 lb
Stored Tare Weight 31,900.00 lb
Net Weight 50,140.00 lb 25.07 TN

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
25.07	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

Julio

NET AMOUNT

TENDERED

CHANGE

CHECK NO.

REPUBLIC SERVICES

REV 11/09

SIGNATURE _____

RS-F04

(6) transfer

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC002678696 | Manifest Document No. 93687 | 2. Page 1 of 1 | 093688

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILL BLVD
ROSEVILLE CA 95747
Att: JIM DIEL

2 FOURTH & 34 SIXTH STREET
SANTA ROSA CA 95402

4. Generator's Phone (916) 789-5481

5. Transporter 1 Company Name: WEST Sand CARRIER | 6. US EPA ID Number | A. Transporter's Phone: 707-396-3059

7. Transporter 2 Company Name: #1. Lic.#705846 | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
KELLER CANYON LANDFILL
901 BAILEY RD
PITTSBURG CA 94565
10. US EPA ID Number | C. Facility's Phone: 925 458-9800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS WASTE SOLID	0.01	T	.18	Y
b.				
c.				
d.				

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P#
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626) 961-9326 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# 78275-1

PO#
4212111185

TRUCK# 1-1

16. GENERATOR'S CERTIFICATION: I Certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Type Name	Signature	Month	Day	Year
ON BEHALF OF GENERATOR UPRR ANGEL HERRERA		1.1	16	11

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year
Julio Chavez		1.1	16	11

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Type Name	Signature	Month	Day	Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt or waste materials covered by this manifest as noted in Item 19.

Printed/Type Name	Signature	Month	Day	Year
FELIPE Comp		11	16	11

TRANSPORTER #2

12475625

KELLER CANYON LANDFILL
901 BAILEY ROAD
PITTSBURG, CA

674579
Union Pacific Railroad
9451 Atkinson Street, Ste. 100

Roseville, CA 95747
Contract: #4212111B254 SOIL

SITE	TICKET	GRID
01	653029	

WEIGHMASTER: FELIPE C

DATE IN	TIME IN
16 November 2011	9:59 am

DATE OUT	TIME OUT
16 November 2011	10:34 am

VEHICLE	ROLL OFF
CST4	

REFERENCE	ORIGIN
093699	SANTA ROSA

00 Gross Weight 87,800.00 lb
Stored Tare Weight 30,900.00 lb
Net Weight 56,900.00 lb 28.45 TN

Inbound - SCALE TICKET

QTY	UNIT	DESCRIPTION	RATE	EXTENSION	TAX	TOTAL
28.45	TN	SW-BENEFICIAL REUSE				
1.00	LD	ENVIRONMENTAL FEE				

NET AMOUNT
TENDERED
CHANGE

REPUBLIC SERVICES

SIGNATURE

CHECK NO.

(9)(7)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAC002678696 | Manifest Document No. 5067 | 2. Page 1 of 1 | 093699

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD
10031 FOOTHILL BLVD
ROSEVILLE CA 95747
Attn: JIM DIEL

2 FOURTH & 34 SIXTH STREET
SANTA ROSA CA 95402

4. Generator's Phone (916) 789-6461

5. Transporter 1 Company Name: Cruz Sons T4 | 6. US EPA ID Number | A. Transporter's Phone: 7076783189

7. Transporter 2 Company Name | 8. US EPA ID Number | B. Transporter's Phone

9. Designated Facility Name and Site Address
KELLER CANYON LANDFILL
901 BAILEY RD
PITTSBURG CA 94565

10. US EPA ID Number

C. Facility's Phone: 925 458-9800

11. Waste Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a. NON HAZARDOUS WASTE SOLID	001	D T.	18	T
b.				
c.				
d.				

D. Additional Description for Materials Listed Above
a. SOIL & DEBRIS P#
b.
c.
d.

E. Handling Codes for Wastes Listed Above
a.
b.
c.
d.

15. Special Handling Instructions and Additional Information
24 HR EMERGENCY PHONE (626) 961-9326 WEAR APPROPRIATE PROTECTIVE EQUIPMENT
WO# 78275-1

PO# 4212118554

GA00255

16. GENERATOR'S CERTIFICATION: I Certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

Printed/Type Name: ON BEHALF OF GENERATOR ANGEL HERRERA | Signature | Month 11 | Day 16 | Year 11

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Type Name: FRANK CRUZ | Signature | Month 11 | Day 16 | Year 11

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Type Name | Signature | Month | Day | Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of Receipt or waste materials covered by this manifest as noted in Item 19.

Printed/Type Name: Frank Cornejo | Signature | Month 11 | Day 16 | Year 11

GENERATOR

TRANSPORTER

FACILITY

TRANSPORTER #2

Well Abandonment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board
Case Nos. 1TSR19 and 1NSR196

Antea Group Project No. UPR8248
February 12, 2013

Prepared for:
Janice Goebel
North Coast Regional Water Quality Control Board
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

Matt L. Villaber
Registered Environmental Health Specialist
Sonoma County Environmental Health
625 5th Street
Santa Rosa, CA 95404

Prepared by:
Antea™Group
1155 North First Street, Suite 201
San Jose, California 95112
1 800 477 7411

Inogen Environmental Alliance

Antea USA, Inc.

Well Abandonment Work Plan

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625 5th Street
Santa Rosa, CA 95404

Prepared by:
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1155 North First Street, Suite 201
San Jose, California 95112
1 800 477 7411

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Well Abandonment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California
North Coast Regional Water Quality Control Board
Case Nos. 1TSR19 and 1NSR196

1.0 INTRODUCTION

Antea™Group has prepared this *Well Abandonment Work Plan* to outline proposed abandonment procedures for the proper destruction of well SRMW-08, located at the above referenced site. This work is being conducted to prevent the improper abandonment of (or uncontrolled damage to) this existing monitoring well. On February 11, 2012, Antea Group and Union Pacific Railroad (UPRR) received notification from the property owner, Sonoma Marin Area Rail Transit District (SMART), that construction at the site is occurring. A train station platform is currently being constructed on the location of this existing well. The North Coast Regional Water Quality Control Board (NCRWQCB) approved the abandonment of this well in an email dated February 12, 2013 (**Appendix A**).

2.0 SITE LOCATION AND DESCRIPTION

Currently, the majority of the site is used as a construction equipment and supply storage area for SMART during offsite construction activities. Additionally, onsite construction activities are occurring in the northern portion of the property. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03. (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the 3 West Third Street and 60 West Sixth Street Warehouses, to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties. A site location map is provided as **Figure 1** and a site plan is provided as **Figure 2**.

3.0 PRE-FIELD ACTIVITIES

Prior to initiating field activities, Antea Group will ensure that the Health and Safety Plan (HASP) is updated for the current field tasks and prepared in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP will contain a list of emergency contacts, potential contaminants, personal protective equipment requirements, and a hospital route map to the nearest emergency facility. The HASP will be reviewed daily by field personnel.

Antea Group will contact Underground Service Alert and UPRR's Fiber Optic Hotline to mark the site for subsurface utilities. Well destruction permits will be obtained from the Sonoma County Department of Health Services, Environmental Health Division. The permit application is included as **Appendix B.**

4.0 GROUNDWATER MONITORING WELL ABANDONMENT

One (1) onsite groundwater monitoring wells (SRMW-08) will be destroyed by drilling out the well to its total constructed depth of 22 feet below ground surface (bgs). Drilling will be conducted by a licensed C-57 contractor. Prior to drilling, an air knife (vacuum) rig will clear the upper five feet of soil surrounding the well to expose potentially unmarked utilities and prevent utility damage during auger advancement. The well casing, filter pack, and backfill materials will be removed by advancing eight-inch diameter hollow-stem augers to the total constructed well depth (22 feet bgs). After removing the well casing and annular material, the bore will be backfilled with neat cement grout through a tremie pipe to just below ground surface, then capped with concrete at the surface. The boring log illustrating the well's original construction detail is provided as **Appendix C**.

5.0 DISPOSAL OF INVESTIGATION DERIVED WASTE

Soil cuttings, construction debris, and wastewater generated during well destruction activities will be placed in Department of Transportation (DOT) approved 55-gallon drums, sealed and labeled in accordance with the corresponding DOT protocols for non-hazardous waste. The drums will be temporarily stored on-site pending waste profiling, then transported by United Pumping, Inc. and disposed of at a licensed facility. Final non-hazardous waste manifests will be submitted with the well destruction report following completion of field activities.

6.0 SCHEDULE/REPORTING

The abandonment of SRMW-08 is scheduled to occur Friday, February 15, 2013. A summary letter/report documenting well abandonment activities will be issued upon receipt of the final executed waste manifests, estimated to be received within 45 days of the completion of field activities.

The activities outlined in this work plan and the preparation of the corresponding report will be conducted under the direction of a licensed California Professional Geologist. In accordance with the California State Water Resources Control Board requirements, the well abandonment report and site plan (showing the well as destroyed) will be uploaded to the GeoTracker database under both of the site's case numbers.

7.0 REMARKS

The findings contained in this document represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This document is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this document.

Sincerely,

Lia N. Holden
Senior Project Manager
California Registered Professional Geologist No. 8584
Antea Group

PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/13
STATE OF CALIFORNIA

Figures

Figure 1 Site Location Map
Figure 2 Site Plan





North

0 1000 2000 FT

SCALE

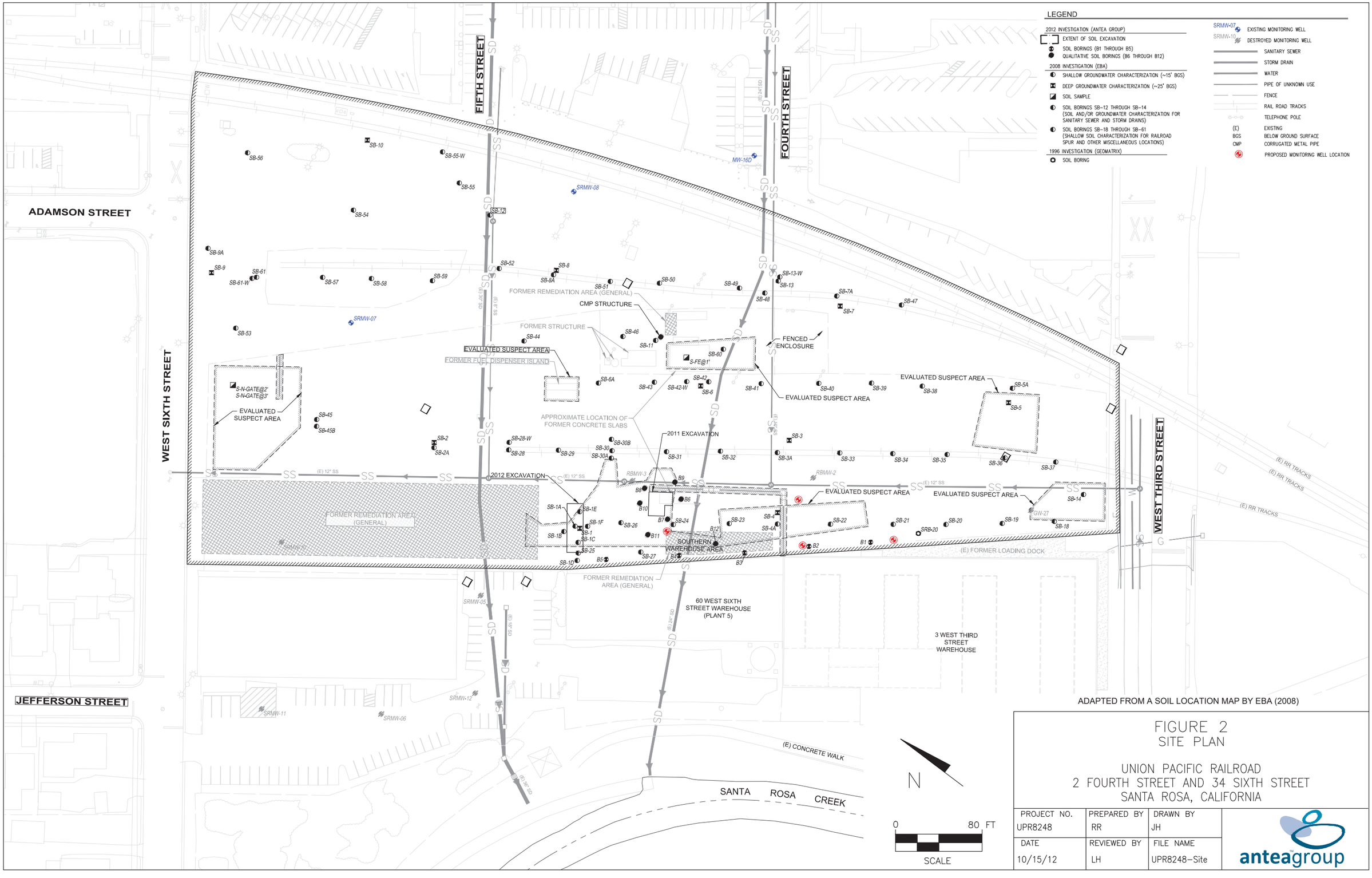
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup



ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
UPR8248	RR	JH	anteagroup
DATE	REVIEWED BY	FILE NAME	
10/15/12	LH	UPR8248-Site	

Appendix A

Agency Correspondence

From: Goebel, Janice@Waterboards
To: Lia Holden
Cc: Matt Villaber (Matt.Villaber@sonoma-county.org)
Subject: RE: Southern Pacific Site, Third Street, Santa Rosa: Abandonment February 15
Date: Tuesday, February 12, 2013 11:29:19 AM

Lia,

Thanks for the update on the well abandonment and for your quick response to properly abandon the well. As we have discussed, our office is in agreement with well abandonment due to the circumstances with development of the site. If you need any assistance with this project, please let me know.

Regards,

Janice

From: Lia Holden [mailto:Lia.Holden@anteagroup.com]
Sent: Tuesday, February 12, 2013 10:23 AM
To: Goebel, Janice@Waterboards
Cc: matt.villaber@sonoma-county.org; James E. Diel
Subject: RE: Southern Pacific Site, Third Street, Santa Rosa: Abandonment February 15

Please note…abandonment is for THIS **Friday, February 15**, not February 22.

Thanks again!

Hi Janice,
Per our telephone conversations, and your verbal approval, we plan to conduct an "emergency" abandonment of well SRMW-08 this Friday, February 15. This is an upgradient well, in the path of site development activities that were schedule to occur this week. Matt at Sonoma County Environmental Health has kindly agreed to expedite the abandonment permit. Their office is closed today, but I will complete the well abandonment work plan and permit application today for his processing tomorrow. SMART has agreed to pay for the well abandonment permit.

Janice and Matt, I greatly appreciate your assistance and in working with us on such short notice.

Thank you!

Lia

Our office has moved to a new location and our direct dial phone numbers have changed. Please note the updated contact information in my signature block below.

Lia Holden, PG | Geologist - Project Manager | USA
Antea™Group
1155 North First Street, Suite 201, San Jose, California 95112
Direct: +1 (408) 606-4919| Mobile: +1 408 410 9781| Fax: +1 408 225 8506



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This e-mail is personal. For our full disclaimer, please visit http://www.anteagroup.com/confidentiality.

Appendix B

Well Abandonment Permit Application

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
625 5th Street, Santa Rosa, CA 95404
Phone (707) 565-6565 Fax (707) 565-6525 www.sonoma-county.org

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment / LOP Lead

For Office Use Only

Amount paid _____
Receipt number _____
Payment date _____ Rev. code _____
Site ID# _____
Permit # _____

Well type: ■Monitoring well ☐Recovery extraction well ☐Boring ☐Injection well ■Destruct ☐Environmental assessment
☐Soil gas survey ☐Direct push ☐Air sparging/venting ☐Remediation well ☐Other _____

Well depth 22 feet Boring depth 22 feet

On-site well/boring SRMW-08 ID # _____ # Off-site well/boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth Street and 34 Sixth Street AP# _____

Facility Name _____

On-site Owner Sonoma Marin Area Rail Transit (SMART) Phone _____

Street 490 Mendocino Avenue, Suite102 City Santa Rosa State CA Zip 95401

Responsible Party Union Pacific Railroad Phone _____

Street 2 Fourth Street and 34 Sixth Street City _____ State _____ Zip _____

Consultant Antea Group Phone _____

Street 1155 N First Street, Suite 201 City San Jose State CA Zip 95112

License #/Type 548062 - State Contractors License

Drilling Contractor Gregg Drilling & Testing, Inc. Phone _____

Street 950 Howe Road City Martinez State CA Zip 94553

C-57 License # 485615

Type of work: ☐Initial investigation _____ # Wells ☐Subsequent investigation _____ # Wells ■Destruct 1 # Wells

Groundwater investigation due to: ■Underground tank ☐Surface impoundment ■Environmental assessment
☐Surface disposal practice—specify involved industry _____
☐Other _____

Perforated intervals _____ Chemical constituents _____

Disposal method for soil cuttings 55 gallon drum Disposal method for development water _____

Drilling method well abandonment (see below) Method of drill equip. rinsate containment _____

If destroying a well, abandonment method air-knife to 5 feet bgs, advance hollow stem augers to well depth (22 ft) and grout to surface

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ○Yes ◉No
50 feet of any sanitary sewer line? ○Yes ◉No
25 feet of any private sanitary sewer line? ○Yes ◉No

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only
Address _____
_____
Site ID# _____
Permit # _____

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by this Department within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit ***only*** after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

_____ Date 2/12/13

Signature of Well Driller—***no proxies***

Insurance Carrier Accord AICW010 41100 Expiration Date 8/31/13

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by _____ Date ____/____

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____

RWQCB / LOP approval _____ Date ____/____/____

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

Appendix C

Well Construction Details

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Well No. SRMW-8**
BORING LOCATION: 340' S of 6th St., adjacent to railroad tracks	TOP OF CASING ELEVATION AND DATUM: 152.29' MSL (NAD'83, Zone 2; State of CA)
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 9/28/01 / DATE FINISHED: 9/28/01
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 22.0 / SCREEN INTERVAL (ft.): 10.9-20.5
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST 13.0, COMPL. 13.0 / CASING: 2" Sch. 40 PVC
SAMPLING METHOD: CME continuous core system [5' x 3"]	LOGGED BY: B. Mulholland
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo / REG. NO. CE038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 152.89' MSL	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					AGGREGATE BASE	Traffic Rated Well Box
1					CLAYEY SAND with GRAVEL (SC): dark olive brown (2.5YR 3/3), moist, 60% fine to coarse sand, 20% low plasticity fines, 20% fine gravel	8.25" diameter borehole
2						2" diameter Schedule 40 PVC casing
3						Type I-II neat cement grout
4						
5						
6						
7					SANDY LEAN CLAY (CL): very dark grayish brown (10YR 3/2), moist, 60% fines, 40% fine to medium sand, low to medium plasticity, firm	Bentonite chip seal
8						
9						
10						#0/30 filter pack sand
11					LEAN CLAY with SAND (CL): very dark grayish brown (10YR 3/2), moist, 75% fines, 25% fine sand, medium plasticity, firm	
12						2" diameter Schedule 40 PVC (0.010-inch slot size) screen
13					brown (10YR 4/3), wet	
14						
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Well No. SRMW-8 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					LEAN CLAY with SAND (CL): Cont'd	2" diameter Schedule 40 PVC (0.010-inch slot size) screen
17					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 90% fines, 10% fine sand, medium plasticity, firm	8.25" diameter borehole
18						
19						
20						
21						Schedule 40 PVC endcap
22					Bottom of boring at 22.0 feet	#0/30 filter pack sand
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

Well Abandonment and Site Investigation Report

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board Case Nos. 1TSR19 and 1NSR196

Antea Group Project No. UPR8248
July 26, 2013

Prepared for:
Janice Goebel
North Coast Regional Water Quality Control Board
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

Prepared by:
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1155 North First Street, Suite 201
San Jose, CA 95112
+1 800 477 7411

Inogen Environmental Alliance

Antea USA, Inc.

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Site Investigation and Well Abandonment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board
Case Nos. 1TSR19 and 1NSR196

1.0 INTRODUCTION

Antea®Group has prepared this *Site Investigation and Well Abandonment Report* on behalf of Union Pacific Railroad (UPRR) in response to the North Coast Regional Water Quality Control Board (NCRWQCB) correspondence letters contained in **Appendix A**. This report documents the recent installation of groundwater monitoring wells MW-1 through MW-4, the abandonment of wells SRMW-07 and SRMW-08, and the associated soil and groundwater sampling.

1.1 Site Description

The site is currently owned by Sonoma Marin Area Rail Transit (SMART) and is used as an equipment and supply storage area for SMART construction activities taking place off site. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the "3 West Third Street and 60 West Sixth Street Warehouses", to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties (**Figure 1**).

1.2 Site History

The site was historically used as a railroad freight depot and maintenance/fueling yard from the late 1800's through the 1960's. This site has been vacant and generally unused since the late 1960's. Consultants have conducted environmental investigations and remediation efforts at the site since 1987. Former operations at the site include the use of aboveground storage tanks (ASTs), underground storage tanks (USTs), a main railroad track system that occupied the eastern portion of the property, several associated railroad spurs and siding, a turntable, warehouses, and freight houses. A Sanborn Fire Insurance map dated 1885 indicates the Santa Rosa Woolen Mills was located in the northwestern portion of the site until approximately 1906 (EBA Engineering (EBA), 2009a). The site's previous environmental case was closed in 2007, but was reopened in 2009 following the discovery of an underground storage tank in 2008. **Appendix B** includes a summary of environmental investigations and remedial activities conducted at the site. **Figure 2** shows the site's historic borings and well location.

1.3 Geologic and Hydrogeologic Setting

1.3.1 Regional Geology

The site is centrally located within the Santa Rosa Plain, which is part of the Coast Range Geomorphic Province of northern California. The Coast Range Geomorphic Province is characterized as a series of northwest trending elongated ridges and valleys that are a result of folding and faulting. The Santa Rosa Plain consists of alluvial fan deposits of Pleistocene and Holocene age. The alluvial fan deposits form a nearly continuous blanket over the Santa Rosa Plain and consist of poorly sorted coarse sand and gravel, moderately sorted fine sand and silt, and silty clay. The region has been mapped as having basement materials that underlie the alluvial fan deposits. The basement materials consist of marine sedimentary rocks of the Miocene Age Wilson Grove Formation. Portions of the Wilson Grove Formation are overlain by younger continental sedimentary rocks of the Pliocene-Pleistocene Age Glen Ellen Formation (EBA, 2008b).

1.3.2 Site Geology and Hydrogeology

The geology of the project site is characterized by shallow rocky fill or organic clay in the upper one to two feet below ground surface (bgs) that is underlain by sandy silt and clayey sediments containing varying amounts of angular to sub-rounded gravel. These finer-grained sediments extend to approximately 20 feet bgs, and are underlain by a laterally continuous sandy coarse-grained unit extending to a minimum of 26 feet bgs, which is the maximum depth explored at the project site to date (EBA, 2008b).

The hydrogeology of the project site is likely controlled by gradational lenses of sediments separated by clayey layers. A thin, semi-continuous sandy unit located at an average depth of approximately 9-15 feet bgs overlays a similarly laterally extensive clayey bed. The more impervious clay units likely act as confining layers inhibiting the downward vertical migration of fluids. Based on this observation, the resulting perched groundwater in the upper permeable sand unit (Zone A) has been independently sampled from the deeper water-bearing zone present at a depth of approximately 20 to 25 feet bgs (EBA, 2008). However, as EBA previously noted, wells SRMW-7 and SRMW-8 were screened across both zones. The predominant groundwater flow direction is approximately west-southwest across the project site towards Santa Rosa Creek (approximately 160 feet beyond the western side of the property). Therefore, the eastern portion of the project site is considered up gradient relative to the western portion (EBA, 2008b).

2.0 SCOPE OF WORK

As stated in the introduction, Antea Group addressed RWQCB directives by conducting the following activities:

Well Abandonments (SRMW-07 and SRMW-08): Due to SMART's track expansion and proposed on-site developments, monitoring wells SRMW-07 and SRMW-08 needed to be abandoned. Both wells were installed prior to the site's initial 2007 case closure. These wells were screened across two water-bearing

zones and no longer used for sample collection. Antea Group abandoned the monitoring wells during two separate events.

- **Well Installations (MW-1 through MW-4):** Antea Group installed four groundwater monitoring wells to further investigate the groundwater impacts from both on and off-site petroleum use and storage. The monitoring wells were subsequently surveyed, developed and sampled.

2.1 Pre-field Activities

Prior to initiating field activities, Antea Group produced a Health and Safety Plan (HASP) in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP contained a list of regulatory and emergency contacts, as well as a hospital route map to the nearest emergency facility. Field personnel conducted a daily review of the HASP for site-specific updates or changes in work conditions. Antea Group obtained all necessary soil boring permits from Sonoma County for well abandonment and installation activities. In addition, Antea Group conducted pre-field notifications, as required by the regulatory and permitting agencies. **Appendix C** includes copies of the permits obtained from County of Sonoma – Department of Health Services.

Prior to drilling, Antea Group conducted a site visit to mark the planned drilling locations as required by Underground Service Alert (USA). Antea Group called USA and utilized a private utility locating service to clear boring locations and further minimize the potential for encountering subsurface utilities during well installation and abandonment.

2.2 Well Abandonments

Prior to drilling for well abandonment, the first five feet (or more, in instances where utilities are suspected in close proximity) of each borehole were cleared with an air-knife and vacuum rig, or hand auger surrounding the existing well. This was conducted as an added safety measure to avoid encountering subsurface utilities. Destruction of SRMW-07 and SWMW-08 occurred on February 15, 2013 and May 15, 2013, respectively. Each well was drilled out to its original bore depth using 8-inch diameter augers. Subsequent to removing the well casing, the boreholes were backfilled (grouted) to the surface with neat cement. Backfilling continued until the level of grout within the former well bore stabilized (until the grout level did not decrease). Antea Group has completed and submitted the Well Completion Forms to the Department of Water Resources (DWR) and the County of Sonoma – Department of Health Services.

2.3 Groundwater Monitoring Well Installation

On May 5 and 6, 2013, Antea Group installed four groundwater monitoring wells (MW-1 through MW-4). Following airknife and vacuum clearing to five feet bgs, Gregg Drilling and Testing advanced 8-inch hollow stem augers to approximately 20 feet bgs. Monitoring well casings for MW-1 and MW-2 were set at depths of 20 feet bgs; casing depths for MW-3 and MW-4 were set at 18.5 feet bgs. Each of the four wells screened with 10-foot long screen interval using 0.020-inch slotted casing.

The locations of monitoring wells MW-1 through MW-4 are shown on **Figure 2**. **Appendix D** includes the standard procedures for hollow stem auger drilling and groundwater construction, equipment decontamination, and waste handling and disposal.

Antea Group field screened the soil samples at approximate 5-foot depth intervals using a pre-calibrated Photo Ionization Detector (PID). PID readings were recorded on each boring log. **Appendix D** includes the standard organic vapor procedures. Soil in each well bore was classified using the United Soil Classification System. **Appendix E** includes the boring logs and well construction information for the four monitoring wells. Cross Sections with lateral interpretations are included as **Figures 3 and 4**.

Samples were retained for laboratory analysis from approximately 5 feet and 10 feet bgs in all soil borings. The 5-foot samples were collected to obtain a representative shallow soil samples in addition to collecting data for lateral comparison to data from previous assessments. The approximate 10-foot interval samples were collected to assess soil conditions at the groundwater-soil interface. An additional soil sample was obtained from 16 feet bgs in MW-1 as this well was installed nearest the former UST excavation area.

Soil samples were collected in glass jars, capped, packed with ice and submitted to TestAmerica Laboratories, Inc. (TestAmerica), located in Pleasanton, California and analyzed for the following:

- Diesel range organics (DRO) by Environmental Protection Agency (EPA) Method 8010B with silica gel clean-up,
- motor oil range organics (MORO) by EPA Method 8010B with silica gel clean up, and
- polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM.

Soil analytical results are summarized in **Table 1** and discussed in Section 4.1.

2.4 Groundwater Monitoring Well Survey and Development

Antea Group subcontracted Morrow Surveying (Morrow) to survey the new wells on May 17, 2013. Morrow surveyed the northing/easting, latitude/longitude and elevation (accurate to the nearest 0.01 foot) of the new wells using North American Datum (NAD) 83. The survey report is contained in **Appendix F**. The survey data will be uploaded into the State of California GeoTracker database with this report.

On May 20, 2013, Blaine Tech Services, Inc. (Blaine Tech), developed newly-installed monitoring wells MW-1 through MW-4 by surging the screened interval with a 2-inch diameter surge block and then purging a minimum of 10 well casing volumes via electric submersible pump. Blaine Tech recorded depth to water, purge rate, temperature, conductivity, turbidity, and pH during development activities. **Appendix G** includes Blaine Tech's well development field sheets.

2.5 Groundwater Monitoring Well Sampling

On May 29, 2013, Blaine Tech gauged and purged/sampled each well. **Appendix H** includes copies of Blaine Tech's well sampling data sheets; the following table presents a summary of the recent gauging and sampling information.

Well gauging and sampling date:	May 29, 2013
Wells gauged and sampled	MW-1 through MW-4 **(Table 2)**
Purge method:	Low flow via peristaltic pump
Sample collection method:	New tubing and peristaltic pump
Groundwater parameters measured (**Appendix B**):	Temperature, pH, Conductivity, Oxidation-reduction potential (ORP), Turbidity, Dissolved Oxygen (DO) and Depth to water (DTW)
Wells with measurable LNAPL:	None

Blaine Tech submitted groundwater samples collected on May 29, 2013, under chain-of-custody protocol to TestAmerica. Groundwater samples were analyzed for the following:

- Diesel range organics (DRO) by Environmental Protection Agency (EPA) Method 8010B with silica gel clean-up,
- motor oil range organics (MORO) by EPA Method 8010B with silica gel clean up, and
- polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM.

Groundwater analytical results are presented in **Table 2** and discussed in Section 3.2.

3.0 RESULTS AND DISCUSSIONS

The analytical results from soil and groundwater samples collected in May 2013 are summarized in **Table 1 and Table 2,** respectively. Conestoga-Rovers and Associates (CRA) performed a data quality assessment and validation for laboratory reports generated for this investigation. CRA concluded that data included in the reports are valid for the intended purpose. Validation forms for the soil and groundwater data are included with the laboratory analytical reports in **Appendices I and J,** respectively.

3.1 Soil Analytical Data

PID readings ranged from 1.8 to 50.1 parts per million (ppm) in soils from monitoring well MW-1, MW-2 and MW-3. In MW-4, PID readings ranged from 70 to 375 ppm; the highest of which was detected at 14 feet bgs, near the depth of the first encountered water.

DRO was detected above the laboratory reporting limit (LRL) in four of the nine soil samples collected. All detections were below the San Francisco Regional Water Quality Control Board's 2013 Tier 1 Environmental Screening Level (ESL) of 100 milligrams per kilogram (mg/kg) with the exception of a detection of 290 mg/kg in the soil sample collected at 10.5 feet bgs in MW-4. In the same soil sample, detections of MORO and various PAH

were reported above the LRL. However, all detections were below their respective Tiers 1 ESLs. Minor concentrations of various PAHs were also detected in the soil sample collected at 5.0 feet bgs in MW-3. See **Table 1** for a summary of detections and their respective screening levels.

3.2 Groundwater Data

Using the gauging data collected on May 29, 2013, Antea Group calculated the groundwater elevation in each well from surveyed well casings. **Figure 5** shows groundwater flow direction to the west-northwest at a shallow gradient of 0.031 feet per foot (ft/ft). In historic reports, groundwater elevation contours prepared with the sites former well network showed somewhat variable localized flow patterns across the site with an overall flow toward the west-southwest, which is more directly toward Santa Rosa Creek. Depth to groundwater ranged from 9.90 feet bgs (MW-4) to 14.03 feet bgs (MW-1) feet below ground surface.

Groundwater samples from all wells were below laboratory reporting limits for all analytes. Groundwater analytical data, depth to water measurements, and well casing and groundwater elevations are listed on **Table 2.**

5.0 CONCLUSIONS AND RECOMMENDATIONS

- Antea Group abandoned two monitoring wells (SRMW-07 and SRMW-08) in February and May 2013 to facilitate SMART's site improvement activities, and per NCRWQCB request. These wells were screened across both the shallow and deeper water-bearing zones and last sampled by EBA in 2008. During that 2008 sampling event, all analytes were below screening levels in SRMW-07. Well SRMW-08 was located near the eastern property boundary, upgradient from onsite source areas, and contained methyl tertiary butyl ether (MTBE) above the ESL. MTBE is a not a chemical associated with the site.
- Blaine Tech collected groundwater samples from the monitoring wells on May 29, 2013. No analytes were detected above the LRLs.
- Antea Group installed four monitoring wells (MW-1 through MW-4) in May 2013 and collected soil samples during their installation. The highest detections in soil from MW-4 at 10.5 feet bgs; only the DRO detection was above its ESL. The depth of the detections in MW-4 coincides with the top of the saturated zone observed during the subsequent groundwater sampling event (9.90 feet bgs). The more elevated groundwater impacts previously observed along the property boundary in 2012 (perimeter borings B-1 though B-4) may be attributed to previous operations on the adjacent property west of the site. This notion was discussed in further detail in our *Site Remedial Action and Investigation Report* dated October 16, 2012, and is further supported by the lower detections in soil and groundwater obtained during the current investigation.
- Since the case reopened, the 2008 Soil and Groundwater Management Plan was submitted by EBA (and approved by the RWQCB) to manage known soil and groundwater impacts that may be encountered during site development/improvement activities. Additionally, the USTs discovered in 2008 were removed in 2011 with approximately 210 tons of impacted soil from the former UST pit. Further, in 2012,

approximately 758 tons of secondary source material was removed to address impacts in the vicinity of former boring SB1 as requested by the RWQCB. The site's soil and groundwater concentrations are comparable to the known conditions at the time of the site's 2007 case closure. Therefore, Antea Group recommends three additional quarterly groundwater sampling events to evaluate the stability of groundwater conditions over one hydrologic cycle. If conditions remain stable, Antea Group will request that the NCRWQCB consider the site for environmental case closure.

6.0 WASTE DISPOSAL

Soil cuttings, construction debris, and wastewater generated during well destruction, well installation, well development and well sampling were placed in Department of Transportation (DOT) approved 55-gallon drums, sealed and labeled in accordance with DOT protocols for non-hazardous waste. The drums were temporarily stored on-site pending waste profiling, then transported by United Pumping, Inc. and disposed of at a licensed facility. The executed non-hazardous waste manifests are included in **Appendix K.**

7.0 REMARKS

The findings contained in this document represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This document is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this document.

Renee Ransom
Staff Professional
Antea Group

The information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



Lia Holden, PG
Geologist - Project Manager
California Registered Professional Geologist No. 8584
Antea Group

Cc: Matt L. Villaber - Sonoma County Environmental Health
Marita Petersen – Santa Rosa Fire Department
Mr. John Nemeth, Ms. Joan Thomas, and Ms. Laura Giraud - SMART

8.0 REFERENCES

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EBA Engineering (2009b). *Soil Excavation Work Plan, Sonoma-Marin Area Rail Transit Properties, 2 Fourth Street and 34 Sixth Street, Santa Rosa*, California, dated October 2009.

Figures

Figure 1	Site Location Map
Figure 2	Site Plan
Figure 3	Cross Section A-A’
Figure 4	Cross Section B-B’
Figure 5	Groundwater Contour Map





North

0 1000 2000 FT

SCALE

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

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LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

SRMW-07 EXISTING MONITORING WELL

SRMW-10 DESTROYED MONITORING WELL

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE

(E) EXISTING
BGS BELOW GROUND SURFACE
CMP CORRUGATED METAL PIPE

N

0 20 FT
SCALE

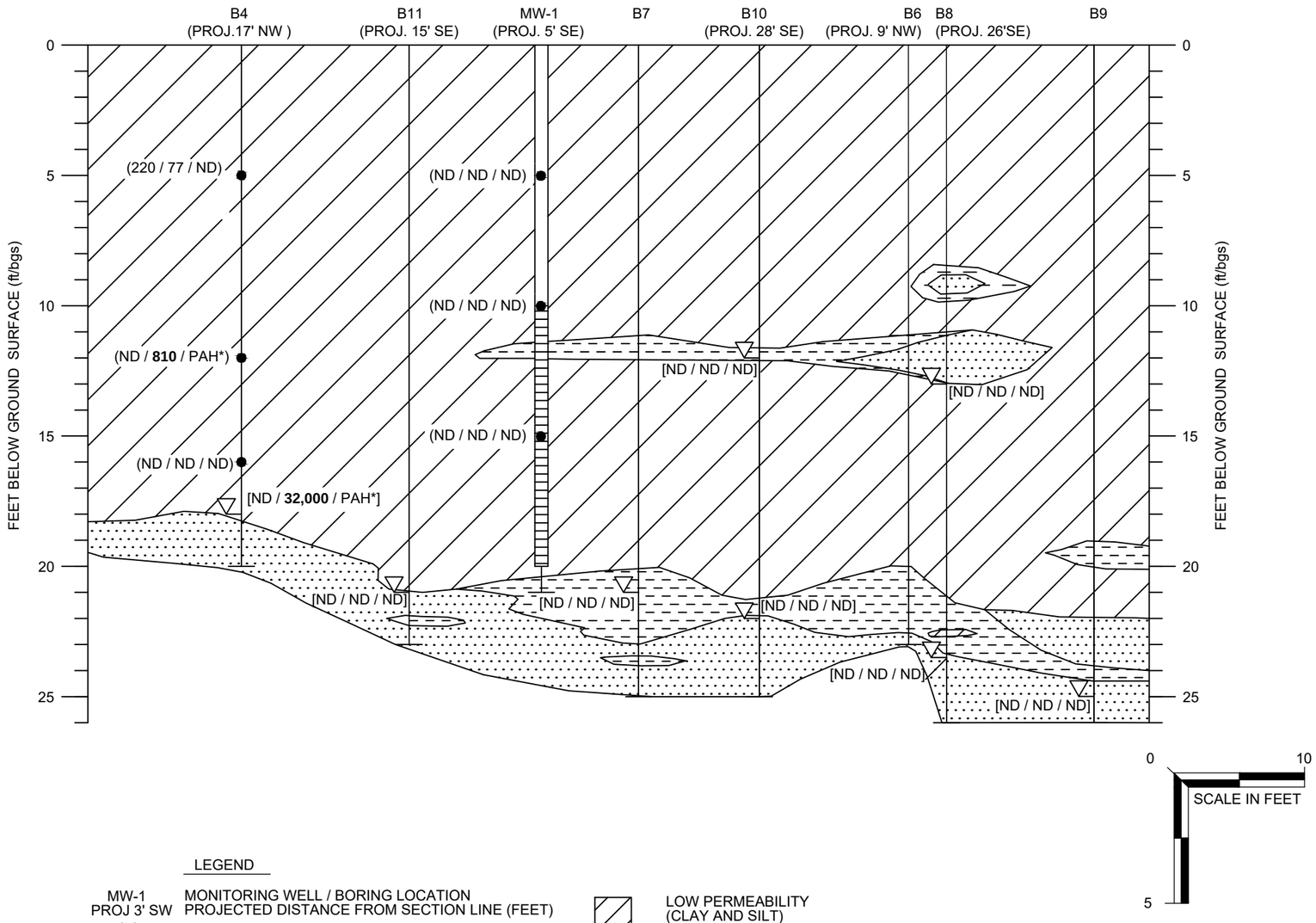
ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

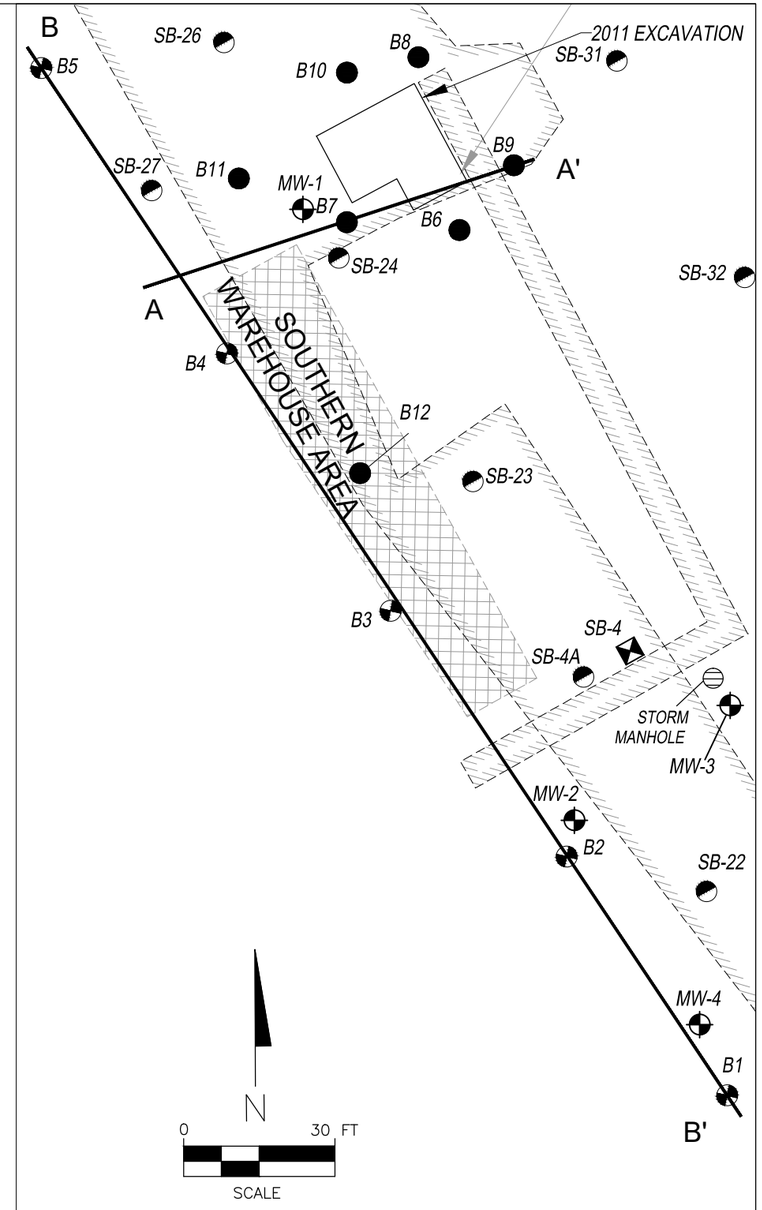
FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
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DATE	REVIEWED BY	FILE NAME
7/19/13	LH	UPR8248-Site

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LEGEND

MW-1 / PROJ 3' SW — MONITORING WELL / BORING LOCATION; PROJECTED DISTANCE FROM SECTION LINE (FEET)

WELL CASING / EXPLORATORY BORING

WELL SCREEN

(ND / ND / ND) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (mg/kg)

[ND / ND / ND] — DEPTH TO FIRST ENCOUNTERED GROUNDWATER

GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (µg/L)

LOW PERMEABILITY (CLAY AND SILT)

MEDIUM PERMEABILITY (SILTY AND CLAYEY SANDS)

HIGH PERMEABILITY (SAND AND GRAVELS)

APPROXIMATE STRATIGRAPHIC BOUNDARY

NOTES:

MORO= MOTOR OIL RANGE ORGANICS
DRO = DIESEL RANGE ORGANICS
PAH = POLYCYCLIC AROMATIC HYDROCARBONS
PAH* = REFER TO TABLES 1 & 2 FOR SPECIFIC PAH CONCENTRATION
mg/kg = MILLIGRAMS PER KILOGRAM
µg/L = MICROGRAMS PER LITER
ND = LESS THAN LABORATORY INDICATED REPORTING LIMITS
BOLD= EXCEEDS ENVIRONMENTAL SCREENING LEVELS (ESL)

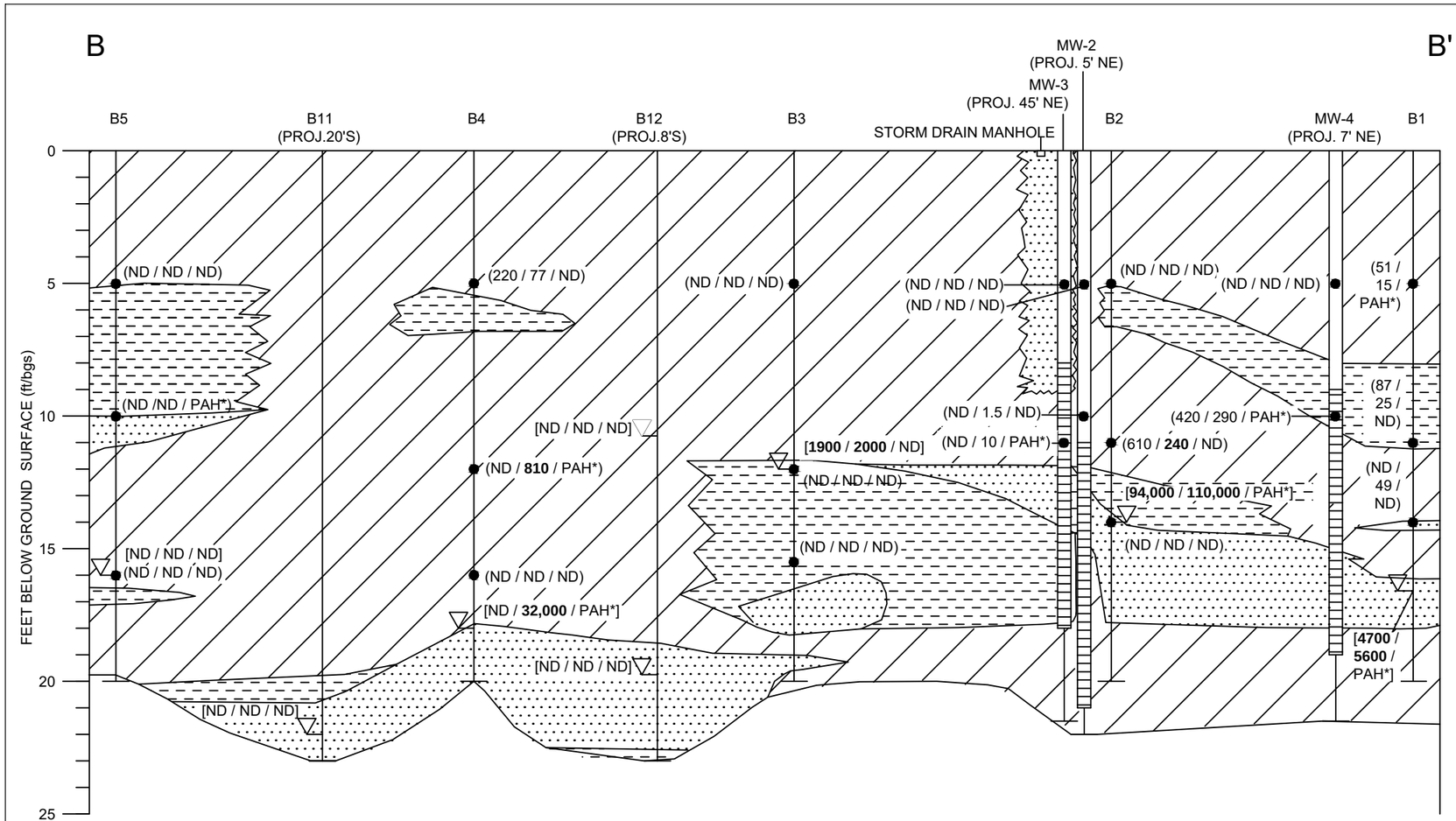
STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

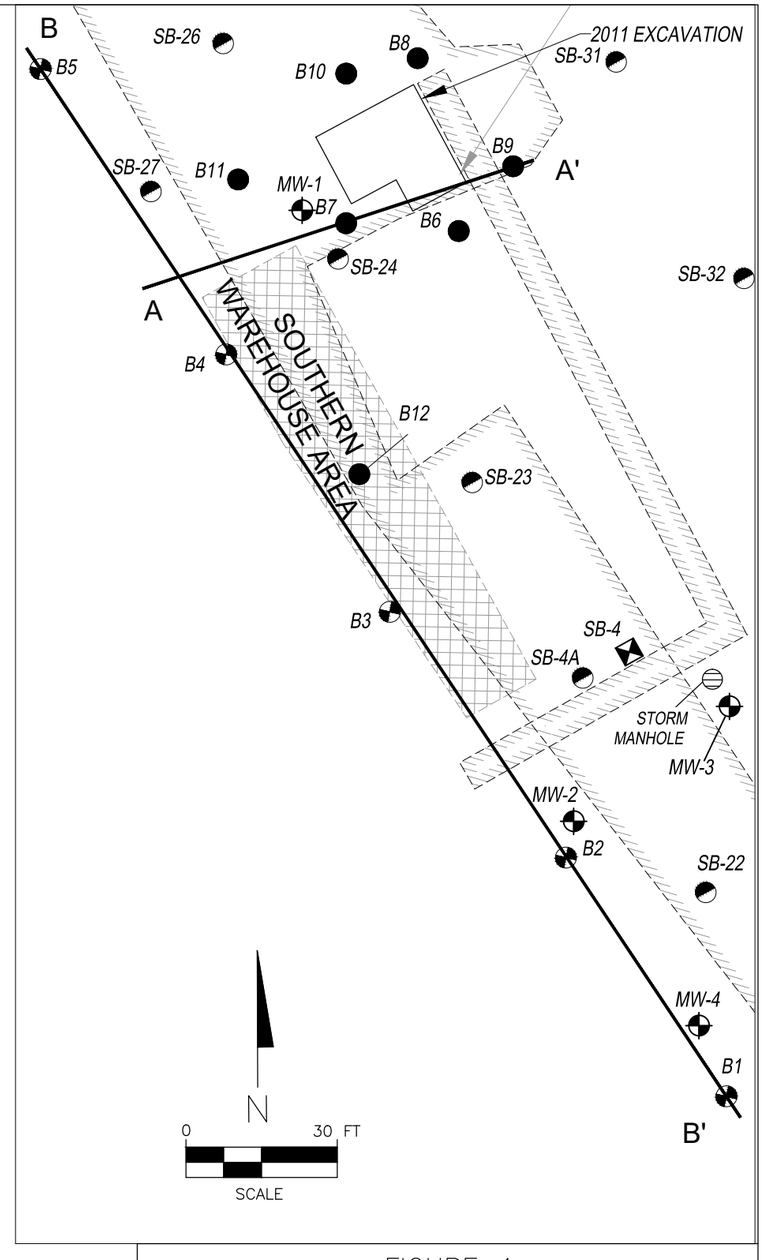
FIGURE 3
CROSS SECTION A – A'

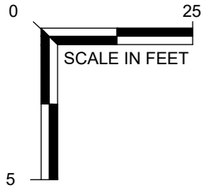
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
7/19/13	LH	UPR8248-Cross

antea group







LEGEND

MW-1 PROJ 3' SW — MONITORING WELL / BORING LOCATION; PROJECTED DISTANCE FROM SECTION LINE (FEET)

WELL CASING / EXPLORATORY BORING

WELL SCREEN

(ND / ND / ND) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (mg/kg)

DEPTH TO FIRST ENCOUNTERED GROUNDWATER

[ND / ND / ND] — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: MORO / DRO / PAH* (µg/L)

LOW PERMEABILITY (CLAY AND SILT)

MEDIUM PERMEABILITY (SILTY AND CLAYEY SANDS)

HIGH PERMEABILITY (SAND AND GRAVELS)

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mg/kg = MILLIGRAMS PER KILOGRAM
µg/L = MICROGRAMS PER LITER
ND = LESS THAN LABORATORY INDICATED REPORTING LIMITS
BOLD= EXCEEDS ENVIRONMENTAL SCREENING LEVELS (ESL)

STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

FIGURE 4
CROSS SECTION B – B'

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

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APPROXIMATE LOCATION OF FORMER CONCRETE SLABS

SB-30B

SB-29 SB-30 SB-31 SB-32 SB-3 SB-3A

SB-30A

(E) 12" SS

RBMW-3 RBMW-2

B9 B8 B6 B10 B7 B11 B12 B4 B3

139.0 140.0 141.0 142.0 138.0

FORMER LOCATION OF USTs AND EXCAVATION

MW-3 (142.02)

SB-1E SB-1A SB-1F SB-1B SB-1 SB-1C SB-25 SB-1D

SB-26 SB-24 SB-23 SB-4 SB-4A SB-22

MW-1 (137.83)

SOUTHERN WAREHOUSE AREA

MW-2 (141.96) MW-4 (142.07) B1 B2

SB-27 B5

0.031 ft/ft

FORMER REMEDIATION AREA (GENERAL)

GROUNDWATER

(142.02) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

142.0 GROUNDWATER ELEVATION CONTOUR LINE (ft/msl) –DASHED WHERE INFERRED (CONTOUR INTERVAL = 1 FT)

0.031 ft/ft GENERAL DIRECTION OF GROUNDWATER FLOW AND HYDRAULIC GRADIENT (ft/ft)

N

0 20 FT

SCALE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
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UTILITIES

- SS SANITARY SEWER
- SD STORM DRAIN
- W WATER
- U PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE

(E) EXISTING

BGS BELOW GROUND SURFACE

CMP CORRUGATED METAL PIPE

FIGURE 5
GROUNDWATER CONTOUR MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
7/19/13	LH	UPR8248–Site

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Tables

Table 1 Current Soil Analytical Table
Table 2 Current Groundwater Analytical Table

TABLE 1
CURRENT SOIL ANALYTICAL DATA
UNION PACIFIC RAILROAD - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location:	Sample ID:	Sample Date:	Sample Depth (feet bgs)	DRO mg/kg	MORO mg/kg	PAHs [2]															
						Acenaphthene mg/kg	Acenaphthylene mg/kg	Anthracene mg/kg	Benzo(a) anthracene mg/kg	Benzo(a) pyrene mg/kg	Benzo(b) fluoranthene mg/kg	Benzo(g,h,i) perylene mg/kg	Benzo(k) fluoranthene mg/kg	Chrysene mg/kg	Dibenz(a,h) anthracene mg/kg	Fluoranthene mg/kg	Fluorene mg/kg	Indeno(1,2,3-cd)pyrene mg/kg	Naphthalene mg/kg	Phenanthrene mg/kg	Pyrene mg/kg
MW-1	SO-2344-MW1-5.0-5.5-150513	5/15/2013	5-5.5	<1.0	<50	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
	SO-2344-MW1-10.5-11.0-150513	5/15/2013	10.5-11	<1.0	<50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	SO-2344-MW1-16.0-16.5-150513	5/15/2013	16-16.5	**1.1**	<50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-2	SO-2344-MW2-5.0-5.5-150513	5/15/2013	5-5.5	<0.99	<50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	SO-2344-MW2-9.5-10.0-150513	5/15/2013	9.5-10	**1.5**	<50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-3	SO-2344-MW3-5.0-5.5-160513	5/16/2013	5-5.5	**10**	<50	<0.0050	<0.0050	**0.0084**	<0.0050	<0.0050	**0.013**	**0.0085**	<0.0050	**0.011**	<0.0050	**0.0084**	**0.0084**	<0.0050	<0.0050	**0.018**	**0.013**
	SO-2344-MW3-10.5-11.0-160513	5/16/2013	10.5-11	<1.0	<50	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
MW-4	SO-2344-MW4-5.0-5.5-160513	5/16/2013	5-5.5	<1.0	<50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	SO-2344-MW4-10.5-11.0-160513	5/16/2013	10.5-11	290	**420**	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	**0.012**	<0.0099	<0.0099	**0.054**	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	**0.037**
San Francisco Bay RWQCB Residential ESL (shallow/deep)				**100/240**	**500/5000**	**16***	**13***	**2.8***	**0.38***	**0.038***	**0.38***	**27***	**0.38***	**3.8***	**0.11***	**40/60**	**8.9***	**0.38***	**1.2***	**11***	**85***
San Francisco Bay RWQCB Industrial ESL (shallow/deep)				**500/530**	**2500/5000**	**16***	**13***	**2.8***	**0.45***	**0.045***	**0.45***	**27***	**0.45***	**4.5***	**0.13***	**40/60**	**8.9***	**0.45***	**1.2***	**11***	**85***
California Human Health Screening Levels (residential/commerical)				**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**0.033/0.13**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**

Notes:

< - Denotes less than the Laboratory Reporting Limit (LRL)

mg/kg - milligrams per kilogram

mg/L - Milliligrams per Liter

bgs - Below Ground Surface

Bold - Reported concentration exceeded the LRL

Bold and Highlighted - Reported concentration exceeded one or more aplicable ESL or screening level

ESL - San Francisco Bay RWQCB Environmental Screening Levels

* - ESL is the same for shallow and deep soils

Analyte Definitions:

MORO - Motor Oil Range Organics (C24-C36)

DRO - Diesel range organics (C10-C28)

GRO - Gasoline range organics

PAHs - Polycyclic Aromatic Hydrocarbons

Analytical Notes

1 - Analyzed by Environemntal Protection Agency (EPA) Method 8015B with Silica Gel Cleanup

2 - Analyzed by EPA Method 8270C SIM

ESL - Environmental Screening Levels

RWQCB - Regional Water Quality Control Board

NE - Not established

TABLE 2
CURRENT GROUNDWATER ANALYTICAL DATA
UNION PACIFIC RAILROAD - 2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Sample Location:	Sample ID	Sample Date:	PVC Elevation	Depth to Water	Groundwater Elevation	DRO[1]	MORO[1]	PAHs[2]															
								Acenaphthene	Acenaphthylene	Anthracene	Benzo(a) anthracene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(g,h,i) perylene	Benzo(k) fluoranthene	Chrysene	Dibenz(a,h) anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	DO
						ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L
MW-1	W-2344-MW-1-290513	05/29/2013	151.86	14.03	137.83	< 53	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	3.03
MW-2	W-2344-MW-2-290513	05/29/2013	152.79	10.83	141.96	< 53	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.58
MW-3	W-2344-MW-3-290513	05/29/2013	153.44	11.42	142.02	< 53	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.18
MW-4	W-2344-MW-4-290513	05/29/2013	151.97	9.90	142.07	< 53	< 110	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	< 0.11	0.41

Notes:

ug/L	micrograms per liter
NTU	Nephelometric Turbidity Unit
mg/L	milligrams per liter
uS/cm	microsiemens per centimeter
< -	Denotes less than the Laboratory Reporting Limit (LRL)

Analyte Definitions:

MORO - Motor Oil Range Organics
DRO - Diesel range organics
GRO - Gasoline range organics
VOCs - Volatile Organic Compounds
PAHs - Polycyclic Aromatic Hydrocarbons
DO - Dissolved Oxygen, field reading

Analytical Notes

1 - Analyzed by Environmental Protection Agency (EPA) Method 8015B with Silica Gel Cleanup
2 - Analyzed by EPA Method 8270C SIM

Appendix A

Agency Correspondence

From: Goebel, Janice@Waterboards
To: Lia Holden
Cc: Matt Villaber (Matt.Villaber@sonoma-county.org)
Subject: RE: Southern Pacific Site, Third Street, Santa Rosa: Abandonment February 15
Date: Tuesday, February 12, 2013 11:29:19 AM

Lia,

Thanks for the update on the well abandonment and for your quick response to properly abandon the well. As we have discussed, our office is in agreement with well abandonment due to the circumstances with development of the site. If you need any assistance with this project, please let me know.

Regards,

Janice

From: Lia Holden [mailto:Lia.Holden@anteagroup.com]
Sent: Tuesday, February 12, 2013 10:23 AM
To: Goebel, Janice@Waterboards
Cc: matt.villaber@sonoma-county.org; James E. Diel
Subject: RE: Southern Pacific Site, Third Street, Santa Rosa: Abandonment February 15

Please note…abandonment is for THIS **Friday, February 15**, not February 22.

Thanks again!

Hi Janice,
Per our telephone conversations, and your verbal approval, we plan to conduct an "emergency" abandonment of well SRMW-08 this Friday, February 15. This is an upgradient well, in the path of site development activities that were schedule to occur this week. Matt at Sonoma County Environmental Health has kindly agreed to expedite the abandonment permit. Their office is closed today, but I will complete the well abandonment work plan and permit application today for his processing tomorrow. SMART has agreed to pay for the well abandonment permit.

Janice and Matt, I greatly appreciate your assistance and in working with us on such short notice.

Thank you!

Lia

Our office has moved to a new location and our direct dial phone numbers have changed. Please note the updated contact information in my signature block below.

Lia Holden, PG | Geologist - Project Manager | USA
Antea™Group
1155 North First Street, Suite 201, San Jose, California 95112
Direct: +1 (408) 606-4919| Mobile: +1 408 410 9781| Fax: +1 408 225 8506



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CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

February 26, 2013

Mr. Jim Diehl
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747
JEDiel@up.com

Dear Mr. Diehl:

Subject: Comments on Site Remedial Action and Investigation Report

File: Southern Pacific Transportation Company, 3rd Street Property, Santa Rosa, California, Case No 1NSR196

On October 18, 2012, Regional Water Board staff received the *Site Remedial Action and Investigation Report*, prepared by Antea Group for the former Southern Pacific Third Street property. Antea Group documents work conducted at the site including the data from removal of an underground storage tank, and soil and groundwater sampling data on the southwest side of the property. In addition, four groundwater monitoring wells are proposed to be drilled at the site.

The soil and groundwater sampling data shows Motor Oil Range Organics (MORO) and Diesel Range Organics (DRO) in soil and groundwater samples. The highest levels of MORO and DRO are present in groundwater grab sample locations B1, B2, and B3.

Table 1 of the report lists the soil sampling analytical data, and compares the results to Residential, Commercial and Industrial San Francisco Bay Regional Water Board's Environmental Screening Levels. For Benzo(a)pyrene [B(a)P] the California Human Health Screening Levels is 0.13 mg/kg.

Antea is proposing to install four groundwater monitoring wells at the site. I concur with the installation of the wells as proposed.

Recently, SRMW-08 was abandoned because of construction activities associated with the SMART train depot. In reviewing the construction details of this well, upgradient well SRMW-07 is screened across two water bearing zones. At some point, Monitoring Well SRMW-07 should be destroyed.

A schedule for the installation of the wells and report of the well installation is requested by March 22, 2013.

If you have any questions, please contact me at (707) 576-2676 or at Janice.goebel@waterboards.ca.gov

Sincerely,

Original Signed By

Janice M. Goebel
Sanitary Engineering Associate

130226_JMG_ef_SPRRSq

cc: Marita Petersen, SRFD, mpetersen@srcity.org
Mr. Paul Nelson, pnelson@ebagroup.com
Ms. Joan Thomas, SMART, jthomas@sonomamarintrain.org
Mr. Richard Devine, Devine & Gong, Inc.rdevine@devinegong.com
Mr. John Nemeth, SMART, jnemeth@sonomamarintrain.org
Ms. Lisa Pheatt, County Counsel, lpheatt@sonoma-county.org
Ms. Laura Giraud, SMART Real Estate Manager, lgiraud@sonomamarintrain.org
Ms. Lia Holden, Antea™Group, lia.holden@anteagroup.com
Ms. Kathleen A. Millison, City Manager, City of Santa Rosa, kmillison@srcity.org
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, CA 94109
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514
Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

June 11, 2013

Mr. James Diehl
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747

Dear Mr. Diehl:

Subject: Comments on Well Abandonment Work Plan

File: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa
Case No 1NSR196

On May 1, 2013, Regional Water Board staff received the Well Abandonment Work Plan, prepared by Antea Group, for the former Southern Pacific railroad property located on West Third Street in Santa Rosa. Antea Group is proposing to overdrill groundwater monitoring well SRMW-07. We concur with the destruction of SRMW-07 as proposed.

If you have any questions, please contact me at (707) 576-2676 or at Janice.Goebel@waterboards.ca.gov.

Sincerely,

Original signed by

Janice M. Goebel
Sanitary Engineering Associate

130611_JMG_dp_SPabandonment

cc: Matt Villaber, Sonoma County Environmental Health Department,
Matt.Villaber@sonoma-county.org
Lia Holden, Antea Group, Lia.Holden@anteagroup.com

Appendix B

Previous Investigations and Site History Summary

PREVIOUS INVESTIGATION AND SITE HISTORY SUMMARY

Over the history of environmental activities at the site, laboratories and consultants have used a wide variety of terms for petroleum hydrocarbons reported in analysis of soil and water. Soil and groundwater samples are analyzed typically by Environmental Protection Agency (EPA) method 8015B or 8260B. Antea®Group (Antea Group) uses the designation GRO for total petroleum hydrocarbons as gasoline within the C_5 to C_{10} carbon range, DRO for total petroleum hydrocarbons as diesel within the C_{10} to C_{28} carbon range, and RRO for total petroleum hydrocarbons as residual range organics (oil) within the C_{24} to C_{40} carbon range.

Terms from previous reports may include total recoverable petroleum hydrocarbons (TRPH), total purgeable petroleum hydrocarbons (TPPH) for GRO, total extractable petroleum hydrocarbons (TEPH) for DRO, and total volatile hydrocarbon (TVH) which refers to a broad carbon range. More specific historical terms are total petroleum hydrocarbons as gasoline (TPHg or TPH-G), total petroleum hydrocarbons as diesel (TPHd or TPH-D), and total petroleum hydrocarbons as oil or motor oil (TPHo, TPHmo, TPH-O, or TPH-MO). The designations are generally comparable to GRO, DRO, and RRO. Antea Group has left the original designation when summarizing historic data and the current designations when applied to recent investigations and summary discussions.

SITE HISTORY

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site. These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs (Industrial Compliance [IC], 1992).

In April 1990, the North Coast Regional Water Quality Control Board (RWQCB) drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (MW-2 and MW-3). Monitoring well MW-3 was located approximately 100 feet down gradient (to the southwest) of the former fuel oil UST. Based on information presented in a July 1992 report by IC, analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1. However, oil and grease was present in the soil sample collected from boring B-1 at 12 feet below ground surface (bgs) at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PAHs). Soil samples collected at depths of 6 and 16 feet bgs from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively. No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3 (Geomatrix Consultants, Inc. [Geomatrix], 2000).

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes

(BTEX compounds), or PAHs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX compounds were detected in the grab groundwater sample collected from IC-B6 (Geomatrix, 2000).

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995. In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHmo), PAHs, metals, and volatile organic compounds (VOCs). Soil samples collected for analyses of TPHd, PAHs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHmo at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHmo at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHmo was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHmo was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs (Geomatrix, 2000).

PAHs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure. Concentrations of PAHs detected at this time are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PAH concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)4 in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs. No TPHd, TPHmo, or VOCs were detected in groundwater above laboratory reporting limits. The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These items, which are the focus of the work described herein, include additional evaluation of historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations (Geomatrix, 2000).

In September 2001, five on-site and off-site groundwater monitoring wells were installed to characterize impacts to groundwater at the project site. A majority of wells were installed in the area of the aforementioned Santa Rosa Woolen Mills facility in the northwest portion of the project site. An up-gradient, single-screen monitoring well was installed on the eastern portion of the property in vicinity of the main line railroad tracks.

Extensive investigative activities were performed in 2002 on the northwest area of the project site at the historical location of the Santa Rosa Woolen Mills Facility. Soil samples collected as part of an investigation within this area reported significant concentrations of petroleum hydrocarbons present in soil and groundwater in the area of the fueling structures, the area of the former above ground fuel storage tank (AST), and the location of a former UST. Impacts to soil were identified as being primarily heavy range petroleum hydrocarbons. From June 2002 to November 2002, an additional characterization was performed in the northwestern area and a fenced enclosure at the property. Soil samples collected from these areas indicated significant concentrations of diesel and motor oil in soil. Proposed remedial options included excavation and removal of accessible impacted soil (EBA, 2008b).

In October and November 2003, approximately 6,500 cubic yards of impacted soil were removed from several areas of the project site. The most significant remediation efforts targeted the northwestern portion of the project site where several areas were excavated to remove impacted soil. Source removal activities began in the area of a former wooden UST that is indicated on historic Sanborn maps for the Santa Rosa Woolen Mills facility. During the excavation activities, remnants of the former UST were found and removed, whereupon the excavation was advanced to a total depth of approximately 18 feet bgs. A significant amount of free-phase petroleum hydrocarbon product was encountered on the groundwater surface during the excavation activities. The product and water was subsequently pumped, treated, and disposed of to the sanitary sewer. The excavation in this area, which resulted in the removal of approximately 700 cubic yards of impacted materials, proceeded to within 20 feet of the existing Sixth Street Warehouse and was subsequently terminated due to concerns of structure stability. Confirmation soil samples indicated that impacted materials containing significant concentrations of diesel and motor oil remained in place in the excavation sidewalls and groundwater in this area (EBA, 2008b).

Excavation activities in the northwestern portion of the property also included the removal off a fuel pipeline. The associated trench was enlarged as it encountered impacted materials in an area designated as the main pit excavation area. A total of 350 cubic yards of impacted materials were removed from this area. The excavation pit extended to depths below first encountered groundwater, which was encountered at approximately 19 feet bgs. The maximum depth attained by the excavation was approximately 22 feet bgs. Impacted groundwater encountered within the excavation pit, which included free-phase petroleum hydrocarbon product, was subsequently removed using pumps, treated, and disposed of to the sanitary sewer (EBA, 2008b).

Additional excavation was also performed on the south side of the aforementioned product line trench in the northwestern area. Approximately 325 cubic yards of impacted soil was removed from this area. Approximately 270 cubic yards of impacted soil was excavated and removed in the southwestern side of the project site identified as the “southern warehouse area” (EBA, 2008b).

Quarterly groundwater monitoring performed in the northwestern portion of the project site property and west into the neighboring property parcel indicated low levels of petroleum hydrocarbons in a monitoring well identified as SRMW-13 located in the northwest corner of the property. In addition, the fuel oxygenate methyl tert-butyl ether (MTBE) was detected in SRMW-8 located on the northeast side of the property. The remaining monitoring wells appear to have been relatively free of impacts during the time monitored (EBA, 2008b).

The RWQCB issued a *No Further Action* (NFA) letter for the previous case at the site on August 31, 2007. In 2008, Sonoma Marin Area Rail Transit District (SMART) granted an option to purchase the site, formerly owned by Northwestern Pacific Railroad Authority (NWRPA) to New Railroad Square Associates, LLC for transit-oriented development purposes. In anticipation of property ownership for the site, New Railroad Square Associates, LLC (with consent from SMART) contracted the services of EBA Engineering (EBA) to perform environmental assessment activities. EBA's November 2008 *Comprehensive Report on Findings* concluded that on-site hazardous materials presently exist at various locations on the property. These materials include an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and impacted shallow soil across the site. The RWQCB reopened the environmental case for the site on January 16, 2009 based on EBA's findings.

In a letter dated February 4, 2011, the RWQCB directed UPRR to remove the oil UST on the property. In November 2011, United Pumping Services (UPS) removed the UST as directed. However, during the initial day-lighting activities of the oil UST, an additional 500-gallon UST containing oil was discovered adjacent and west of the known tank. UPS evacuated, cleaned, and removed the second UST in conjunction with the known UST. UPS excavated and disposed of approximately 213.03 tons of impacted soil surrounding the USTs, and pumped approximately 500 gallons of oil impacted groundwater from the excavation. Antea Group collected 16 soil samples and one grab groundwater sample from within the excavation. Based on the distribution of MORO, DRO, VOCs, and PAHs, it appears that a release from the removed USTs only affected the immediate soils surrounding the USTs. Sidewall samples NWB and SWB collected at 15 feet bgs reported concentrations of VOCs and PAHs not found in any other (shallower) samples collected. From the available data, soil VOCs and PAHs impacts appear to be the result of impacted groundwater within the capillary fringe, originating from outside of the excavated area, and not due to a release from the USTs at that location.

In a directive letter dated January 19, 2012, the RWQCB requested removal of soil in the area of SB-1 prior to SMART's planned land development activities. In addition to the soil excavation, the RWQCB also requested an investigation of the extent of groundwater impacts, including the presence of separate hydrocarbons at the former UST area, groundwater impacts in the area of SB-1, and requested that UPRR clarify the relationship of on-site discharges and off-site impacts to the west beneath adjacent properties. In April 2013, Antea Group advanced borings B1 through B8 at the site. Data from these borings indicated the highest soil concentrations along the southwestern property boundary. Analyte concentrations in groundwater exceeding environmental screening

levels (ESLs) were on the southern-most portion of the southwestern property boundary (borings B1 and B2). The qualitative UVOST/CPT data from B-6 through B-8 (surrounding the former UST pit) showed that the only boring displaying potential hydrocarbon impacts around the former UST area was boring B7 in the interval of approximately 5 to 10 feet bgs. None of the groundwater samples collected from borings surrounding the former UST area contained concentrations above the ESLs.

In July 2012, Antea Group oversaw the removal of secondary source soils in the vicinity of SB-1. Soils were excavated as previously proposed by EBA in their *Soil Excavation work plan*, dated October 2009. Significant source removal occurred during excavation activities as indicated by visual observation of soils removed as well as waste composite hydrocarbon concentrations. Sidewall and base sample analytical results from the excavation show that only those soil samples from the southwest portion of the excavation exceeded commercial/industrial ESLs for DRO and MORO.

In an email dated February 12, 2013, the RWQCB approved the urgent abandonment of monitoring well SRMW-08 to facilitate SMART onsite construction activities planned that same week. Structures were planned to be constructed in the location of the well. The monitoring well was subsequently abandoned on February 15, 2013.

In a letter dated February 26, 2013, the RWQCB directed Antea Group to complete groundwater impact investigation activities, which included the installation sampling of groundwater monitoring wells, initially requested in their February 2012 directive letter and proposed in Antea Group's *Site Remedial Action and Investigation Report dated October 16, 2012*. In their letter, the RWQCB also approved the abandonment of monitoring well SRMW-07. In May 2013, SRMW-07 was abandoned and four monitoring wells (MW-1 through MW-4) were installed, surveyed, developed, and sampled.

SENSISTIVE RECEPTORS

Geomatrix performed a well survey in 2000. Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which is fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use (Geomatrix, 2003).

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site. Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically down-gradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately up gradient and two approximately down gradient. Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the

wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use (Geomatrix, 2003).

Information about the possible presence of an additional water producing well located near the site was provided by the RWQCB. This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek; its actual location has not been field-verified. At this time the well is not in use, and based on a conversation with the site redeveloper, the well will not be used in the future and will be appropriately destroyed (Geomatrix, 2003).

Appendix C

Permits

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
625 5th Street, Santa Rosa, CA 95404
Phone (707) 565-6565 Fax (707) 565-6525 www.sonoma-county.org

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment / LOP Lead

For Office Use Only
Amount paid $366.00
Receipt number T#071336
Payment date 2/13/13 Rev. code 1348
Site ID# FA0041705
Permit # SR0011404

T#071336

Well type: ■Monitoring well ☐Recovery extraction well ☐Boring ☐Injection well ■Destruct ☐Environmental assessment
☐Soil gas survey ☐Direct push ☐Air sparging/venting ☐Remediation well ☐Other _____

Well depth 22 feet Boring depth 22 feet

On-site well/boring SRMW-08 ID # _____ # Off-site well/boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth Street and 34 Sixth Street AP# _____

Facility Name _____

On-site Owner Sonoma Marin Area Rail Transit (SMART) Phone _____

Street 490 Mendocino Avenue, Suite102 City Santa Rosa State CA Zip 95401

Responsible Party Union Pacific Railroad Phone _____

Street 2 Fourth Street and 34 Sixth Street City _____ State _____ Zip _____

Consultant Antea Group Phone _____

Street 1155 N First Street, Suite 201 City San Jose State CA Zip 95112

License #/Type 548062 - State Contractors License

Drilling Contractor Gregg Drilling & Testing, Inc. Phone _____

Street 950 Howe Road City Martinez State CA Zip 94553

C-57 License # 485615

Type of work: ☐Initial investigation _____ # Wells ☐Subsequent investigation _____ # Wells ■Destruct 1 # Wells

Groundwater investigation due to: ■Underground tank ☐Surface impoundment ■Environmental assessment
☐Surface disposal practice—specify involved industry _____
☐Other _____

Perforated intervals _____ Chemical constituents _____

Disposal method for soil cuttings 55 gallon drum Disposal method for development water _____

Drilling method well abandonment (see below) Method of drill equip. rinsate containment _____

If destroying a well, abandonment method air-knife to 5 feet bgs, advance hollow stem augers to well depth (22 ft) and grout to surface

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ○Yes ◉No
50 feet of any sanitary sewer line? ○Yes ◉No
25 feet of any private sanitary sewer line? ○Yes ◉No

ENTERED PK

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only

Address 2 4th St

Site ID# FA0041705

Permit # SR0011904

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by this Department within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit ***only*** after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

Signature of Well Driller—***no proxies*** Date 2/13/13

Insurance Carrier Accord AICW0104 1100 Expiration Date 8/31/13

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

Please submit a well destruction report when completed.

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by Matt L. Villaber Date 2/14/13

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____/____

RWQCB / LOP approval _____ Date ____/____/____

drilling permit.doc (Revised June 2012) Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
625 5th Street, Santa Rosa, CA 95404
Phone (707) 565-6565 Fax (707) 565-6525 www.sonoma-county.org

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment / LOP Lead

For Office Use Only

Amount paid _____
Receipt number _____
Payment date _____ Rev. code _____
Site ID# _____
Permit # _____

Well type: ■Monitoring well ☐Recovery extraction well ☐Boring ☐Injection well ■Destruct ☐Environmental assessment
☐Soil gas survey ☐Direct push ☐Air sparging/venting ☐Remediation well ☐Other _____

Well depth 22 Boring depth 22

On-site well/boring SRMW-07 ID # _____ # Off-site well/boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth Street and 34 Sixth Street AP# _____

Facility Name _____

On-site Owner Sonoma Marin Area Rail Transit (SMART) Phone _____

Street 490 Mendocino Avenue, Suite 102 City Santa Rosa State CA Zip 95401

Responsible Party Union Pacific Railroad Phone _____

Street 2 Fourth Street and 34 Sixth Street City _____ State _____ Zip _____

Consultant Antea Group Phone 408-606-4900

Street 1155 N First Street, Suite 201 City San Jose State CA Zip 95112

License #/Type 548062 - State Contractors License

Drilling Contractor Gregg Drilling & Testing, Inc. Phone _____

Street 950 Howe Road City Martinez State CA Zip 94553

C-57 License # 485615

Type of work: ☐Initial investigation _____ # Wells ☐Subsequent investigation _____ # Wells ■Destruct 1 # Wells

Groundwater investigation due to: ■Underground tank ☐Surface impoundment ■Environmental assessment
☐Surface disposal practice—specify involved industry _____
☐Other _____

Perforated intervals _____ Chemical constituents _____

Disposal method for soil cuttings 55 gallon drums Disposal method for development water _____

Drilling method Well Abandonment (see below) Method of drill equip. rinsate containment _____

If destroying a well, abandonment method Air-knife to 5 ft bgs, advance hollow stem augers to well depth (22 ft) and grout to surface

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ○Yes ◉No
50 feet of any sanitary sewer line? ○Yes ◉No
25 feet of any private sanitary sewer line? ○Yes ◉No

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only

Address _____

_____

Site ID# _____

Permit # _____

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Dustin Penn Date 4/18/13

Signature of Well Driller—***no proxies***

Insurance Carrier Accord AICW0104 1101 Expiration Date 8/31/13

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

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FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by _____ Date ____/____/____

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____/____

RWQCB / LOP approval _____ Date ____/____/____

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
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APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment / LOP Lead

For Office Use Only

Amount paid _____
Receipt number _____
Payment date _____ Rev. code _____
Site ID# _____
Permit # _____

Well type: ■Monitoring well ☐Recovery extraction well ☐Boring ☐Injection well ☐Destruct ☐Environmental assessment
☐Soil gas survey ☐Direct push ☐Air sparging/venting ☐Remediation well ☐Other _____

Well depth 20 Boring depth 20

On-site well/boring MW-15 ID # _____ # Off-site well/boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth Street and 34 Sixth Street AP# _____

Facility Name _____

On-site Owner Sonoma Marin Area Rail Transit (SMART) Phone _____

Street 490 Mendocino Avenue, Suite 102 City Santa Rosa State CA Zip 95401

Responsible Party Union Pacific Railroad Phone _____

Street 2 Fourth Street and 34 Sixth Street City _____ State _____ Zip _____

Consultant Antea Group Phone 408-606-4900

Street 1155 N First Street, Suite 201 City San Jose State CA Zip 95112

License #/Type 548062 - State Contractors License

Drilling Contractor Gregg Drilling & Testing, Inc. Phone _____

Street 950 Howe Road City Martinez State CA Zip 94553

C-57 License # 485615

Type of work: ☐Initial investigation _____ # Wells ■Subsequent investigation 4 # Wells ☐Destruct _____ # Wells

Groundwater investigation due to: ■Underground tank ☐Surface impoundment ☐Environmental assessment
☐Surface disposal practice—specify involved industry _____
☐Other _____

Perforated intervals _____ Chemical constituents _____

Disposal method for soil cuttings 55 gallon drums Disposal method for development water _____

Drilling method Hollow stem auger Method of drill equip. rinsate containment _____

If destroying a well, abandonment method _____

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ○Yes ◉No
50 feet of any sanitary sewer line? ◉Yes ○No
25 feet of any private sanitary sewer line? ○Yes ◉No

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only
Address _____
_____
Site ID# _____
Permit # _____

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_____ Date 4/8/13

Signature of Well Driller—***no proxies***

Insurance Carrier Acord AIW0104/101 Expiration Date 8/31/13

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

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FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by _____ Date ____/____/____

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____/____

RWQCB / LOP approval _____ Date ____/____/____

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

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ENVIRONMENTAL HEALTH & SAFETY
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Amount paid _____
Receipt number _____
Payment date _____ Rev. code _____
Site ID# _____
Permit # _____

Well type: ■Monitoring well ☐Recovery extraction well ☐Boring ☐Injection well ☐Destruct ☐Environmental assessment
☐Soil gas survey ☐Direct push ☐Air sparging/venting ☐Remediation well ☐Other _____

Well depth 20 Boring depth 20

On-site well/boring MW-16 ID # _____ # Off-site well/boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth Street and 34 Sixth Street AP# _____

Facility Name _____

On-site Owner Sonoma Marin Area Rail Transit (SMART) Phone _____

Street 490 Mendocino Avenue, Suite 102 City Santa Rosa State CA Zip 95401

Responsible Party Union Pacific Railroad Phone _____

Street 2 Fourth Street and 34 Sixth Street City _____ State _____ Zip _____

Consultant Antea Group Phone 408-606-4900

Street 1155 N First Street, Suite 201 City San Jose State CA Zip 95112

License #/Type 548062 - State Contractors License

Drilling Contractor Gregg Drilling & Testing, Inc. Phone _____

Street 950 Howe Road City Martinez State CA Zip 94553

C-57 License # 485615

Type of work: ☐Initial investigation _____ # Wells ■Subsequent investigation 4 # Wells ☐Destruct _____ # Wells

Groundwater investigation due to: ■Underground tank ☐Surface impoundment ☐Environmental assessment
☐Surface disposal practice—specify involved industry _____
☐Other _____

Perforated intervals _____ Chemical constituents _____

Disposal method for soil cuttings 55 gallon drums Disposal method for development water _____

Drilling method Hollow stem auger Method of drill equip. rinsate containment _____

If destroying a well, abandonment method _____

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ○Yes ◉No
50 feet of any sanitary sewer line? ◉Yes ○No
25 feet of any private sanitary sewer line? ○Yes ◉No

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only

Address _____

_____

Site ID# _____

Permit # _____

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by this Department within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit ***only*** after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

_____ Date 4/18/13

Signature of Well Driller—***no proxies***

Insurance Carrier Acord AICW0104110C Expiration Date 8/31/13

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

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FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by _____ Date ____/____/____

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____/____

RWQCB / LOP approval _____ Date ____/____/____

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
625 5th Street, Santa Rosa, CA 95404
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APPLICATION FOR DRILLING PERMIT
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For Office Use Only
Amount paid _____
Receipt number _____
Payment date _____ Rev. code _____
Site ID# _____
Permit # _____

Well type: ■Monitoring well ☐Recovery extraction well ☐Boring ☐Injection well ☐Destruct ☐Environmental assessment
☐Soil gas survey ☐Direct push ☐Air sparging/venting ☐Remediation well ☐Other _____

Well depth 20 Boring depth 20

On-site well/boring MW-17 ID # _____ # Off-site well/boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth Street and 34 Sixth Street AP# _____

Facility Name _____

On-site Owner Sonoma Marin Area Rail Transit (SMART) Phone _____

Street 490 Mendocino Avenue, Suite 102 City Santa Rosa State CA Zip 95401

Responsible Party Union Pacific Railroad Phone _____

Street 2 Fourth Street and 34 Sixth Street City _____ State _____ Zip _____

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License #/Type 548062 - State Contractors License

Drilling Contractor Gregg Drilling & Testing, Inc. Phone _____

Street 950 Howe Road City Martinez State CA Zip 94553

C-57 License # 485615

Type of work: ☐Initial investigation _____ # Wells ■Subsequent investigation 4 # Wells ☐Destruct _____ # Wells

Groundwater investigation due to: ■Underground tank ☐Surface impoundment ☐Environmental assessment
☐Surface disposal practice—specify involved industry _____
☐Other _____

Perforated intervals _____ Chemical constituents _____

Disposal method for soil cuttings 55 gallon drums Disposal method for development water _____

Drilling method Hollow stem auger Method of drill equip. rinsate containment _____

If destroying a well, abandonment method _____

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ○Yes ◉No
50 feet of any sanitary sewer line? ◉Yes ○No
25 feet of any private sanitary sewer line? ○Yes ◉No

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only

Address _____

_____

Site ID# _____

Permit # _____

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_____ Date 4/18/13

Signature of Well Driller—***no proxies***

Insurance Carrier Accord AICW0107#101 Expiration Date 8/31/13

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

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FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by _____ Date ____/____/____

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____/____

RWQCB / LOP approval _____ Date ____/____/____

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
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APPLICATION FOR DRILLING PERMIT
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For Office Use Only

Amount paid _____
Receipt number _____
Payment date _____ Rev. code _____
Site ID# _____
Permit # _____

Well type: ■Monitoring well ☐Recovery extraction well ☐Boring ☐Injection well ☐Destruct ☐Environmental assessment
☐Soil gas survey ☐Direct push ☐Air sparging/venting ☐Remediation well ☐Other _____

Well depth 20 Boring depth 20

On-site well/boring MW-18 ID # _____ # Off-site well/boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth Street and 34 Sixth Street AP# _____

Facility Name _____

On-site Owner Sonoma Marin Area Rail Transit (SMART) Phone _____

Street 490 Mendocino Avenue, Suite 102 City Santa Rosa State CA Zip 95401

Responsible Party Union Pacific Railroad Phone _____

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Drilling Contractor Gregg Drilling & Testing, Inc. Phone _____

Street 950 Howe Road City Martinez State CA Zip 94553

C-57 License # 485615

Type of work: ☐Initial investigation _____ # Wells ■Subsequent investigation 4 # Wells ☐Destruct _____ # Wells

Groundwater investigation due to: ■Underground tank ☐Surface impoundment ☐Environmental assessment
☐Surface disposal practice—specify involved industry _____
☐Other _____

Perforated intervals _____ Chemical constituents _____

Disposal method for soil cuttings 55 gallon drums Disposal method for development water _____

Drilling method Hollow stem auger Method of drill equip. rinsate containment _____

If destroying a well, abandonment method _____

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ○Yes ◉No
50 feet of any sanitary sewer line? ◉Yes ○No
25 feet of any private sanitary sewer line? ○Yes ◉No

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only

Address _____

_____

Site ID# _____

Permit # _____

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_____ Date 4/18/13

Signature of Well Driller—***no proxies***

Insurance Carrier Acord AICW010 41101 Expiration Date 8/31/13

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

_____

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FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by _____ Date ____/____/____

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____/____

RWQCB / LOP approval _____ Date ____/____/____

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

Appendix D

Antea Group's Standard Operating Procedures

Standard Operating Procedures

Borehole Advancement using Hollow Stem Auger

Pre-cleaned hollow stem augers (typically 8 to 10 inches in diameter) are advanced using a drill rig. A pre-cleaned split spoon sampler is lined with three 6-inch long brass or stainless steel tubes and attached to the drill rods. The sampler is then driven 18 inches into the underlying soils at the target sample interval by repeatedly dropping a 140-pound hammer over a 30-inch free fall distance. The number of blow counts to drive the sampler each 6-inch interval of sampler advancement are recorded on the field logs. The sampler is driven 18 inches or until the sampler has met refusal (typically 50 blows per six inches), then the sampler is retrieved. Alternatively, soil samples are retrieved by driving the sampler using a pneumatic hammer, when using a limited access rig.

Generally the bottom sample tube is selected for laboratory analysis. The middle tube is extruded for logging and PID screening, and the top tube is considered slough caved off from the sides of the boring prior to sampling.

The retained sample is carefully packaged for chemical analysis by capping each end of the sample with a Teflon sheet followed by a tight-fitting plastic cap and stored in a zip-type plastic bag. A label is affixed to the sample indicating the sample identification number, borehole number, sampling depth, sample collection date, and job number. The sample is then annotated on a chain-of-custody form and placed in an ice-filled cooler for transport to the laboratory.

During the drilling process, a physical description of the encountered soil characteristics (i.e. moisture content, consistency or density, odor, color, and plasticity), drilling difficulty, and soil type as a function of depth are described on boring logs. The soil cuttings are classified in accordance with the USCS.

Well Construction (typical)

Selected borings will be converted to groundwater monitoring wells by the installation of Schedule 40 polyvinyl chloride well casing with factory slotted well screen as stated in the body of the work plan. A filter pack of will be placed in the annular space of the monitoring well borings, extending from the bottom of each well casing to approximately 2-feet above the top of the screened casing. A sanitary seal consisting of a 2-foot bentonite will be placed on above the filter sand and charged with water to create a seal. Neat cement grout, mixed at a ratio of 6 gallons of water per 94 pounds of Portland cement, is introduced via a tremie pipe to displace standing water in the well annulus bentonite to within two feet of the ground surface. Antea Group will install a minimum of a 5-foot annual seal. A traffic-rated well box will be installed on each well to protect and finish the well to surface grade.

The groundwater monitoring wells will be allowed to stabilize for a minimum of 72 hours after installation prior to development. Following development, the wells will be allowed stabilize for a minimum of 48 hours prior to the collection of any groundwater samples.

Organic Vapor Procedures

Soil samples are collected for analysis in the field for ionizable organic compounds using a photo-ionization detector (PID) with a 10.2 eV lamp. The test procedure involves measuring approximately 30 grams from an undisturbed soil sample, placing this sub-sample in a jar covered with aluminum foil. The container is warmed for approximately 20 minutes in the sun; then the head-space within the container is tested for total organic vapor, measured in parts per million as benzene

(ppm; volume/volume). The instrument is calibrated prior to drilling. The results of the field-testing are noted on the boring logs. PID readings are useful as a qualitative indication of relative levels of contamination, but cannot be used to quantify petroleum hydrocarbon concentrations with the confidence of laboratory analyses.

Equipment Decontamination

Equipment that could potentially come in contact subsurface media and compromise the integrity of the samples is carefully decontaminated prior to drilling and sampling. Drilling auger and other large pieces of equipment are decontaminated using high pressure hot water spray. Soil and groundwater sampling apparatus, groundwater pumps, liners and other equipment are decontaminated in an Alconox scrub solution and double rinsed in clean tap water rinse followed by a final distilled water rinse.

The rinsate and other wastewater are contained in 55-gallon DOT-approved drums, labeled (to identify the contents, generation date and project) and stored on-site pending waste profiling and disposal.

Waste Handling and Disposal *(Soil Cuttings and Rinsate/Purge Water)*

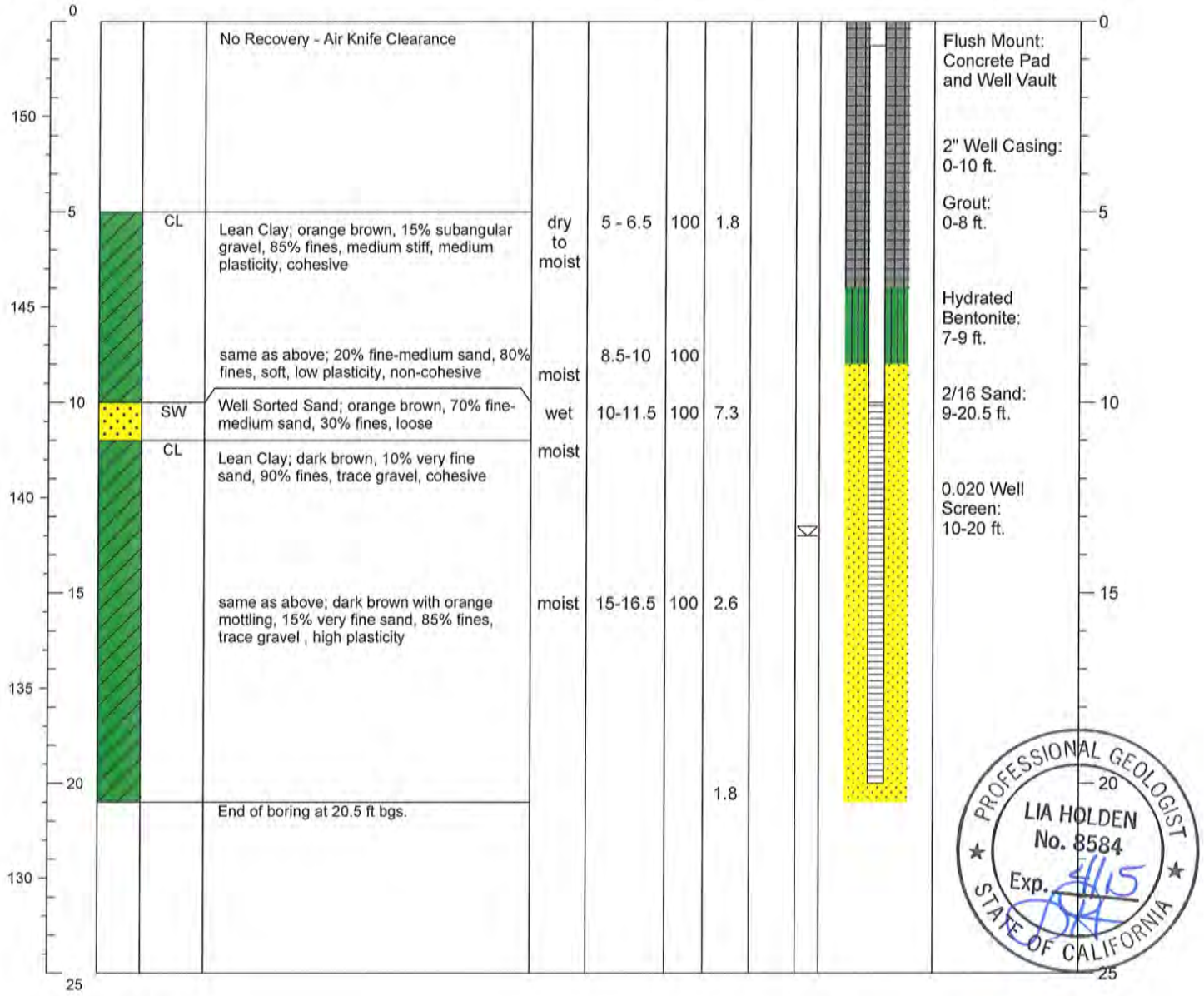
Soil cuttings and rinsate/purge water generated during drilling and sampling are stored on-site in DOT-approved 55-gallon steel drums pending characterization. A label is affixed to the drums indicating the contents of the drum, suspected contaminants, date of generation, and the boring number from which the waste is generated. The drums are removed from the site by a licensed waste disposal contractor to an appropriate facility for treatment/recycling.

Appendix E

Boring Logs

Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			MW-1

Address 2 Fourth St & 34 Sixth St Santa Rosa California	Drilling Contractor Gregg Drilling	Ground Surface Elevation: 152.50	Top of Casing Elevation: 151.86
	Drilling Method Air Knife / Hollow Stem Auger	Boring Depth 20.5 ft.	Boring Diameter 8 in.
Logged By: R. Ransom; Approved By: L. Holden	Sampling Method Split Spoon	Well Depth: 20 ft.; Casing Type: SCH 40 PVC	Well Screen Interval: 10 - 20 ft.; Slot Size: 0.020
Antea Group Project Number UPR8248	Headspace Monitoring Device PID	Date Drilling Started 5/15/13	Date Drilling Completed 5/15/13



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LIA HOLDEN
No. 8584
Exp. 4/15
STATE OF CALIFORNIA

* Blow counts not recorded

▽ First Encountered Groundwater ▼ Static Groundwater

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INOGEN

Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			MW-2

Address 2 Fourth St & 34 Sixth St Santa Rosa California	Drilling Contractor Gregg Drilling	Ground Surface Elevation: 153.55	Top of Casing Elevation: 152.79
	Drilling Method Air Knife / Hollow Stem Auger	Boring Depth 20.5 ft.	Boring Diameter 8 in.
Logged By: R. Ransom; Approved By: L. Holden	Sampling Method Split Spoon	Well Depth: 20 ft.; Casing Type: SCH 40 PVC	Well Screen Interval: 10 - 20 ft.; Slot Size: 0.020
Antea Group Project Number UPR8248	Headspace Monitoring Device PID	Date Drilling Started 5/15/13	Date Drilling Completed 5/15/13

LITHOLOGY **SAMPLING DATA**

Elevation	Depth	Graphic Log	USCS	Visual Description	Moisture Content	Sample Interval (ft)	Recovery (%)	Headspace (ppm)	Blow Count (blows/6")	Water Level	Well Diagram	Well Details	Depth
150	0			No Recovery - Air Knife Clearance								Flush Mount: Concrete Pad and Well Vault	0
	5		ML	Silt; dark brown with orange mottling, 15% gravel, 20% fine-medium sand, 65% fines, medium stiff, low plasticity, non-cohesive	dry to moist	5 - 6.5	75	50.1	2 3 3			2" Well Casing: 0-10 ft.	5
145				same as above; orange brown with dark brown mottling, 25% very fine sand, 75% fines, low-medium plasticity	moist	8.5-10	100		2 3 3			Grout: 0-8 ft.	
	10			No Recovery		10-11.5	0	17.0	2 2 4	▽		Hydrated Bentonite: 7-9 ft.	10
			CL	Lean Clay; orange gray, 5% angular gravel, 10% fine-medium sand, 85% fines, stiff, medium plasticity, cohesive	wet	11.5-13	75		2 4 3	▼		2/16 Sand: 9-20.5 ft.	
140			SM	Silty Sand; gray, 10% angular gravel, 50% very fine-medium sand, 40% fines, loose, low plasticity	wet	13-14.5	75		3 3 5			0.020 Well Screen: 10-20 ft.	
	15		GP	Poorly Graded Gravel; gray, 50% small-large subangular to angular gravel, 25% sand, 25% fines, loose, non-cohesive		14.5-16	100	5.4	5 4 2				15
			CH		moist	16-17.5	100		2 2 3				
135			CL	Fat Clay; brown with orange mottling, 10% coarse sand, 90% fines, soft, high plasticity, cohesive	moist	17.5-19	100		2 2 1				
	20			Lean Clay; gray brown, 5% small angular gravel, 5% very fine sand, 90% fines, stiff				4.2	2 3 4				20
130	25			End of boring at 20.5 ft bgs.									25

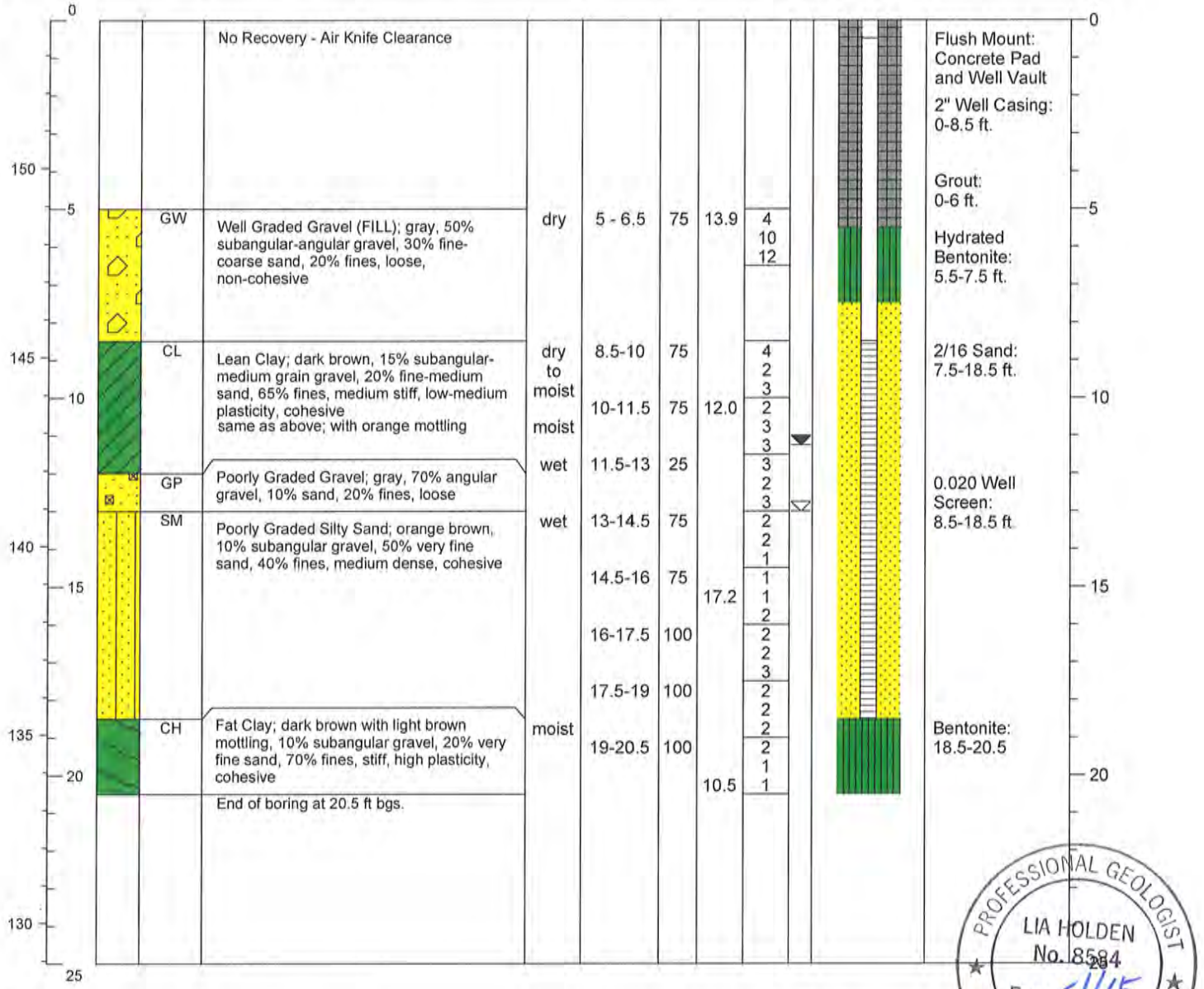
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Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			MW-3
Address 2 Fourth St & 34 Sixth St Santa Rosa California	Drilling Contractor Gregg Drilling	Ground Surface Elevation: 153.92	Top of Casing Elevation: 153.44
	Drilling Method Air Knife / Hollow Stem Auger	Boring Depth 20.5 ft.	Boring Diameter 8 in.
Logged By: R. Ransom; Approved By: L. Holden	Sampling Method Split Spoon	Well Depth: 18.5 ft.; Casing Type: SCH 40 PVC	Well Screen Interval: 8.5-18.5 ft.; Slot Size: 0.020
Antea Group Project Number UPR8248	Headspace Monitoring Device PID	Date Drilling Started 5/16/13	Date Drilling Completed 5/16/13



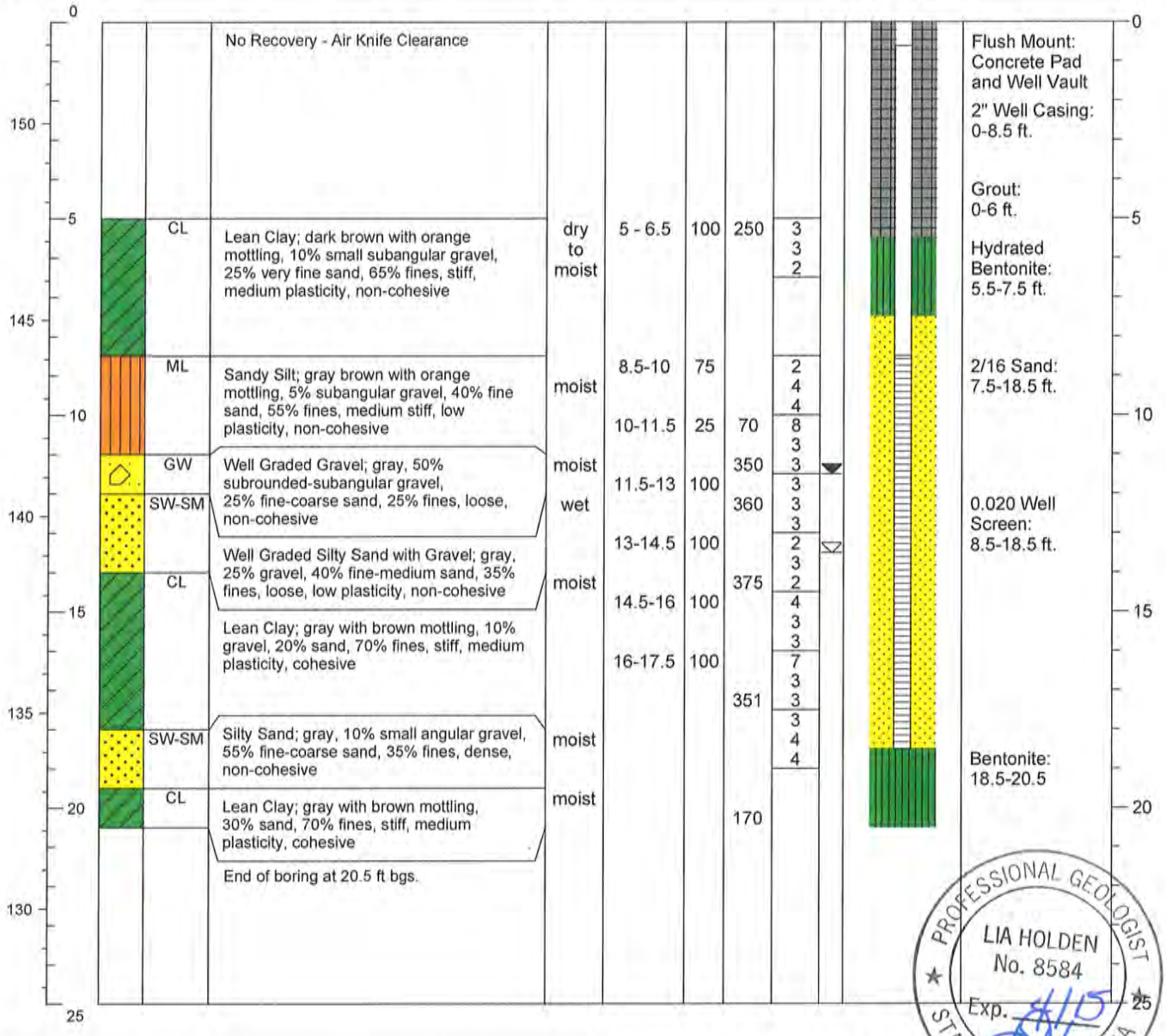
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Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			MW-4
Address 2 Fourth St & 34 Sixth St Santa Rosa California	Drilling Contractor Gregg Drilling Drilling Method Air Knife / Hollow Stem Auger	Ground Surface Elevation: 152.58 Boring Depth 20.5 ft.	Top of Casing Elevation: 151.97 Boring Diameter 8 in.
Logged By / Approved By R. Ransom / L. Holden	Sampling Method Split Spoon	Well Depth / Casing Type 18.5 ft. / SCH 40 PVC	Well Screen Interval / Slot Size 8.5 - 18.5 ft. / 0.020
Antea Group Project Number UPR8248	Headspace Monitoring Device PID	Date Drilling Started 5/16/13	Date Drilling Completed 5/16/13



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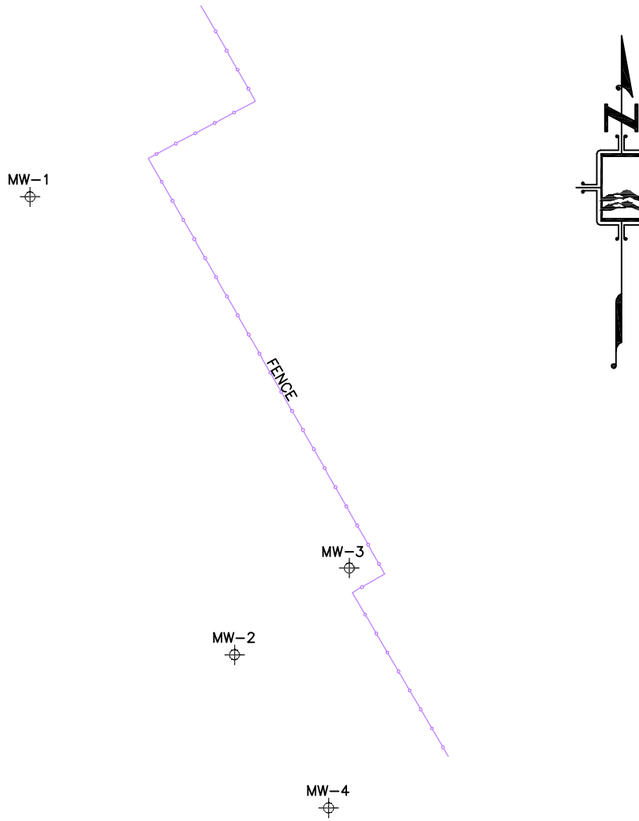
Appendix F

Survey Report

Monitoring Well Exhibit

Prepared For:

Antea Group



DESC.	NORTHING	EASTING	LATITUDE	LONGITUDE	EL. PVC	EL. RIM
MW-1	1921796.2	6354679.5	38.4370151	-122.7226299	151.86	152.50
MW-2	1921675.3	6354733.5	38.4366843	-122.7224381	152.79	153.35
MW-3	1921698.2	6354763.7	38.4367478	-122.7223330	153.44	153.92
MW-4	1921634.9	6354758.3	38.4365739	-122.7223503	151.97	152.58

BASIS OF COORDINATES AND ELEVATIONS:

COORDINATES ARE CALIFORNIA STATE PLANE ZONE 2 COORDINATES FROM GPS OBSERVATIONS USING CSDS VIRTUAL SURVEY NETWORK.

COORDINATE DATUM IS NAD 83.

REFERENCE GEOID IS GEOID03.

VERTICAL DATUM IS NAVD 88 FROM GPS OBSERVATIONS.



UPRR
2 Fourth St. and 34 Sixth St.
Santa Rosa
Sonoma County
California

Morrow Surveying
LAND SURVEYORS

1255 Starboard Drive
West Sacramento
California 95691
(916) 372-8124
mark@morrowsurveying.com

Date: May, 2013
Field: 5-17-13 DB
Scale: 1"=40'
Revised:
Field Book:
Dwg. No. 1275-165 MAM

Appendix G

Blaine Tech Well Development Field Notes

WELL GAUGING DATA

Project # 130520-JL1 Date 5/20/13 Client Antea

Site UPRR @ Santa Rosa

Well ID	Well Size (in.)	Time Gauged	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or (TOC)
MW-1	2	1006					13.54	19.90	
MW-2	2	1004					10.90	19.70	
MW-3	2	1002					11.46	18.24	
MW-4	2	1000					9.83	18.24	—

WELL DEVELOPMENT DATA SHEET

Project #: 130520-JL1	Client: Antea
Developer: JL	Date Developed: 5/21/13
Well I.D. MW-1	Well Diameter: (circle one) (2) 3 4 6 __
Total Well Depth: Before 19.90 After 19.93	Depth to Water: Before 13.54 After 14.13
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

80% = 14.81

1.0	X	10	=	10.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☒ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump N/A
Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
-Surged Well 15 min prior to Purging-						
0710	62.5	7.1	847	>1000	1.0	Hard bottom
0712	63.7	6.9	710	>1000	2.0	Dark Brown
0714	63.9	6.9	684	>1000	3.0	" "
	- Well dewatered @ 3.5 gallons-					
0740	65.4	6.8	580	>1000	4.0	DTW: 14.15
0742	65.0	6.8	561	>1000	5.0	Light Brown / No Sediment
	- Well dewatered @ 5.0 gallons-					
0840	66.7	6.8	614	>1000	6.0	Brown
0842	66.0	6.7	653	>1000	7.0	" "
0845	65.8	6.7	698	>1000	8.0	" "
	- Well dewatered @ 8.5 gallons-					
0920	66.3	6.7	544	>1000	9.0	Light Brown
Did Well Dewater? Yes	If yes, note above. -			Gallons Actually Evacuated:		21.0

WELL DEVELOPMENT DATA SHEET

Well I.D. MW-4	PAGE 2 OF 2
Project #: 130570-T1	Client: Antea

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
0922	60.5	6.7	539	>1000	10.0	light Brown
0925	60.3	6.7	542	>1000	11.0	" "
	-well dewatered @ 11.0 gallons-					
0958	60.0	6.8	507	>1000	12.0	switch to 2" ES pump
1001	59.8	6.7	502	>1000	13.0	light Brown
1004	59.8	6.7	500	>1000	14.0	" "
	-well dewatered @ 14.5 gallons-					
1053	60.9	6.7	517	858	15.0	light Brown
1056	60.4	6.7	513	830	16.0	" "
1059	60.1	6.6	510	598	17.0	" "
1104	59.9	6.6	508	362	18.0	Clear
1110	59.8	6.6	505	106	19.0	" " DTW: 18.20
1115	59.7	6.6	503	70	20.0	" "
1120	59.7	6.6	502	39	21.0	" "

WELL DEVELOPMENT DATA SHEET

Project #: 130520-JL1	Client: Antea
Developer: JL	Date Developed: 5/20/13
Well I.D. MW-2	Well Diameter: (circle one) (2) 3 4 6 ___
Total Well Depth: Before 19.70 After 19.72	Depth to Water: Before 10.90 After 11.68
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):	Well dia.		VCF
{12 x (d^2/4) x π} /231	2"	=	0.16
where	3"	=	0.37
12 = in / foot	4"	=	0.65
d = diameter (in.)	6"	=	1.47
π = 3.1416	10"	=	4.08
231 = in 3/gal	12"	=	6.87

80% = 12.66

1.4	X	10	=	14.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☒ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump N/A
Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
-Surged 15 min prior to purging					-	
1145	66.4	6.6	629	>1000	1.5	Hard bottom / Dark Brown
1147	64.6	6.6	597	>1000	3.0	Dark Brown
1149	64.4	6.5	558	>1000	4.5	" " Surged well w/ Pump
1151	64.5	6.5	529	>1000	6.0	" " DTW: 11.90
1153	64.5	6.5	502	>1000	7.5	Light Brown / No Sediment
1155	64.5	6.5	517	>1000	9.0	" " DTW: 11.63
1157	64.3	6.4	524	>1000	10.5	" "
1159	64.2	6.4	511	>1000	12.0	" "
1201	64.2	6.4	488	>1000	13.5	" " DTW: 11.93
1203	64.2	6.4	493	>1000	15.0	" "
1206	64.1	6.4	480	>1000	16.5	Cloudy
1208	64.1	6.4	476	>1000	18.0	" "
Did Well Dewater? No		If yes, note above. N/A		Gallons Actually Evacuated:		33.0

WELL DEVELOPMENT DATA SHEET

Well I.D. MW-2	PAGE 2 OF 2
Project #: 130520-JL1	Client: Antea

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1210	64.1	6.4	473	877	19.5	cloudy / switch to 2" ES pump
1215	64.0	6.3	470	>1000	21.0	" "
(15) 1217	64.1	6.3	449	808	22.5	" "
1218	64.1	6.3	440	876	24.0	" " DTW: 11.65
1220	64.0	6.3	436	842	25.5	" "
1222	63.8	6.3	431	500	27.0	Clear
1224	63.7	6.3	429	283	28.5	" "
1226	63.7	6.3	426	197	30.0	" "
1228	63.6	6.3	425	66	31.5	" "
1230	63.6	6.3	423	42	33.0	" "

WELL DEVELOPMENT DATA SHEET

Project #: 130570-JU	Client: Antea
Developer: JL	Date Developed: 5/20/13
Well I.D. MW-3	Well Diameter: (circle one) (2) 3 4 6 ___
Total Well Depth: Before 18.24 After 18.27	Depth to Water: Before 11.46 After 12-23
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
{12 x (d^2/4) x π} /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

80% = 12.81

1.0	X	10	=	10.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☒ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump N/A
Other equipment used 2" Surge block

TIME	TEMP (F)	pH	Cond. (mS or µS)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
-Surged well 15 min prior to purging-						
1345	70.3	6.6	737	>1000	1.0	Hard bottom / Dark brown
1347	69.0	6.5	721	>1000	2.0	Dark brown
1349	68.1	6.4	648	>1000	3.0	" " Surged well w/Pm
1351	67.6	6.4	592	>1000	4.0	" "
1353	67.2	6.4	570	>1000	5.0	No sediment DTW: 12.10
1354	67.0	6.4	561	>1000	6.0	light Brown
1356	66.9	6.3	549	>1000	7.0	" "
1358	66.9	6.3	540	>1000	8.0	" "
1359	66.8	6.3	536	>1000	9.0	" "
1401	66.8	6.3	533	>1000	10.0	" " DTW: 12.25
1403	66.8	6.3	530	>1000	11.0	" "
-Switched to 2" ES Pump-						

Did Well Dewater? NO	If yes, note above. N/A	Gallons Actually Evacuated:	20.0

WELL DEVELOPMENT DATA SHEET

Well I.D. MW-3	PAGE 2 OF 2
Project #: 130520-SL1	Client: Antea

TIME	TEMP (F)	pH	Cond. (mS or (µS))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1408	66.9	6.3	551	>1000	12.0	Brown
1409	66.8	6.3	550	>1000	13.0	light brown
1410	66.8	6.3	546	>1000	14.0	" "
1412	66.8	6.3	540	>1000	15.0	" " DTW: 12.16
1414	66.7	6.3	537	701	16.0	" "
1416	66.8	6.3	533	433	17.0	Clear
1417	66.7	6.3	533	211	18.0	" "
1419	66.7	6.3	530	84	19.0	" "
1420	66.7	6.3	529	40	20.0	" " DTW: 12.23

WELL DEVELOPMENT DATA SHEET

Project #: 130520-JL1	Client: Antea
Developer: JL	Date Developed: 5/20/13
Well I.D. MW-4	Well Diameter: (circle one) (2) 3 4 6 ___
Total Well Depth: Before 18.24 After 18.27	Depth to Water: Before 9.83 After 18.02
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):
{12 x (d^2/4) x π} /231
where
12 = in / foot
d = diameter (in.)
π = 3.1416
231 = in 3/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

80% = 11.51

1.3	X	10	=	13.0
1 Case Volume		Specified Volumes		gallons

Purging Device:
- ☐ Bailer
- ☐ Suction Pump
- ☒ Electric Submersible
- ☒ Positive Air Displacement

Type of Installed Pump N/A
Other equipment used 2" Surge Block

TIME	TEMP (F)	pH	Cond. (mS or (µS))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1010	- Surged well for 15 min prior to purging -					odo.
1028	70.9	6.4	2151	>1000	1.5	Dark Brown
1030	64.7	6.4	1685	>1000	3.0	Hard bottom
1032	63.4	6.4	1491	>1000	4.5	DTW: 18.25
	- well dewatered @ 5.0 gallons -					
1048	63.9	6.5	1656	>1000	6.0	Surged well w/ Pump
1050	65.8	6.6	899	>1000	7.5	light Brown
1052	64.1	6.5	1511	>1000	9.0	" " DTW: 18.04
	- well dewatered @ 9.5 gallons -					
1118	65.9	6.6	625	>1000	10.5	light Brown / no sediment
1120	64.3	6.6	623	972	12.0	" " DTW: 17.90
1122	64.0	6.6	620	857	13.5	Cloudy
	- well dewatered @			14.0	gallons -	
Did Well Dewater? yes	If yes, note above. ✓		Gallons Actually Evacuated:		36.0	

WELL DEVELOPMENT DATA SHEET

Well I.D. MW-4	PAGE 2 OF 2
Project #: 130520-JLI	Client: Antea

TIME	TEMP (F)	pH	Cond. (mS or (µS))	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
1300	64.5	6.6	489	670	15.0	switch to 2" ES pump ok
1302	64.4	6.5	482	711	16.5	cloudy
1304	64.4	6.5	480	682	18.0	" "
1307	64.5	6.5	478	651	19.5	" "
	- Well dewatered @			20.5	gallons -	
1450	64.7	6.5	485	729	21.0	cloudy
1453	64.5	6.5	481	684	22.5	" "
1456	64.5	6.5	479	639	24.0	" "
1500	64.5	6.5	477	650	25.5	" " DTW: 18.01
	- Well dewatered @			26.0	gallons -	
0800	61.3	6.8	479	712	27.0	cloudy DTW: 9.97
0803	60.7	6.8	473	681	28.5	" "
0806	60.4	6.8	477	695	30.0	" "
	- Well dewatered @ 31.0 gallons -					
1135	60.8	6.7	459	510	31.5	clear
1139	60.6	6.7	455	478	33.0	" "
1144	60.5	6.7	452	457	34.5	" "
1149	60.5	6.7	450	450	36.0	" "
	- Well dewatered @ 36.0 gallons -					

WELLHEAD INSPECTION CHECKLIST

Client Antea Date 5/20/13

Site Address UPRR @ Santa Rosa

Job Number 130570-JL1 Technician JL

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1					X			
MW-2					X			
MW-3					X			
MW-4					X			

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME UPRR @ Santa Rosa				PROJECT NUMBER 130520-5↳			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
Ultrameter II	6295222	5/20/13 1000	4-7-10 pH	4.0-7.0-10.0	Y	64° F	
"	"	"	3900 cond	3900	Y	"	
"	"	5/21/13 0630	4-7-10 pH	4.0-7.0-10.0	Y	57° F	
"	"	"	3900 cond	3900	Y	"	

SPH or Purge Water Drum Log

Client: Antea

Site Address: UPRR @ Santa Rosa, CA

STATUS OF DRUM(S) UPON ARRIVAL						
Date	5/20/13					
Number of drum(s) empty:	—					
Number of drum(s) 1/4 full:	—					
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—					
Number of drum(s) full:	8					
Total drum(s) on site:	8					
Are the drum(s) properly labeled?	Yes					
Drum ID & Contents:	soil cuttings H2O					
If any drum(s) are partially or totally filled, what is the first use date:	5/16/13					

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	5/21/13					
Number of drums empty:	—					
Number of drum(s) 1/4 full:	—					
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—					
Number of drum(s) full:	10					
Total drum(s) on site:	10					
Are the drum(s) properly labeled?	Yes					
Drum ID & Contents:	soil Purge H2O					

LOCATION OF DRUM(S)
Describe location of drum(s): Next to MW-3

FINAL STATUS						
Number of new drum(s) left on site this event	2					
Date of inspection:	5/21/13					
Drum(s) labelled properly:	Yes					
Logged by BTS Field Tech:						
Office reviewed by:						

Appendix H

Blaine Tech Well Sampling Field Notes

WELL GAUGING DATA

Project # 130529-601 Date 5/29/13 Client Antea

Site UPRR Santa Rosa

Well ID	Well Size (in.)	Time Gauged	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-1	2	0901					14.03	19.82	
MW-2	2	0858					10.83	19.61	
MW-3	2	0855					11.42	18.20	
MW-4	2	0852					9.90	18.19	

LOW FLOW WELL MONITORING DATA SHEET

Project #: 130529-K01	Client: Antea
Sampler: KD	Start Date: 5/29/13
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 19.82	Depth to Water: 14.03
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other ____
Flow Rate: 200 ml/min Pump Depth: 17'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	DTW Observations
0914	18.6	6.7	713	222	3.42	178.5	500	14.07
0917	18.5	6.6	518	148	3.15	157.0	1100	14.11
0920	18.4	6.6	489	57	2.99	140.6	1700	14.14
0923	18.5	6.6	485	55	3.02	137.0	2300	14.17
0926	18.5	6.6	487	54	3.03	131.9	2900	14.21

Did well dewater? Yes (No)	Amount actually evacuated: 2900 ml
Sampling Time: 0930	Sampling Date: 5/29/13
Sample I.D.: W-2344-MW-1-290513	Laboratory: Test America
Analyzed for: PAH DRO MORO	
Equipment Blank I.D.: @ Time	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 130529-KD1	Client: Antea
Sampler: KD	Start Date: 5/29/13
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 19.61	Depth to Water: 10.83
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump | (Peristaltic) Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other ____
Flow Rate: 250 ml/min | Pump Depth: 15'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (ml))	DTW Observations
0946	17.4	6.7	392	16	0.97	109.5	500	10.87
0949	17.1	6.6	392	13	0.78	101.4	1250	10.91
0952	17.1	6.6	387	9	0.61	84.4	2000	10.94
0955	17.1	6.6	386	8	0.60	82.9	2750	10.97
0958	17.1	6.6	386	8	0.58	85.2	3500	11.00

Did well dewater? Yes (No) — Amount actually evacuated: 3500 ml
Sampling Time: 1000 — Sampling Date: 5/29/13
Sample I.D.: W-2344-MW-2-290513 — Laboratory: Test America
Analyzed for: PAH DRO MORO
Equipment Blank I.D.: @ Time — Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 130529-K01	Client: Antea
Sampler: KO	Start Date: 5/29/13
Well I.D.: MW-3	Well Diameter: 2 3 4 6 8 ____
Total Well Depth: 18.20	Depth to Water: 11.42
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump (Peristaltic Pump) Bladder Pump
Sampling Method: Dedicated Tubing (New Tubing) Other____

Flow Rate: 250 ml/min Pump Depth: 14.51

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	DTW Observations
1048	19.3	6.7	467	15	0.57	66.4	500	11.44
1051	19.0	6.7	463	8	0.30	56.9	1250	11.46
1054	18.9	6.7	461	6	0.19	47.3	2000	11.46
1057	19.0	6.7	461	5	0.18	46.4	2750	11.46
1100	18.9	6.7	462	5	0.18	44.0	3500	11.46

Did well dewater? Yes (No)	Amount actually evacuated: 3500 ml
Sampling Time: 1105	Sampling Date: 5/29/13
Sample I.D.: W-2344-MW-3-290513	Laboratory: Test America
Analyzed for: PAH DRO MORO	
Equipment Blank I.D.: @ Time	Duplicate I.D.:

LOW FLOW WELL MONITORING DATA SHEET

Project #: 130529-1401	Client: Antea
Sampler: KD	Start Date: 5/29/13
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 18.19	Depth to Water: 9.90
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	Flow Cell Type: YSI 556

Purge Method: 2" Grundfos Pump | Peristaltic Pump | Bladder Pump
Sampling Method: Dedicated Tubing | New Tubing | Other ____
Flow Rate: 250 ml/min | Pump Depth: 14'

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	DTW Observations
1016	16.7	7.0	537	27	1.52	83.7	500	9.94
1019	16.6	7.0	538	25	0.26	77.9	1250	9.98
1022	16.6	7.0	532	16	0.29	69.3	2000	10.01
1025	16.6	7.0	510	11	0.39	61.5	2750	10.04
1028	16.5	7.0	511	10	0.41	60.2	3500	10.07
1031	16.5	7.0	511	10	0.41	60.5	4250	10.10

Did well dewater? Yes (No)	Amount actually evacuated: 4250 ml
Sampling Time: 1035	Sampling Date: 5/29/13
Sample I.D.: W-3344-MW-4-290513	Laboratory: Test America
Analyzed for: PAH DRO MORO	
Equipment Blank I.D.: @ Time	Duplicate I.D.:

BLAINE
TECH SERVICES, INC.

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 130529-K01

CLIENT Antea Group

SITE UPRR Santa Rosa
2 Fourth Street & 34 Sixth Street
Santa Rosa, CA

CONDUCT ANALYSIS TO DETECT

LAB: **Test America - Pleasanton** DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION
☐ LIA
☐ OTHER

Client Name/Address:
Lia Holden - Antea Group
1155 North First Street, Suite 201, San Jose, CA 95112
phone: (408) 606-4919
email: lia.holden@anteagroup.com

PEDD: PEDD_2344_5_Rev1_20130523

SAMPLE I.D.	DATE	TIME	MATRIX S= SOIL W=H_2O	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS		DRO & MORO (8015B) w/silica gel cleanup	PAHs (8270C SIM)					ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
W-2344+MW-1-290513	5/29/2013	0930	W	3	NP Amber			X	X								
W-2344-MW-2-290513	5/29/2013	1000	W	3	NP Amber			X	X								
W-2344-MW-3-290513	5/29/2013	1105	W	3	NP Amber			X	X								
W-2344-MW-4-290513	5/29/2013	1035	W	3	NP Amber			X	X								

SAMPLING COMPLETED DATE 5/29/13 TIME 1105 SAMPLING PERFORMED BY K. Allen

RESULTS NEEDED NO LATER THAN **STANDARD**

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
	5/29/13	1500	(SC)	5/29/13	1500
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #	

WELLHEAD INSPECTION CHECKLIST

Client Antea Date 5/29/13

Site Address UPRR Santa Rosa

Job Number 130529-KM1 Technician KM

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	X				X			
MW-2	X							
MW-3	X							
MW-4	X							

NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME Antea G UPRR Santa Rosa				PROJECT NUMBER 130529-K01			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP. °C	INITIALS
YSI 556	05K1408AC	5/29/13 0905	pH 4.0 7.0 10.0	4.0 7.0 10.0	Y	19.6	KS
			conductivity 3900 uS	3900 uS	Y	20.3	KS
			D.O. 100%	100%	Y	19.9	KS
			ORP 237	237	Y	20.6	KS

SPH or Purge Water Drum Log

Client: Antea

Site Address: UPRR @ Santa Rosa, CA

STATUS OF DRUM(S) UPON ARRIVAL						
Date	5/20/13	5/20/13				
Number of drum(s) empty:	—					
Number of drum(s) 1/4 full:	—					
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—	1				
Number of drum(s) full:	8	9				
Total drum(s) on site:	8	10				
Are the drum(s) properly labeled?	Yes	Yes				
Drum ID & Contents:	soil cuttings H2O	soil H2O				
If any drum(s) are partially or totally filled, what is the first use date:	5/16/13	5/16/13				

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purgewater or DI Water.

-If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.

-All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	5/21/13	5/21/13				
Number of drums empty:	—					
Number of drum(s) 1/4 full:	—					
Number of drum(s) 1/2 full:	—					
Number of drum(s) 3/4 full:	—					
Number of drum(s) full:	10	10				
Total drum(s) on site:	10	10				
Are the drum(s) properly labeled?	Yes	Yes				
Drum ID & Contents:	soil Purge H2O	soil purge H2O				

LOCATION OF DRUM(S)	
Describe location of drum(s):	Next to MW-3

FINAL STATUS						
Number of new drum(s) left on site this event	2	0				
Date of inspection:	5/21/13	5/21/13				
Drum(s) labelled properly:	Yes	Yes				
Logged by BTS Field Tech:						
Office reviewed by:						

Appendix I

Certified Laboratory Analytical Report and Validation Form – Soil Samples

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-49803-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
1155 North 1st Street
Suite 201
San Jose, California 95112

Attn: Ms. Lia Holden

Authorized for release by:
5/23/2013 3:37:40 PM

Dimple Sharma, Project Manager I
dimple.sharma@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Job ID: 720-49803-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-49803-1

Comments
No additional comments.

Receipt
The samples were received on 5/17/2013 5:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.8º C.

GC/MS Semi VOA
Method 8270C SIM: The following sample was diluted due to the abundance of non-target analytes: SO-2344-MW4-10.5-11.0-160513 (720-49803-9). Elevated reporting limits (RLs) are provided.

No other analytical or quality issues were noted.

GC Semi VOA
Method 8015B: Due to the level of dilution required for the following sample, surrogate recoveries are not reported: SO-2344-MW4-10.5-11.0-160513 (720-49803-9).

No other analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW1-5.0-5.5-150513 — Lab Sample ID: 720-49803-1

No Detections.

Client Sample ID: SO-2344-MW1-10.5-11.0-150513 — Lab Sample ID: 720-49803-2

No Detections.

Client Sample ID: SO-2344-MW1-16.0-16.5-150513 — Lab Sample ID: 720-49803-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.1		0.99		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-MW2-5.0-5.5-150513 — Lab Sample ID: 720-49803-4

No Detections.

Client Sample ID: SO-2344-MW2-9.5-10.0-150513 — Lab Sample ID: 720-49803-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Diesel Range Organics [C10-C28]	1.5		0.99		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-MW3-5.0-5.5-160513 — Lab Sample ID: 720-49803-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Anthracene	0.0084		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[b]fluoranthene	0.013		0.0050		mg/Kg	1		8270C SIM	Total/NA
Benzo[g,h,i]perylene	0.0085		0.0050		mg/Kg	1		8270C SIM	Total/NA
Chrysene	0.011		0.0050		mg/Kg	1		8270C SIM	Total/NA
Fluoranthene	0.0084		0.0050		mg/Kg	1		8270C SIM	Total/NA
Fluorene	0.0084		0.0050		mg/Kg	1		8270C SIM	Total/NA
Phenanthrene	0.018		0.0050		mg/Kg	1		8270C SIM	Total/NA
Pyrene	0.013		0.0050		mg/Kg	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	10		1.0		mg/Kg	1		8015B	Silica Gel Cleanup

Client Sample ID: SO-2344-MW3-10.5-11.0-160513 — Lab Sample ID: 720-49803-7

No Detections.

Client Sample ID: SO-2344-MW4-5.0-5.5-160513 — Lab Sample ID: 720-49803-8

No Detections.

Client Sample ID: SO-2344-MW4-10.5-11.0-160513 — Lab Sample ID: 720-49803-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[b]fluoranthene	0.012		0.0099		mg/Kg	2		8270C SIM	Total/NA
Chrysene	0.054		0.0099		mg/Kg	2		8270C SIM	Total/NA
Pyrene	0.037		0.0099		mg/Kg	2		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	290		4.9		mg/Kg	5		8015B	Silica Gel Cleanup
Motor Oil Range Organics [C24-C36]	420		250		mg/Kg	5		8015B	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW1-5.0-5.5-150513
Date Collected: 05/15/13 09:30
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-1
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Acenaphthylene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Benzo[b]fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Chrysene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Fluorene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Naphthalene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Phenanthrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1
Pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*91*		*33 - 120*	*05/18/13 08:56*	*05/20/13 15:54*	*1*
Terphenyl-d14	*87*		*35 - 146*	*05/18/13 08:56*	*05/20/13 15:54*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/18/13 09:01	05/18/13 18:04	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/18/13 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.007*		*0 - 1*	*05/18/13 09:01*	*05/18/13 18:04*	*1*
p-Terphenyl	*85*		*38 - 148*	*05/18/13 09:01*	*05/18/13 18:04*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW1-10.5-11.0-150513
Date Collected: 05/15/13 09:45
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-2
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Acenaphthylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Chrysene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Fluorene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Naphthalene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Phenanthrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1
Pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*33 - 120*	*05/18/13 08:56*	*05/20/13 16:15*	*1*
Terphenyl-d14	*89*		*35 - 146*	*05/18/13 08:56*	*05/20/13 16:15*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/18/13 09:01	05/18/13 18:34	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/18/13 18:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 1*	*05/18/13 09:01*	*05/18/13 18:34*	*1*
p-Terphenyl	*93*		*38 - 148*	*05/18/13 09:01*	*05/18/13 18:34*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW1-16.0-16.5-150513
Date Collected: 05/15/13 09:55
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-3
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Acenaphthylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Chrysene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Fluorene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Naphthalene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Phenanthrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1
Pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*89*		*33 - 120*	*05/18/13 08:56*	*05/20/13 16:35*	*1*
Terphenyl-d14	*85*		*35 - 146*	*05/18/13 08:56*	*05/20/13 16:35*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.1**		0.99		mg/Kg		05/18/13 09:01	05/18/13 15:38	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/18/13 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.03*		*0 - 1*	*05/18/13 09:01*	*05/18/13 15:38*	*1*
p-Terphenyl	*75*		*38 - 148*	*05/18/13 09:01*	*05/18/13 15:38*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW2-5.0-5.5-150513
Date Collected: 05/15/13 12:00
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-4
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Acenaphthylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Chrysene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Fluorene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Naphthalene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Phenanthrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1
Pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*88*		*33 - 120*	*05/18/13 08:56*	*05/20/13 16:56*	*1*
Terphenyl-d14	*85*		*35 - 146*	*05/18/13 08:56*	*05/20/13 16:56*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		05/18/13 09:01	05/18/13 16:07	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/18/13 16:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 1*	*05/18/13 09:01*	*05/18/13 16:07*	*1*
p-Terphenyl	*87*		*38 - 148*	*05/18/13 09:01*	*05/18/13 16:07*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW2-9.5-10.0-150513
Date Collected: 05/15/13 12:25
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-5
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Acenaphthylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Chrysene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Fluorene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Naphthalene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Phenanthrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1
Pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*88*		*33 - 120*	*05/18/13 08:56*	*05/20/13 17:16*	*1*
Terphenyl-d14	*86*		*35 - 146*	*05/18/13 08:56*	*05/20/13 17:16*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1.5**		0.99		mg/Kg		05/18/13 09:01	05/18/13 16:37	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/18/13 16:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.02*		*0 - 1*	*05/18/13 09:01*	*05/18/13 16:37*	*1*
p-Terphenyl	*79*		*38 - 148*	*05/18/13 09:01*	*05/18/13 16:37*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW3-5.0-5.5-160513
Date Collected: 05/16/13 08:15
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-6
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Acenaphthylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Anthracene	**0.0084**		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Benzo[b]fluoranthene	**0.013**		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Benzo[g,h,i]perylene	**0.0085**		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Chrysene	**0.011**		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Fluoranthene	**0.0084**		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Fluorene	**0.0084**		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Naphthalene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Phenanthrene	**0.018**		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1
Pyrene	**0.013**		0.0050		mg/Kg		05/18/13 08:56	05/20/13 17:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*83*		*33 - 120*	*05/18/13 08:56*	*05/20/13 17:37*	*1*
Terphenyl-d14	*89*		*35 - 146*	*05/18/13 08:56*	*05/20/13 17:37*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**10**		1.0		mg/Kg		05/18/13 09:01	05/18/13 17:06	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/18/13 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.04*		*0 - 1*	*05/18/13 09:01*	*05/18/13 17:06*	*1*
p-Terphenyl	*107*		*38 - 148*	*05/18/13 09:01*	*05/18/13 17:06*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW3-10.5-11.0-160513
Date Collected: 05/16/13 08:30
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-7
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Acenaphthylene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Benzo[b]fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Chrysene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Fluorene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Naphthalene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Phenanthrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1
Pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 17:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*81*		*33 - 120*	*05/18/13 08:56*	*05/20/13 17:58*	*1*
Terphenyl-d14	*75*		*35 - 146*	*05/18/13 08:56*	*05/20/13 17:58*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/18/13 09:01	05/18/13 17:35	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/18/13 17:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.008*		*0 - 1*	*05/18/13 09:01*	*05/18/13 17:35*	*1*
p-Terphenyl	*93*		*38 - 148*	*05/18/13 09:01*	*05/18/13 17:35*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW4-5.0-5.5-160513
Date Collected: 05/16/13 10:15
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-8
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Acenaphthylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Benzo[a]anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Benzo[a]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Benzo[b]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Benzo[g,h,i]perylene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Benzo[k]fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Chrysene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Dibenz(a,h)anthracene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Fluoranthene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Fluorene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Indeno[1,2,3-cd]pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Naphthalene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Phenanthrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1
Pyrene	ND		0.0050		mg/Kg		05/18/13 08:56	05/20/13 18:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*89*		*33 - 120*	*05/18/13 08:56*	*05/20/13 18:18*	*1*
Terphenyl-d14	*84*		*35 - 146*	*05/18/13 08:56*	*05/20/13 18:18*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0		mg/Kg		05/18/13 09:01	05/18/13 18:04	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/18/13 18:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/18/13 09:01*	*05/18/13 18:04*	*1*
p-Terphenyl	*93*		*38 - 148*	*05/18/13 09:01*	*05/18/13 18:04*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Client Sample ID: SO-2344-MW4-10.5-11.0-160513
Date Collected: 05/16/13 10:45
Date Received: 05/17/13 17:45

Lab Sample ID: 720-49803-9
Matrix: Solid

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Acenaphthylene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Anthracene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Benzo[a]anthracene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Benzo[a]pyrene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Benzo[b]fluoranthene	**0.012**		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Benzo[g,h,i]perylene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Benzo[k]fluoranthene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Chrysene	**0.054**		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Dibenz(a,h)anthracene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Fluoranthene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Fluorene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Indeno[1,2,3-cd]pyrene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Naphthalene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Phenanthrene	ND		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2
Pyrene	**0.037**		0.0099		mg/Kg		05/18/13 08:56	05/20/13 18:39	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*93*		*33 - 120*	*05/18/13 08:56*	*05/20/13 18:39*	*2*
Terphenyl-d14	*95*		*35 - 146*	*05/18/13 08:56*	*05/20/13 18:39*	*2*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**290**		4.9		mg/Kg		05/18/13 09:01	05/20/13 13:08	5
Motor Oil Range Organics [C24-C36]	**420**		250		mg/Kg		05/18/13 09:01	05/20/13 13:08	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*05/18/13 09:01*	*05/20/13 13:08*	*5*
p-Terphenyl	*0*	*X D*	*38 - 148*	*05/18/13 09:01*	*05/20/13 13:08*	*5*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-136697/1-A
Matrix: Solid
Analysis Batch: 136730

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 136697

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Acenaphthylene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Benzo[a]anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Benzo[a]pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Benzo[b]fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Benzo[g,h,i]perylene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Benzo[k]fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Chrysene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Dibenz(a,h)anthracene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Fluoranthene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Fluorene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Indeno[1,2,3-cd]pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Naphthalene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Phenanthrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1
Pyrene	ND		0.0049		mg/Kg		05/18/13 08:56	05/20/13 12:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*92*		*33 - 120*	*05/18/13 08:56*	*05/20/13 12:28*	*1*
Terphenyl-d14	*90*		*35 - 146*	*05/18/13 08:56*	*05/20/13 12:28*	*1*

Lab Sample ID: LCS 720-136697/2-A
Matrix: Solid
Analysis Batch: 136730

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 136697

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	0.329	0.280		mg/Kg		85	49 - 120
Acenaphthylene	0.329	0.278		mg/Kg		85	52 - 120
Anthracene	0.329	0.307		mg/Kg		93	52 - 120
Benzo[a]anthracene	0.329	0.294		mg/Kg		89	52 - 120
Benzo[a]pyrene	0.329	0.304		mg/Kg		92	54 - 120
Benzo[b]fluoranthene	0.329	0.315		mg/Kg		96	51 - 120
Benzo[g,h,i]perylene	0.329	0.273		mg/Kg		83	48 - 120
Benzo[k]fluoranthene	0.329	0.290		mg/Kg		88	56 - 120
Chrysene	0.329	0.280		mg/Kg		85	40 - 120
Dibenz(a,h)anthracene	0.329	0.302		mg/Kg		92	50 - 120
Fluoranthene	0.329	0.299		mg/Kg		91	57 - 120
Fluorene	0.329	0.291		mg/Kg		89	52 - 120
Indeno[1,2,3-cd]pyrene	0.329	0.294		mg/Kg		90	48 - 120
Naphthalene	0.329	0.258		mg/Kg		79	46 - 120
Phenanthrene	0.329	0.282		mg/Kg		86	48 - 120
Pyrene	0.329	0.288		mg/Kg		88	53 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*95*		*33 - 120*
Terphenyl-d14	*95*		*35 - 146*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-136697/3-A
Matrix: Solid
Analysis Batch: 136730

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 136697

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	0.332	0.275		mg/Kg		83	49 - 120	2	20
Acenaphthylene	0.332	0.273		mg/Kg		82	52 - 120	2	20
Anthracene	0.332	0.304		mg/Kg		92	52 - 120	1	20
Benzo[a]anthracene	0.332	0.294		mg/Kg		89	52 - 120	0	20
Benzo[a]pyrene	0.332	0.308		mg/Kg		93	54 - 120	2	20
Benzo[b]fluoranthene	0.332	0.304		mg/Kg		92	51 - 120	4	20
Benzo[g,h,i]perylene	0.332	0.274		mg/Kg		82	48 - 120	0	20
Benzo[k]fluoranthene	0.332	0.311		mg/Kg		94	56 - 120	7	20
Chrysene	0.332	0.284		mg/Kg		86	40 - 120	1	20
Dibenz(a,h)anthracene	0.332	0.305		mg/Kg		92	50 - 120	1	20
Fluoranthene	0.332	0.298		mg/Kg		90	57 - 120	0	20
Fluorene	0.332	0.287		mg/Kg		87	52 - 120	1	20
Indeno[1,2,3-cd]pyrene	0.332	0.296		mg/Kg		89	48 - 120	0	20
Naphthalene	0.332	0.259		mg/Kg		78	46 - 120	0	20
Phenanthrene	0.332	0.281		mg/Kg		85	48 - 120	0	20
Pyrene	0.332	0.283		mg/Kg		85	53 - 120	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*92*		*33 - 120*
Terphenyl-d14	*94*		*35 - 146*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-136698/1-A
Matrix: Solid
Analysis Batch: 136722

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 136698

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		0.99		mg/Kg		05/18/13 09:01	05/20/13 11:40	1
Motor Oil Range Organics [C24-C36]	ND		50		mg/Kg		05/18/13 09:01	05/20/13 11:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.0008*		*0 - 1*	*05/18/13 09:01*	*05/20/13 11:40*	*1*
p-Terphenyl	*89*		*38 - 148*	*05/18/13 09:01*	*05/20/13 11:40*	*1*

Lab Sample ID: LCS 720-136698/2-A
Matrix: Solid
Analysis Batch: 136691

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 136698

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]	82.2	66.8		mg/Kg		81	36 - 112		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*130*		*38 - 148*

Method: 8015B - Diesel Range Organics (DRO) (GC) (Continued)

Lab Sample ID: LCSD 720-136698/3-A
Matrix: Solid
Analysis Batch: 136691

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 136698

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			82.3	63.3		mg/Kg		77	36 - 112	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*123*		*38 - 148*

Lab Sample ID: 720-49803-1 MS
Matrix: Solid
Analysis Batch: 136691

Client Sample ID: SO-2344-MW1-5.0-5.5-150513
Prep Type: Silica Gel Cleanup
Prep Batch: 136698

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	ND		82.8	57.9		mg/Kg		70	50 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
p-Terphenyl	*124*		*38 - 148*

Lab Sample ID: 720-49803-1 MSD
Matrix: Solid
Analysis Batch: 136691

Client Sample ID: SO-2344-MW1-5.0-5.5-150513
Prep Type: Silica Gel Cleanup
Prep Batch: 136698

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	ND		83.2	59.0		mg/Kg		71	50 - 150	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
p-Terphenyl	*117*		*38 - 148*

GC/MS Semi VOA

Prep Batch: 136697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49803-1	SO-2344-MW1-5.0-5.5-150513	Total/NA	Solid	3546	
720-49803-2	SO-2344-MW1-10.5-11.0-150513	Total/NA	Solid	3546	
720-49803-3	SO-2344-MW1-16.0-16.5-150513	Total/NA	Solid	3546	
720-49803-4	SO-2344-MW2-5.0-5.5-150513	Total/NA	Solid	3546	
720-49803-5	SO-2344-MW2-9.5-10.0-150513	Total/NA	Solid	3546	
720-49803-6	SO-2344-MW3-5.0-5.5-160513	Total/NA	Solid	3546	
720-49803-7	SO-2344-MW3-10.5-11.0-160513	Total/NA	Solid	3546	
720-49803-8	SO-2344-MW4-5.0-5.5-160513	Total/NA	Solid	3546	
720-49803-9	SO-2344-MW4-10.5-11.0-160513	Total/NA	Solid	3546	
LCS 720-136697/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 720-136697/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
MB 720-136697/1-A	Method Blank	Total/NA	Solid	3546	

Analysis Batch: 136730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49803-1	SO-2344-MW1-5.0-5.5-150513	Total/NA	Solid	8270C SIM	136697
720-49803-2	SO-2344-MW1-10.5-11.0-150513	Total/NA	Solid	8270C SIM	136697
720-49803-3	SO-2344-MW1-16.0-16.5-150513	Total/NA	Solid	8270C SIM	136697
720-49803-4	SO-2344-MW2-5.0-5.5-150513	Total/NA	Solid	8270C SIM	136697
720-49803-5	SO-2344-MW2-9.5-10.0-150513	Total/NA	Solid	8270C SIM	136697
720-49803-6	SO-2344-MW3-5.0-5.5-160513	Total/NA	Solid	8270C SIM	136697
720-49803-7	SO-2344-MW3-10.5-11.0-160513	Total/NA	Solid	8270C SIM	136697
720-49803-8	SO-2344-MW4-5.0-5.5-160513	Total/NA	Solid	8270C SIM	136697
720-49803-9	SO-2344-MW4-10.5-11.0-160513	Total/NA	Solid	8270C SIM	136697
LCS 720-136697/2-A	Lab Control Sample	Total/NA	Solid	8270C SIM	136697
LCSD 720-136697/3-A	Lab Control Sample Dup	Total/NA	Solid	8270C SIM	136697
MB 720-136697/1-A	Method Blank	Total/NA	Solid	8270C SIM	136697

GC Semi VOA

Analysis Batch: 136691

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49803-1	SO-2344-MW1-5.0-5.5-150513	Silica Gel Cleanup	Solid	8015B	136698
720-49803-1 MS	SO-2344-MW1-5.0-5.5-150513	Silica Gel Cleanup	Solid	8015B	136698
720-49803-1 MSD	SO-2344-MW1-5.0-5.5-150513	Silica Gel Cleanup	Solid	8015B	136698
720-49803-2	SO-2344-MW1-10.5-11.0-150513	Silica Gel Cleanup	Solid	8015B	136698
LCS 720-136698/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	136698
LCSD 720-136698/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	136698

Analysis Batch: 136692

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49803-3	SO-2344-MW1-16.0-16.5-150513	Silica Gel Cleanup	Solid	8015B	136698
720-49803-4	SO-2344-MW2-5.0-5.5-150513	Silica Gel Cleanup	Solid	8015B	136698
720-49803-5	SO-2344-MW2-9.5-10.0-150513	Silica Gel Cleanup	Solid	8015B	136698
720-49803-6	SO-2344-MW3-5.0-5.5-160513	Silica Gel Cleanup	Solid	8015B	136698
720-49803-7	SO-2344-MW3-10.5-11.0-160513	Silica Gel Cleanup	Solid	8015B	136698
720-49803-8	SO-2344-MW4-5.0-5.5-160513	Silica Gel Cleanup	Solid	8015B	136698

GC Semi VOA (Continued)

Prep Batch: 136698

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49803-1	SO-2344-MW1-5.0-5.5-150513	Silica Gel Cleanup	Solid	3546	
720-49803-1 MS	SO-2344-MW1-5.0-5.5-150513	Silica Gel Cleanup	Solid	3546	
720-49803-1 MSD	SO-2344-MW1-5.0-5.5-150513	Silica Gel Cleanup	Solid	3546	
720-49803-2	SO-2344-MW1-10.5-11.0-150513	Silica Gel Cleanup	Solid	3546	
720-49803-3	SO-2344-MW1-16.0-16.5-150513	Silica Gel Cleanup	Solid	3546	
720-49803-4	SO-2344-MW2-5.0-5.5-150513	Silica Gel Cleanup	Solid	3546	
720-49803-5	SO-2344-MW2-9.5-10.0-150513	Silica Gel Cleanup	Solid	3546	
720-49803-6	SO-2344-MW3-5.0-5.5-160513	Silica Gel Cleanup	Solid	3546	
720-49803-7	SO-2344-MW3-10.5-11.0-160513	Silica Gel Cleanup	Solid	3546	
720-49803-8	SO-2344-MW4-5.0-5.5-160513	Silica Gel Cleanup	Solid	3546	
720-49803-9	SO-2344-MW4-10.5-11.0-160513	Silica Gel Cleanup	Solid	3546	
LCS 720-136698/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-136698/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	
MB 720-136698/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	

Analysis Batch: 136722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-49803-9	SO-2344-MW4-10.5-11.0-160513	Silica Gel Cleanup	Solid	8015B	136698
MB 720-136698/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	136698

Client Sample ID: SO-2344-MW1-5.0-5.5-150513

Lab Sample ID: 720-49803-1

Date Collected: 05/15/13 09:30

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	136730	05/20/13 15:54	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	136691	05/18/13 18:04	DH	TAL PLS

Client Sample ID: SO-2344-MW1-10.5-11.0-150513

Lab Sample ID: 720-49803-2

Date Collected: 05/15/13 09:45

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	136730	05/20/13 16:15	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	136691	05/18/13 18:34	DH	TAL PLS

Client Sample ID: SO-2344-MW1-16.0-16.5-150513

Lab Sample ID: 720-49803-3

Date Collected: 05/15/13 09:55

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	136730	05/20/13 16:35	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	136692	05/18/13 15:38	DH	TAL PLS

Client Sample ID: SO-2344-MW2-5.0-5.5-150513

Lab Sample ID: 720-49803-4

Date Collected: 05/15/13 12:00

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	136730	05/20/13 16:56	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	136692	05/18/13 16:07	DH	TAL PLS

Client Sample ID: SO-2344-MW2-9.5-10.0-150513

Lab Sample ID: 720-49803-5

Date Collected: 05/15/13 12:25

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	136730	05/20/13 17:16	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS

Client Sample ID: SO-2344-MW2-9.5-10.0-150513

Lab Sample ID: 720-49803-5

Date Collected: 05/15/13 12:25

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Analysis	8015B		1	136692	05/18/13 16:37	DH	TAL PLS

Client Sample ID: SO-2344-MW3-5.0-5.5-160513

Lab Sample ID: 720-49803-6

Date Collected: 05/16/13 08:15

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	136730	05/20/13 17:37	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	136692	05/18/13 17:06	DH	TAL PLS

Client Sample ID: SO-2344-MW3-10.5-11.0-160513

Lab Sample ID: 720-49803-7

Date Collected: 05/16/13 08:30

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	136730	05/20/13 17:58	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	136692	05/18/13 17:35	DH	TAL PLS

Client Sample ID: SO-2344-MW4-5.0-5.5-160513

Lab Sample ID: 720-49803-8

Date Collected: 05/16/13 10:15

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	136730	05/20/13 18:18	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	136692	05/18/13 18:04	DH	TAL PLS

Client Sample ID: SO-2344-MW4-10.5-11.0-160513

Lab Sample ID: 720-49803-9

Date Collected: 05/16/13 10:45

Matrix: Solid

Date Received: 05/17/13 17:45

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			136697	05/18/13 08:56	ND	TAL PLS
Total/NA	Analysis	8270C SIM		2	136730	05/20/13 18:39	ML	TAL PLS
Silica Gel Cleanup	Prep	3546			136698	05/18/13 09:01	ND	TAL PLS
Silica Gel Cleanup	Analysis	8015B		5	136722	05/20/13 13:08	DH	TAL PLS

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-49803-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-49803-1	SO-2344-MW1-5.0-5.5-150513	Solid	05/15/13 09:30	05/17/13 17:45
720-49803-2	SO-2344-MW1-10.5-11.0-150513	Solid	05/15/13 09:45	05/17/13 17:45
720-49803-3	SO-2344-MW1-16.0-16.5-150513	Solid	05/15/13 09:55	05/17/13 17:45
720-49803-4	SO-2344-MW2-5.0-5.5-150513	Solid	05/15/13 12:00	05/17/13 17:45
720-49803-5	SO-2344-MW2-9.5-10.0-150513	Solid	05/15/13 12:25	05/17/13 17:45
720-49803-6	SO-2344-MW3-5.0-5.5-160513	Solid	05/16/13 08:15	05/17/13 17:45
720-49803-7	SO-2344-MW3-10.5-11.0-160513	Solid	05/16/13 08:30	05/17/13 17:45
720-49803-8	SO-2344-MW4-5.0-5.5-160513	Solid	05/16/13 10:15	05/17/13 17:45
720-49803-9	SO-2344-MW4-10.5-11.0-160513	Solid	05/16/13 10:45	05/17/13 17:45

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TESTAMERICA Pleasanton Chain of Custody
1220 Quarry Lane ◉ Pleasanton CA 94566-4756
Phone: (925) 484-1919 ◉ Fax: (925) 600-3002

Reference #: 146072

720-49803

Date 5/17/2013 Page 1 of 1

5/23/2013

Report To

Attn: Lia Holden
Company: Antea Group
Address: 1155 N First St, San Jose
Email: lia.holden@anteagroup.com
Bill To: Union Pacific Railroad
Sampled By: Renee Ransam
Attn: Jim Diel
Phone: 408-606-4911

Analysis Request

Sample ID	Date	Time	Mat'l	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☒ Silica Gel ☒ Diesel ☒ Motor Oil ☐ Other ___	SemiVolatile Organics GC/MS ☐ EPA 8270C	PNA/PAH's by ☐ 8270C ☒ 8270C SIM	Oil and Grease ☐ Petroleum (EPA 1664/9071) ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	Metals: ☐ 6020 ☐ 200.8 (ICP-MS) ___	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex. Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity	Number of Containers
SO-2344-MW1-5.0-5.5-160513	5/15	930	S	None				X		X												1
SO-2344-MW1-10.5-11.0-160513	5/15	945	S	None				X		X												1
SO-2344-MW1-16.0-16.5-160513	5/15	955	S	None				X		X												1
SO-2344-MW2-5.0-5.5-160513	5/15	1200	S	None				X		X												1
SO-2344-MW2-9.5-10.0-160513	5/15	1225	S	None				X		X												1
SO-2344-MW3-5.0-5.5-160513	5/16	815	S	None				X		X												1
SO-2344-MW3-10.5-11.0-160513	5/16	830	S	None				X		X												1
SO-2344-MW4-5.0-5.5-160513	5/16	1015	S	None				X		X												1
SO-2344-MW4-10.5-11.0-160513	5/16	1045	S	None				X		X												1

720-49803 Chain of Custody

Page 26 of 27

Project Info

Project Name/ #: Santa Rosa, CA: 4th and Lotn St UST
PO#: UPR8248
Credit Card Y/N: If yes, please call with payment information ASAP

Sample Receipt

of Containers: 9 soil samples
Head Space:
Temp: 3.8°

TAT: 10 Day | 5 Day | 4 Day | 3 Day | 2 Day | 1 Day | Other

Report: ☐ Routine ☐ Level 3 ☐ Level 4 ☒ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID ___

See Terms and Conditions on reverse

	1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature	Renee Ransam		
Time	1445	1745	
Printed Name	Renee Ransam	Savio Motha	
Date	5/17/13	05/17/13	
Company	Antea Group	TAP	

	1) Received by:	2) Received by:	3) Received by:
Signature		Justin Gonzales	
Time	1445	1745	
Printed Name	Savio Motha	Justin Gonzales	
Date	05/17/13	5/17/13	
Company	TAP	TAP	

Rev.10/2012

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-49803-1

Login Number: 49803

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Gonzales, Justinn

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CONESTOGA-ROVERS & ASSOCIATES

20818 44th Avenue West, Suite 190
Lynnwood, WA 98036
Telephone: (206) 914-3141
www.CRAworld.com

MEMORANDUM

TO:	Lia Holden	REF. NO.:	058324-2344
FROM:	Jeffrey Cloud/bjw/387 JC/bjw	DATE:	June 11, 2013
C.C.:	Renee Ransom, Jesse Orth, Julie Lidstone	**E-Mail and Hard Copy if Requested**	

RE: Data Quality Assessment and Validation of Report J49803
Monitoring Well Installation
Union Pacific Railroad (UPRR)
2 Fourth Street and 34 Sixth Street
Santa Rosa, California
May 2013

INTRODUCTION

The following document details a reduced validation of analytical data resulting from the May 2013, collection of soil samples in Santa Rosa, California. Samples were submitted to Test America Laboratories (TA), located in Pleasanton, California. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes, laboratory control samples (LCS) and matrix spikes.

The QA/QC criteria by which these data have been assessed are outlined in the analytical methods referenced in Table 2 and the document entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

These guidelines are collectively referred to as "Guidelines" in this Memorandum.

SAMPLE HOLDING TIME AND PRESERVATION

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 2. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times.

EQUAL EMPLOYMENT OPPORTUNITY EMPLOYER

REGISTERED COMPANY FOR ISO 9001 ENGINEERING DESIGN

All samples were properly delivered on ice, stored by the laboratory at the required temperature (<6°C).

LABORATORY METHOD BLANK ANALYSES

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

SURROGATE SPIKE RECOVERIES

In accordance with the methods employed, all samples, blanks and QC samples analyzed for semi-volatile organic compounds (SVOCs) and diesel range organics/oil range organics (DRO/ORO) are spiked with the appropriate number of surrogate compounds prior to sample extraction. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of semi-volatile organic compound (SVOC) analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

LABORATORY CONTROL SAMPLE (LCS) ANALYSES

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries and relative percent differences were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) ANALYSES

To evaluate the effects of sample matrices on the extraction or digestion process, measurement procedures, and accuracy of a particular analysis, samples are spiked with a known concentration of the analyte of concern and analyzed as MS/MSD samples. The RPD between the MS and MSD is used to assess analytical precision.

MS/MSD analyses were performed as specified in Table 1.

Organic Analyses

The MS/MSD samples were spiked with all compounds of interest. All percent recoveries and RPD values were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision.

ANALYTE REPORTING

The laboratory did not report any detected concentrations below the laboratory's practical quantitation limit (PQL)/report limit (RL).

All soil results were reported on a wet weight basis.

CONCLUSION

Based on this assessment of the information provided, the data produced by TA were found to exhibit acceptable levels of accuracy and precision and may be used without qualification.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
MONITORING WELL INSTALLATION
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

								Analysis/Parameters	
Sample Identification	*Location*	*Matrix*	*Initial Sample Depth (ft. bgs)*	*Final Sample Depth (ft. bgs)*	*QC Samples*	*Collection Date*	*Collection Time*	*SW8015D*	*SW8270SIM*
SO-2344-MW1-5.0-5.5-150513	MW1	Soil	5	5.5	MS/MSD-P	5/15/2013	9:30:00 AM	X	X
SO-2344-MW1-10.5-11.0-150513	MW1	Soil	10.5	11		5/15/2013	9:45:00 AM	X	X
SO-2344-MW1-16.0-16.5-150513	MW1	Soil	16	16.5		5/15/2013	9:55:00 AM	X	X
SO-2344-MW2-5.0-5.5-150513	MW2	Soil	5	5.5		5/15/2013	12:00:00 PM	X	X
SO-2344-MW2-9.5-10.0-150513	MW2	Soil	9.5	10		5/15/2013	12:25:00 PM	X	X
SO-2344-MW3-5.0-5.5-160513	MW3	Soil	5	5.5		5/16/2013	8:15:00 AM	X	X
SO-2344-MW3-10.5-11.0-160513	MW3	Soil	10.5	11		5/16/2013	8:30:00 AM	X	X
SO-2344-MW4-5.0-5.5-160513	MW4	Soil	5	5.5		5/16/2013	10:15:00 AM	X	X
SO-2344-MW4-10.5-11.0-160513	MW4	Soil	10.5	11		5/16/2013	10:45:00 AM	X	X

Notes:

MS/MSD-P Matrix spike/matrix spike duplicate (partial parameters)
QC Quality control.

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
MONITORING WELL INSTALLATION
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

Parameter	*Method* [1]	*Matrix*	*Holding Time*	*Preservation* [2]
Semi-Volatile Organic Compounds (SVOCs)	SW-846 8270C	Soil	- 14 days from sample collection to extraction - 40 days from extraction to completion of analysis	Iced, ≤ 6° C
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	SW-846 8015B	Soil	- 14 days from sample collection to extraction - 40 days from extraction to completion of analysis	Iced, ≤ 6° C

Notes

[1] Method References:
SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

[2] pH preservation is not required in soil samples.

TABLE 3

ANALYTICAL RESULTS SUMMARY
MONITORING WELL INSTALLATION
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

	Sample Location:	***MW1***	***MW1***	***MW1***
	Sample ID:	***SO-2344-MW1-5.0-5.5-150513***	***SO-2344-MW1-10.5-11.0-150513***	***SO-2344-MW1-16.0-16.5-150513***
	Sample Date:	***5/15/2013***	***5/15/2013***	***5/15/2013***
	Sample Depth:	***5-5.5 ft BGS***	***10.5-11 ft BGS***	***16-16.5 ft BGS***
Parameters	***Units***			
Semi-volatile Organic Compounds				
Acenaphthene	mg/kg	<0.0049	<0.0050	<0.0050
Acenaphthylene	mg/kg	<0.0049	<0.0050	<0.0050
Anthracene	mg/kg	<0.0049	<0.0050	<0.0050
Benzo(a)anthracene	mg/kg	<0.0049	<0.0050	<0.0050
Benzo(a)pyrene	mg/kg	<0.0049	<0.0050	<0.0050
Benzo(b)fluoranthene	mg/kg	<0.0049	<0.0050	<0.0050
Benzo(g,h,i)perylene	mg/kg	<0.0049	<0.0050	<0.0050
Benzo(k)fluoranthene	mg/kg	<0.0049	<0.0050	<0.0050
Chrysene	mg/kg	<0.0049	<0.0050	<0.0050
Dibenz(a,h)anthracene	mg/kg	<0.0049	<0.0050	<0.0050
Fluoranthene	mg/kg	<0.0049	<0.0050	<0.0050
Fluorene	mg/kg	<0.0049	<0.0050	<0.0050
Indeno(1,2,3-cd)pyrene	mg/kg	<0.0049	<0.0050	<0.0050
Naphthalene	mg/kg	<0.0049	<0.0050	<0.0050
Phenanthrene	mg/kg	<0.0049	<0.0050	<0.0050
Pyrene	mg/kg	<0.0049	<0.0050	<0.0050
Petroleum Products				
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	<1.0	<1.0	1.1
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<50	<50	<50

TABLE 3

ANALYTICAL RESULTS SUMMARY
MONITORING WELL INSTALLATION
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

	Sample Location:	***MW2***	***MW2***	***MW3***
	Sample ID:	***SO-2344-MW2-5.0-5.5-150513***	***SO-2344-MW2-9.5-10.0-150513***	***SO-2344-MW3-5.0-5.5-160513***
	Sample Date:	***5/15/2013***	***5/15/2013***	***5/16/2013***
	Sample Depth:	***5-5.5 ft BGS***	***9.5-10 ft BGS***	***5-5.5 ft BGS***
Parameters	***Units***			
Semi-volatile Organic Compounds				
Acenaphthene	mg/kg	<0.0050	<0.0050	<0.0050
Acenaphthylene	mg/kg	<0.0050	<0.0050	<0.0050
Anthracene	mg/kg	<0.0050	<0.0050	0.0084
Benzo(a)anthracene	mg/kg	<0.0050	<0.0050	<0.0050
Benzo(a)pyrene	mg/kg	<0.0050	<0.0050	<0.0050
Benzo(b)fluoranthene	mg/kg	<0.0050	<0.0050	0.013
Benzo(g,h,i)perylene	mg/kg	<0.0050	<0.0050	0.0085
Benzo(k)fluoranthene	mg/kg	<0.0050	<0.0050	<0.0050
Chrysene	mg/kg	<0.0050	<0.0050	0.011
Dibenz(a,h)anthracene	mg/kg	<0.0050	<0.0050	<0.0050
Fluoranthene	mg/kg	<0.0050	<0.0050	0.0084
Fluorene	mg/kg	<0.0050	<0.0050	0.0084
Indeno(1,2,3-cd)pyrene	mg/kg	<0.0050	<0.0050	<0.0050
Naphthalene	mg/kg	<0.0050	<0.0050	<0.0050
Phenanthrene	mg/kg	<0.0050	<0.0050	0.018
Pyrene	mg/kg	<0.0050	<0.0050	0.013
Petroleum Products				
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	<0.99	1.5	10
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<50	<50	<50

TABLE 3

ANALYTICAL RESULTS SUMMARY
MONITORING WELL INSTALLATION
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

	Sample Location:	***MW3***	***MW4***	***MW4***
	Sample ID:	***SO-2344-MW3-10.5-11.0-160513***	***SO-2344-MW4-5.0-5.5-160513***	***SO-2344-MW4-10.5-11.0-160513***
	Sample Date:	***5/16/2013***	***5/16/2013***	***5/16/2013***
	Sample Depth:	***10.5-11 ft BGS***	***5-5.5 ft BGS***	***10.5-11 ft BGS***
Parameters	***Units***			
Semi-volatile Organic Compounds				
Acenaphthene	mg/kg	<0.0049	<0.0050	<0.0099
Acenaphthylene	mg/kg	<0.0049	<0.0050	<0.0099
Anthracene	mg/kg	<0.0049	<0.0050	<0.0099
Benzo(a)anthracene	mg/kg	<0.0049	<0.0050	<0.0099
Benzo(a)pyrene	mg/kg	<0.0049	<0.0050	<0.0099
Benzo(b)fluoranthene	mg/kg	<0.0049	<0.0050	0.012
Benzo(g,h,i)perylene	mg/kg	<0.0049	<0.0050	<0.0099
Benzo(k)fluoranthene	mg/kg	<0.0049	<0.0050	<0.0099
Chrysene	mg/kg	<0.0049	<0.0050	0.054
Dibenz(a,h)anthracene	mg/kg	<0.0049	<0.0050	<0.0099
Fluoranthene	mg/kg	<0.0049	<0.0050	<0.0099
Fluorene	mg/kg	<0.0049	<0.0050	<0.0099
Indeno(1,2,3-cd)pyrene	mg/kg	<0.0049	<0.0050	<0.0099
Naphthalene	mg/kg	<0.0049	<0.0050	<0.0099
Phenanthrene	mg/kg	<0.0049	<0.0050	<0.0099
Pyrene	mg/kg	<0.0049	<0.0050	0.037
Petroleum Products				
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	mg/kg	<1.0	<1.0	290
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	mg/kg	<50	<50	420

Appendix J

Certified Laboratory Analytical Report and Validation Form – Groundwater Samples

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



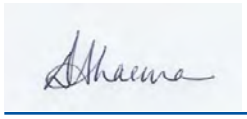
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-50010-1
Client Project/Site: UPRR- Santa Rosa

For:
Antea USA, Inc.
1155 North 1st Street
Suite 201
San Jose, California 95112

Attn: Ms. Lia Holden



Authorized for release by:
6/13/2013 5:56:30 PM

Dimple Sharma, Project Manager I
dimple.sharma@testamericainc.com

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
*	LCS or LCSD exceeds the control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Job ID: 720-50010-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-50010-1

Comments
No additional comments.

Receipt
The samples were received on 5/30/2013 5:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.2º C and 1.9º C.

GC/MS Semi VOA
Method 8270C SIM: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch #137648 recovered outside control limits for the following analytes: fluoranthene, fluorene.

No other analytical or quality issues were noted.

GC Semi VOA
No analytical or quality issues were noted.

Organic Prep
No analytical or quality issues were noted.

Detection Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Client Sample ID: W-2344-MW-1-290513 — **Lab Sample ID: 720-50010-1**

No Detections.

Client Sample ID: W-2344-MW-2-290513 — **Lab Sample ID: 720-50010-2**

No Detections.

Client Sample ID: W-2344-MW-3-290513 — **Lab Sample ID: 720-50010-3**

No Detections.

Client Sample ID: W-2344-MW-4-290513 — **Lab Sample ID: 720-50010-4**

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Client Sample ID: W-2344-MW-1-290513
Date Collected: 05/29/13 09:30
Date Received: 05/30/13 17:15

Lab Sample ID: 720-50010-1
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Acenaphthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Acenaphthylene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Fluorene	ND	H	0.11		ug/L		06/07/13 17:02	06/08/13 12:58	1
Phenanthrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Benzo[a]anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Chrysene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Benzo[a]pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Benzo[b]fluoranthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Benzo[k]fluoranthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Fluoranthene	ND	H	0.11		ug/L		06/07/13 17:02	06/08/13 12:58	1
Pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 01:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*66*		*29 - 120*	*06/04/13 16:11*	*06/06/13 01:59*	*1*
2-Fluorobiphenyl	*80*		*29 - 120*	*06/07/13 17:02*	*06/08/13 12:58*	*1*
Terphenyl-d14	*66*		*45 - 120*	*06/04/13 16:11*	*06/06/13 01:59*	*1*
Terphenyl-d14	*76*		*45 - 120*	*06/07/13 17:02*	*06/08/13 12:58*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		06/04/13 08:37	06/04/13 17:12	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		06/04/13 08:37	06/04/13 17:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 5*	*06/04/13 08:37*	*06/04/13 17:12*	*1*
p-Terphenyl	*99*		*31 - 150*	*06/04/13 08:37*	*06/04/13 17:12*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Client Sample ID: W-2344-MW-2-290513
Date Collected: 05/29/13 10:00
Date Received: 05/30/13 17:15

Lab Sample ID: 720-50010-2
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Acenaphthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Acenaphthylene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Fluorene	ND	H	0.11		ug/L		06/07/13 17:02	06/08/13 13:22	1
Phenanthrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Benzo[a]anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Chrysene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Benzo[a]pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Benzo[b]fluoranthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Benzo[k]fluoranthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Fluoranthene	ND	H	0.11		ug/L		06/07/13 17:02	06/08/13 13:22	1
Pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*29 - 120*	*06/04/13 16:11*	*06/06/13 02:20*	*1*
2-Fluorobiphenyl	*79*		*29 - 120*	*06/07/13 17:02*	*06/08/13 13:22*	*1*
Terphenyl-d14	*61*		*45 - 120*	*06/04/13 16:11*	*06/06/13 02:20*	*1*
Terphenyl-d14	*76*		*45 - 120*	*06/07/13 17:02*	*06/08/13 13:22*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		06/04/13 08:37	06/04/13 17:36	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		06/04/13 08:37	06/04/13 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*06/04/13 08:37*	*06/04/13 17:36*	*1*
p-Terphenyl	*86*		*31 - 150*	*06/04/13 08:37*	*06/04/13 17:36*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Client Sample ID: W-2344-MW-3-290513
Date Collected: 05/29/13 11:05
Date Received: 05/30/13 17:15

Lab Sample ID: 720-50010-3
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Acenaphthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Acenaphthylene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Fluorene	ND	H	0.11		ug/L		06/07/13 17:02	06/09/13 23:47	1
Phenanthrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Benzo[a]anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Chrysene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Benzo[a]pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Benzo[b]fluoranthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Benzo[k]fluoranthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Fluoranthene	ND	H	0.11		ug/L		06/07/13 17:02	06/09/13 23:47	1
Pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 02:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*29 - 120*	*06/04/13 16:11*	*06/06/13 02:41*	*1*
2-Fluorobiphenyl	*82*		*29 - 120*	*06/07/13 17:02*	*06/09/13 23:47*	*1*
Terphenyl-d14	*70*		*45 - 120*	*06/04/13 16:11*	*06/06/13 02:41*	*1*
Terphenyl-d14	*89*		*45 - 120*	*06/07/13 17:02*	*06/09/13 23:47*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		06/04/13 08:37	06/04/13 18:00	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		06/04/13 08:37	06/04/13 18:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.004*		*0 - 5*	*06/04/13 08:37*	*06/04/13 18:00*	*1*
p-Terphenyl	*91*		*31 - 150*	*06/04/13 08:37*	*06/04/13 18:00*	*1*

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Client Sample ID: W-2344-MW-4-290513
Date Collected: 05/29/13 10:35
Date Received: 05/30/13 17:15

Lab Sample ID: 720-50010-4
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Acenaphthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Acenaphthylene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Fluorene	ND	H	0.11		ug/L		06/07/13 17:02	06/08/13 14:08	1
Phenanthrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Benzo[a]anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Chrysene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Benzo[a]pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Benzo[b]fluoranthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Benzo[k]fluoranthene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Fluoranthene	ND	H	0.11		ug/L		06/07/13 17:02	06/08/13 14:08	1
Pyrene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		06/04/13 16:11	06/06/13 03:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*29 - 120*	*06/04/13 16:11*	*06/06/13 03:01*	*1*
2-Fluorobiphenyl	*88*		*29 - 120*	*06/07/13 17:02*	*06/08/13 14:08*	*1*
Terphenyl-d14	*65*		*45 - 120*	*06/04/13 16:11*	*06/06/13 03:01*	*1*
Terphenyl-d14	*74*		*45 - 120*	*06/07/13 17:02*	*06/08/13 14:08*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		53		ug/L		06/04/13 08:37	06/04/13 18:25	1
Motor Oil Range Organics [C24-C36]	ND		110		ug/L		06/04/13 08:37	06/04/13 18:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.001*		*0 - 5*	*06/04/13 08:37*	*06/04/13 18:25*	*1*
p-Terphenyl	*91*		*31 - 150*	*06/04/13 08:37*	*06/04/13 18:25*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-137648/1-A
Matrix: Water
Analysis Batch: 137704

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 137648

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Acenaphthene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Acenaphthylene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Fluorene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Phenanthrene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Anthracene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Benzo[a]anthracene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Chrysene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Benzo[a]pyrene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Benzo[b]fluoranthene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Benzo[k]fluoranthene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Fluoranthene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Pyrene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		06/04/13 16:11	06/05/13 12:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*43*		*29 - 120*	*06/04/13 16:11*	*06/05/13 12:59*	*1*
Terphenyl-d14	*63*		*45 - 120*	*06/04/13 16:11*	*06/05/13 12:59*	*1*

Lab Sample ID: LCS 720-137648/2-A
Matrix: Water
Analysis Batch: 137704

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 137648

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	4.35		ug/L		44	29 - 120
Acenaphthene	10.0	4.76		ug/L		48	42 - 120
Acenaphthylene	10.0	4.79		ug/L		48	39 - 120
Fluorene	10.0	4.11	*	ug/L		41	45 - 120
Phenanthrene	10.0	5.27		ug/L		53	46 - 120
Anthracene	10.0	6.03		ug/L		60	53 - 120
Benzo[a]anthracene	10.0	5.52		ug/L		55	48 - 120
Chrysene	10.0	5.45		ug/L		55	47 - 120
Benzo[a]pyrene	10.0	5.73		ug/L		57	43 - 120
Benzo[b]fluoranthene	10.0	6.03		ug/L		60	42 - 120
Benzo[k]fluoranthene	10.0	5.60		ug/L		56	42 - 120
Benzo[g,h,i]perylene	10.0	5.74		ug/L		57	24 - 120
Indeno[1,2,3-cd]pyrene	10.0	5.79		ug/L		58	25 - 120
Fluoranthene	10.0	5.49	*	ug/L		55	57 - 120
Pyrene	10.0	5.55		ug/L		55	47 - 120
Dibenz(a,h)anthracene	10.0	5.52		ug/L		55	21 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*46*		*29 - 120*
Terphenyl-d14	*56*		*45 - 120*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCSD 720-137648/3-A
Matrix: Water
Analysis Batch: 137704

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 137648

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			10.0	4.44		ug/L		44	29 - 120	2	35
Acenaphthene			10.0	4.81		ug/L		48	42 - 120	1	35
Acenaphthylene			10.0	4.68		ug/L		47	39 - 120	2	35
Fluorene			10.0	4.04	*	ug/L		40	45 - 120	2	35
Phenanthrene			10.0	5.04		ug/L		50	46 - 120	4	35
Anthracene			10.0	5.76		ug/L		58	53 - 120	4	35
Benzo[a]anthracene			10.0	5.61		ug/L		56	48 - 120	2	35
Chrysene			10.0	5.49		ug/L		55	47 - 120	1	35
Benzo[a]pyrene			10.0	5.61		ug/L		56	43 - 120	2	35
Benzo[b]fluoranthene			10.0	5.89		ug/L		59	42 - 120	2	35
Benzo[k]fluoranthene			10.0	5.43		ug/L		54	42 - 120	3	35
Benzo[g,h,i]perylene			10.0	6.72		ug/L		67	24 - 120	16	35
Indeno[1,2,3-cd]pyrene			10.0	6.66		ug/L		67	25 - 120	14	35
Fluoranthene			10.0	6.07		ug/L		61	57 - 120	10	35
Pyrene			10.0	4.87		ug/L		49	47 - 120	13	35
Dibenz(a,h)anthracene			10.0	6.31		ug/L		63	21 - 120	13	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*44*		*29 - 120*
Terphenyl-d14	*51*		*45 - 120*

Lab Sample ID: MB 720-137935/1-A
Matrix: Water
Analysis Batch: 137966

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 137935

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Acenaphthene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Acenaphthylene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Fluorene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Phenanthrene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Anthracene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Benzo[a]anthracene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Chrysene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Benzo[a]pyrene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Benzo[b]fluoranthene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Benzo[k]fluoranthene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Fluoranthene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Pyrene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		06/07/13 17:02	06/08/13 11:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*57*		*29 - 120*	*06/07/13 17:02*	*06/08/13 11:02*	*1*
Terphenyl-d14	*76*		*45 - 120*	*06/07/13 17:02*	*06/08/13 11:02*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCS 720-137935/2-A
Matrix: Water
Analysis Batch: 137966

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 137935

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Naphthalene			10.0	4.68		ug/L		47	29 - 120		
Acenaphthene			10.0	5.23		ug/L		52	42 - 120		
Acenaphthylene			10.0	5.11		ug/L		51	39 - 120		
Fluorene			10.0	5.11		ug/L		51	45 - 120		
Phenanthrene			10.0	6.59		ug/L		66	46 - 120		
Anthracene			10.0	7.41		ug/L		74	53 - 120		
Benzo[a]anthracene			10.0	7.22		ug/L		72	48 - 120		
Chrysene			10.0	7.28		ug/L		73	47 - 120		
Benzo[a]pyrene			10.0	7.85		ug/L		78	43 - 120		
Benzo[b]fluoranthene			10.0	8.46		ug/L		85	42 - 120		
Benzo[k]fluoranthene			10.0	7.19		ug/L		72	42 - 120		
Benzo[g,h,i]perylene			10.0	7.94		ug/L		79	24 - 120		
Indeno[1,2,3-cd]pyrene			10.0	8.11		ug/L		81	25 - 120		
Fluoranthene			10.0	7.70		ug/L		77	57 - 120		
Pyrene			10.0	7.55		ug/L		75	47 - 120		
Dibenz(a,h)anthracene			10.0	7.49		ug/L		75	21 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*54*		*29 - 120*
Terphenyl-d14	*75*		*45 - 120*

Lab Sample ID: LCSD 720-137935/3-A
Matrix: Water
Analysis Batch: 137966

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 137935

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			10.0	5.97		ug/L		60	29 - 120	24	35
Acenaphthene			10.0	7.11		ug/L		71	42 - 120	30	35
Acenaphthylene			10.0	7.03		ug/L		70	39 - 120	32	35
Fluorene			10.0	6.87		ug/L		69	45 - 120	29	35
Phenanthrene			10.0	7.42		ug/L		74	46 - 120	12	35
Anthracene			10.0	7.91		ug/L		79	53 - 120	7	35
Benzo[a]anthracene			10.0	7.23		ug/L		72	48 - 120	0	35
Chrysene			10.0	7.25		ug/L		73	47 - 120	0	35
Benzo[a]pyrene			10.0	7.97		ug/L		80	43 - 120	2	35
Benzo[b]fluoranthene			10.0	8.57		ug/L		86	42 - 120	1	35
Benzo[k]fluoranthene			10.0	7.32		ug/L		73	42 - 120	2	35
Benzo[g,h,i]perylene			10.0	8.06		ug/L		81	24 - 120	1	35
Indeno[1,2,3-cd]pyrene			10.0	8.17		ug/L		82	25 - 120	1	35
Fluoranthene			10.0	7.88		ug/L		79	57 - 120	2	35
Pyrene			10.0	7.54		ug/L		75	47 - 120	0	35
Dibenz(a,h)anthracene			10.0	7.54		ug/L		75	21 - 120	1	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*69*		*29 - 120*
Terphenyl-d14	*75*		*45 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-137599/1-A
Matrix: Water
Analysis Batch: 137600

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 137599

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		06/04/13 08:37	06/04/13 18:38	1
Motor Oil Range Organics [C24-C36]	ND		99		ug/L		06/04/13 08:37	06/04/13 18:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*06/04/13 08:37*	*06/04/13 18:38*	*1*
p-Terphenyl	*95*		*31 - 150*	*06/04/13 08:37*	*06/04/13 18:38*	*1*

Lab Sample ID: LCS 720-137599/2-A
Matrix: Water
Analysis Batch: 137600

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 137599

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			2500	1110		ug/L		44	32 - 119		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*111*		*31 - 150*

Lab Sample ID: LCSD 720-137599/3-A
Matrix: Water
Analysis Batch: 137600

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 137599

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			2500	1430		ug/L		57	32 - 119	25	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*109*		*31 - 150*

GC/MS Semi VOA

Prep Batch: 137648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-50010-1	W-2344-MW-1-290513	Total/NA	Water	3510C	
720-50010-2	W-2344-MW-2-290513	Total/NA	Water	3510C	
720-50010-3	W-2344-MW-3-290513	Total/NA	Water	3510C	
720-50010-4	W-2344-MW-4-290513	Total/NA	Water	3510C	
LCS 720-137648/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-137648/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-137648/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 137704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-137648/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	137648
LCSD 720-137648/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	137648
MB 720-137648/1-A	Method Blank	Total/NA	Water	8270C SIM	137648

Analysis Batch: 137718

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-50010-1	W-2344-MW-1-290513	Total/NA	Water	8270C SIM	137648
720-50010-2	W-2344-MW-2-290513	Total/NA	Water	8270C SIM	137648
720-50010-3	W-2344-MW-3-290513	Total/NA	Water	8270C SIM	137648
720-50010-4	W-2344-MW-4-290513	Total/NA	Water	8270C SIM	137648

Prep Batch: 137935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-50010-1	W-2344-MW-1-290513	Total/NA	Water	3510C	
720-50010-2	W-2344-MW-2-290513	Total/NA	Water	3510C	
720-50010-3	W-2344-MW-3-290513	Total/NA	Water	3510C	
720-50010-4	W-2344-MW-4-290513	Total/NA	Water	3510C	
LCS 720-137935/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-137935/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-137935/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 137966

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-50010-1	W-2344-MW-1-290513	Total/NA	Water	8270C SIM	137935
720-50010-2	W-2344-MW-2-290513	Total/NA	Water	8270C SIM	137935
720-50010-4	W-2344-MW-4-290513	Total/NA	Water	8270C SIM	137935
LCS 720-137935/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	137935
LCSD 720-137935/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	137935
MB 720-137935/1-A	Method Blank	Total/NA	Water	8270C SIM	137935

Analysis Batch: 137982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-50010-3	W-2344-MW-3-290513	Total/NA	Water	8270C SIM	137935

GC Semi VOA

Analysis Batch: 137585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-50010-1	W-2344-MW-1-290513	Silica Gel Cleanup	Water	8015B	137599
720-50010-2	W-2344-MW-2-290513	Silica Gel Cleanup	Water	8015B	137599

GC Semi VOA (Continued)

Analysis Batch: 137585 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-50010-3	W-2344-MW-3-290513	Silica Gel Cleanup	Water	8015B	137599
720-50010-4	W-2344-MW-4-290513	Silica Gel Cleanup	Water	8015B	137599

Prep Batch: 137599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-50010-1	W-2344-MW-1-290513	Silica Gel Cleanup	Water	3510C SGC	
720-50010-2	W-2344-MW-2-290513	Silica Gel Cleanup	Water	3510C SGC	
720-50010-3	W-2344-MW-3-290513	Silica Gel Cleanup	Water	3510C SGC	
720-50010-4	W-2344-MW-4-290513	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-137599/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-137599/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-137599/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 137600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-137599/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	137599
LCSD 720-137599/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	137599
MB 720-137599/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	137599

Client Sample ID: W-2344-MW-1-290513

Lab Sample ID: 720-50010-1

Date Collected: 05/29/13 09:30

Matrix: Water

Date Received: 05/30/13 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			137648	06/04/13 16:11	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	137718	06/06/13 01:59	ML	TAL PLS
Total/NA	Prep	3510C			137935	06/07/13 17:02	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	137966	06/08/13 12:58	ML	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			137599	06/04/13 08:37	MP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	137585	06/04/13 17:12	DH	TAL PLS

Client Sample ID: W-2344-MW-2-290513

Lab Sample ID: 720-50010-2

Date Collected: 05/29/13 10:00

Matrix: Water

Date Received: 05/30/13 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			137648	06/04/13 16:11	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	137718	06/06/13 02:20	ML	TAL PLS
Total/NA	Prep	3510C			137935	06/07/13 17:02	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	137966	06/08/13 13:22	ML	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			137599	06/04/13 08:37	MP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	137585	06/04/13 17:36	DH	TAL PLS

Client Sample ID: W-2344-MW-3-290513

Lab Sample ID: 720-50010-3

Date Collected: 05/29/13 11:05

Matrix: Water

Date Received: 05/30/13 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			137648	06/04/13 16:11	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	137718	06/06/13 02:41	ML	TAL PLS
Total/NA	Prep	3510C			137935	06/07/13 17:02	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	137982	06/09/13 23:47	ML	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			137599	06/04/13 08:37	MP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	137585	06/04/13 18:00	DH	TAL PLS

Client Sample ID: W-2344-MW-4-290513

Lab Sample ID: 720-50010-4

Date Collected: 05/29/13 10:35

Matrix: Water

Date Received: 05/30/13 17:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			137648	06/04/13 16:11	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	137718	06/06/13 03:01	ML	TAL PLS
Total/NA	Prep	3510C			137935	06/07/13 17:02	ND	TAL PLS
Total/NA	Analysis	8270C SIM		1	137966	06/08/13 14:08	ML	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			137599	06/04/13 08:37	MP	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	137585	06/04/13 18:25	DH	TAL PLS

Lab Chronicle

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-14

Method Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Method	Method Description	Protocol	Laboratory
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Antea USA, Inc.
Project/Site: UPRR- Santa Rosa

TestAmerica Job ID: 720-50010-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-50010-1	W-2344-MW-1-290513	Water	05/29/13 09:30	05/30/13 17:15
720-50010-2	W-2344-MW-2-290513	Water	05/29/13 10:00	05/30/13 17:15
720-50010-3	W-2344-MW-3-290513	Water	05/29/13 11:05	05/30/13 17:15
720-50010-4	W-2344-MW-4-290513	Water	05/29/13 10:35	05/30/13 17:15

BLAINE
TECH SERVICES, INC

1680 ROGERS AVENUE
SAN JOSE, CA 95112-1105
FAX (408) 573-7771
PHONE (408) 573-0555

CHAIN OF CUSTODY BTS # 130529-601

CLIENT: Antea Group

SITE: UPRR Santa Rosa
2 Fourth Street & 34 Sixth Street
Santa Rosa, CA

CONDUCT ANALYSIS TO DETECT

LAB: Test America - Pleasanton

DHS #

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND
☐ EPA ☐ RWQCB REGION
☐ LIA
☐ OTHER

146284

Client Name/Address:
Lia Holden - Antea Group
1155 North First Street, Suite 201, San Jose, CA 95112
phone: (408) 606-4919
email: lia.holden@anteagroup.com

PEDD: PEDD_2344_5_Rev1_20130523

720-50010

SAMPLE I.D.	DATE	TIME	MATRIX S= SOIL W=H_2O	CONTAINERS TOTAL	CONTAINERS TYPE	C = COMPOSITE ALL CONTAINERS	DRO & MORO (8015B) w/silica gel cleanup	PAHs (8270C SIM)	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
W-2344+MW-1-290513	5/29/2013	0930	W	3 4	NP Amber		X	X				
W-2344-MW-2-290513	5/29/2013	1000	W	3 4	NP Amber		X	X				
W-2344-MW-3-290513	5/29/2013	1105	W	3 4	NP Amber		X	X				
W-2344-MW-4-290513	5/29/2013	1035	W	3 4	NP Amber		X	X				

720-50010 Chain of Custody

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY
	5/29/13	1105	K. Allen

RESULTS NEEDED NO LATER THAN: STANDARD

RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
	5/29/13	1500	(SC)	5/29/13	1500
	5/30/13	1530		5.30.13	1530
	5.30.13	1715		5/30/13	1715

SHIPPED VIA	DATE SENT	TIME SENT	COOLER #

1.2°C, 1.9°C

6/13/2013

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

720-50030

TESTAMERICA Pleasanton Chain of Custody
1220 Quarry Lane • Pleasanton CA 94566-4756
Phone: (925) 484-1919 • Fax: (925) 600-3002

Reference #: 146306 T

Date_____ Page_____of_____

6/13/2013

Report To

Attn: PETER HOPKINS.
Company: ATKINSON CONTRACTORS
Address: 1777 NEPTUNE DR SAN LEANDRO
Email: PETER.HOPKINS@ATKN.COM
Bill To: 27422 PORTOLA PARKWAY/SUITE 250 FOOTHILL RANCH CA 92
Sampled By: PETER HOPKINS.
Attn: NICK TOPPINO
Phone: 949-855-9755

Analysis Request

Sample ID	Date	Time	Matrix	Preserv	Volatile Organics GC/MS (VOCs) ☐ EPA 8260B	HVOCs by ☐ EPA 8260B	EPA 8260B: ☐ Gas ☐ BTEX ☐ 5 Oxygenates ☐ DCA, EDB ☐ Ethanol	TEPH EPA 8015B ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other___	SemiVolatile Organics GC/MS ☐ EPA 8270C	PNA/PAH's by ☐ 8270C ☐ 8270C SIM	Oil and Grease (EPA 1664/9071) ☐ Petroleum ☐ Total	Pesticides ☐ EPA 8081 PCBs ☐ EPA 8082	CAM17 Metals (EPA 6010/7470/7471)	Metals: ☐ 6010B ☐ 200.7 ☐ Lead ☐ LUFT ☐ RCRA ☐ Other:_____	Metals: ☐ 6020 ☐ 200.8 (ICP-MS):_____	☐ W.E.T (STLC) ☐ W.E.T (DI) ☐ TCLP	Hex. Chrom by ☐ EPA 7196 ☐ or EPA 7199	pH ☐ 9040 ☐ SM4500	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ SS ☐ TDS	Anions ☐ Cl ☐ SO_4 ☐ NO_3 ☐ F ☐ Br ☐ NO_2 ☐ PO_4	☐ Perchlorate by EPA 314.0	COD ☐ EPA 410.4 ☐ SM5220D ☐ Turbidity	1 CHLOROFORM METHOD 624		Number of Containers
P366-3	5/31/13	11AM																						1		3

RUSH

720-50030 Chain of Custody

Project Info.

Project Name/ #: BART A-LINE NORTH
PO#: 150136-76
Credit Card Y/N: If yes, please call with payment information ASAP

Sample Receipt

of Containers: 3
Head Space: 0
Temp: 1.6°C

TAT: 10 Day | 5 Day | 4 Day | 3 Day | 2 Day | (1 Day) | Other. ASAP

Report. ☐ Routine ☐ Level 3 ☐ Level 4 ☐ EDD ☐ EDF
Special Instructions / Comments: ☐ Global ID _____

See Terms and Conditions on reverse

1) Relinquished by:	2) Relinquished by:	3) Relinquished by:
Signature	Signature	Signature
Time	Time: 1340	Time
Printed Name: PETER HOPKINS.	Printed Name: DAVID MOTTA	Printed Name
Date: 5/31/13	Date: 05/31/13	Date
Company: ATKINSON CONTRACTORS.	Company: TAP	Company

1) Received by:	2) Received by:	3) Received by:
Signature	Signature	Signature
Time: 1310	Time: 1340	Time
Printed Name: DAVID MOTTA	Printed Name: T. SULLOCH	Printed Name
Date: 05/31/13	Date: 5/31/13	Date
Company: TAP	Company: TA	Company

Rev 10/2012

Login Sample Receipt Checklist

Client: Antea USA, Inc.

Job Number: 720-50010-1

Login Number: 50010

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Bullock, Tracy

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CONESTOGA-ROVERS & ASSOCIATES

20818 44th Avenue West, Suite 190
Lynnwood, WA 98036
Telephone: (206) 914-3141
www.CRAworld.com

MEMORANDUM

TO:	Lia Holden	REF. NO.:	058324-2344
FROM:	Jeffrey Cloud/bjw/394-NF JC/bjw	DATE:	July 8, 2013
C.C.:	Jesse Orth, Julie Lidstone	**E-Mail and Hard Copy if Requested**	

RE: Data Quality Assessment and Validation of Report J50010
Site Assessment
Union Pacific Railroad (UPRR)
2 Fourth Street and 34 Sixth Street
Santa Rosa, California
May 2013

INTRODUCTION

The following document details a reduced validation of analytical data resulting from the May 2013, collection of groundwater samples in Santa Rosa, California. Samples were submitted to Test America Laboratories (TA), located in Pleasanton, California. A sample collection and analysis summary is presented in Table 1. A summary of the analytical methodology is presented in Table 2. The validated analytical results are summarized in Table 3.

Standard Conestoga-Rovers & Associates (CRA) report deliverables were submitted by the laboratory. The final results and supporting quality assurance/quality control (QA/QC) data were assessed. Evaluation of the data was based on information obtained from the chain of custody form, finished report forms, method blank data, recovery data from surrogate spikes and laboratory control samples (LCS).

The QA/QC criteria by which these data have been assessed are outlined in the analytical method referenced in Table 2 and the document entitled:

i) "USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review", United States Environmental Protection Agency (USEPA) 540/R-99-008, October 1999

These guidelines are collectively referred to as "Guidelines" in this Memorandum.

SAMPLE HOLDING TIME AND PRESERVATION

The sample holding time criteria and sample preservation requirements for the analyses are summarized in Table 2. Sample chain of custody documents and analytical reports were used to determine sample holding times. All samples were prepared and analyzed within the required holding times with the exceptions of a

few semi-volatile organic compounds (SVOCs) extracted outside of the method specified hold time. The associated sample results were qualified as estimated (See Table 4).

All samples were properly preserved and delivered on ice, stored by the laboratory at the required temperature (<6°C).

LABORATORY METHOD BLANK ANALYSES

Method blanks are prepared from a purified matrix and analyzed with investigative samples to determine the existence and magnitude of sample contamination introduced during the analytical procedures.

For this study, laboratory method blanks were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

All method blank results were non-detect, indicating that laboratory contamination was not a factor for this investigation.

SURROGATE SPIKE RECOVERIES

In accordance with the methods employed, all samples, blanks and QC samples analyzed for SVOCs and diesel range organics/motor oil range organics (DRO/ORO) are spiked with the appropriate number of surrogate compounds prior to sample extraction. Surrogate recoveries provide a means to evaluate the effects of laboratory performance on individual sample matrices.

Each individual surrogate compound is expected to meet the laboratory control limits with the exception of SVOC analyses. According to the "Guidelines" for SVOC analyses, up to one outlying surrogate in the base/neutral or acid fractions is acceptable as long as the recovery is at least 10 percent.

Surrogate recoveries were assessed against laboratory control limits. All surrogate recoveries met the above criteria.

LABORATORY CONTROL SAMPLE (LCS) ANALYSES

LCS and/or laboratory control sample duplicates (LCSD) are prepared and analyzed as samples to assess the analytical efficiencies of the methods employed, independent of sample matrix effects. The relative percent difference (RPD) of the LCS/LCSD recoveries is used to evaluate analytical precision.

For this study, LCS/LCSD were analyzed at a minimum frequency of one per 20 investigative samples and/or one per analytical batch.

Organic Analyses

The LCS/LCSD contained all compounds of interest. All LCS recoveries and relative percent differences were within the laboratory control limits, demonstrating acceptable analytical accuracy and precision with the exceptions of a few low SVOC recoveries. No sample results were associated with the low recoveries.

ANALYTE REPORTING

The laboratory did not report any detected concentrations below the laboratory's practical quantitation limit (PQL)/report limit (RL).

CONCLUSION

Based on this assessment of the information provided, the data produced by TA were found to exhibit acceptable levels of accuracy and precision and may be used with the qualifications noted.

TABLE 1

SAMPLE COLLECTION AND ANALYSIS SUMMARY
SITE ASSESSMENT
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

					Analysis/Parameters	
Sample Identification	*Location*	*Matrix*	*Collection Date*	*Collection Time*	*SW8015D*	*SW8270SIM*
W-2344-MW-1-290513	MW1	Water	5/29/2013	9:30:00 AM	X	X
W-2344-MW-2-290513	MW2	Water	5/29/2013	10:00:00 AM	X	X
W-2344-MW-3-290513	MW3	Water	5/29/2013	11:05:00 AM	X	X
W-2344-MW-4-290513	MW4	Water	5/29/2013	10:35:00 AM	X	X

Notes:

QC Quality control.

TABLE 2

SUMMARY OF ANALYTICAL METHODS, HOLDING TIME PERIODS, AND PRESERVATIVES
SITE ASSESSMENT
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

Parameter	*Method* [1]	*Matrix*	*Holding Time*	*Preservation*
Semi-Volatile Organic Compounds (SVOCs)	SW-846 8270C	Water	- 7 days from sample collection to extraction - 40 days from extraction to completion of analysis	pH < 2 and Iced, ≤ 6° C
Diesel Range Organics (DRO)/Motor Oil Range Organics (ORO)	SW-846 8015B	Water	- 14 days from sample collection to extraction - 40 days from extraction to completion of analysis	pH < 2 and Iced, ≤ 6° C

Notes

[1] Method References:

SW-846 - "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 3rd Edition, and Promulgated updates, November 1986

TABLE 3

ANALYTICAL RESULTS SUMMARY
SITE ASSESSMENT
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

	Sample Location:	***MW1***	***MW2***	***MW3***	***MW4***
	Sample ID:	***W-2344-MW-1-290513***	***W-2344-MW-2-290513***	***W-2344-MW-3-290513***	***W-2344-MW-4-290513***
	Sample Date:	***5/29/2013***	***5/29/2013***	***5/29/2013***	***5/29/2013***
Parameters	***Units***				
Semi-volatile Organic Compounds					
Acenaphthene	µg/L	<0.11	<0.11	<0.11	<0.11
Acenaphthylene	µg/L	<0.11	<0.11	<0.11	<0.11
Anthracene	µg/L	<0.11	<0.11	<0.11	<0.11
Benzo(a)anthracene	µg/L	<0.11	<0.11	<0.11	<0.11
Benzo(a)pyrene	µg/L	<0.11	<0.11	<0.11	<0.11
Benzo(b)fluoranthene	µg/L	<0.11	<0.11	<0.11	<0.11
Benzo(g,h,i)perylene	µg/L	<0.11	<0.11	<0.11	<0.11
Benzo(k)fluoranthene	µg/L	<0.11	<0.11	<0.11	<0.11
Chrysene	µg/L	<0.11	<0.11	<0.11	<0.11
Dibenz(a,h)anthracene	µg/L	<0.11	<0.11	<0.11	<0.11
Fluoranthene	µg/L	<0.11 J	<0.11 J	<0.11 J	<0.11 J
Fluorene	µg/L	<0.11 J	<0.11 J	<0.11 J	<0.11 J
Indeno(1,2,3-cd)pyrene	µg/L	<0.11	<0.11	<0.11	<0.11
Naphthalene	µg/L	<0.11	<0.11	<0.11	<0.11
Phenanthrene	µg/L	<0.11	<0.11	<0.11	<0.11
Pyrene	µg/L	<0.11	<0.11	<0.11	<0.11
Petroleum Products					
Total Petroleum Hydrocarbons (C10-C28) DRO (Silica Gel)	µg/L	<53	<53	<53	<53
Total Petroleum Hydrocarbons (C24-C36) Motor Oil (Silica Gel)	µg/L	<110	<110	<110	<110

Notes:

J Estimated concentration.

TABLE 4

QUALIFIED SAMPLE RESULTS DUE TO HOLDING TIME EXCEEDANCES
SITE ASSESSMENT
UNION PACIFIC RAILROAD (UPRR)
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA
MAY 2013

Parameter	*Analyte*	*Holding Time*	*Holding Time Criteria*	*Sample ID*	*Qualified Result*	*Units*
SW8270SIM	Fluoranthene	9 days	7 days	W-2344-MW-1-290513	0.11 UJ	µg/L
SW8270SIM	Fluorene	9 days	7 days	W-2344-MW-1-290513	0.11 UJ	µg/L
SW8270SIM	Fluoranthene	9 days	7 days	W-2344-MW-2-290513	0.11 UJ	µg/L
SW8270SIM	Fluorene	9 days	7 days	W-2344-MW-2-290513	0.11 UJ	µg/L
SW8270SIM	Fluoranthene	9 days	7 days	W-2344-MW-3-290513	0.11 UJ	µg/L
SW8270SIM	Fluorene	9 days	7 days	W-2344-MW-3-290513	0.11 UJ	µg/L
SW8270SIM	Fluoranthene	9 days	7 days	W-2344-MW-4-290513	0.11 UJ	µg/L
SW8270SIM	Fluorene	9 days	7 days	W-2344-MW-4-290513	0.11 UJ	µg/L

Notes:

UJ Not detected; associated reporting limit is estimated.

Appendix K

Waste Manifests

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 11637760

2. Page 1 of 1

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD - UNI768
DIR ENV OPS
ROSEVILLE CA 95747
10031 FOOTHILLS BL

4. Generator's Phone ( ) 626 890-7073

5. Transporter 1 Company Name: ASBURY ENVIRONMENTAL SERVICES

6. US EPA ID Number: CAD 028277036

A. State Transporter's ID

B. Transporter 1 Phone (800)974-4495

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
DEMENNO / KERDOON
2000 N. ALAMEDA STREET
COMPTON CA 90222

10. US EPA ID Number: CAT080013352

E. State Facility's ID

F. Facility's Phone (310)537-7100

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZARDOUS WASTE, SOLID SOIL	7	D M	2,750	P
b. NON-HAZARDOUS WASTE, LIQUID WATER	3	D M	120	G
c.				
d.				

GENERATOR

NON-HAZARDOUS WASTE

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT : CHEMTREC 1-800-424-9300 * PROFILE # 9B1 : 329740 SOIL, 9B2 : 329742 WATER * PO# A110168223 * APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT

SITE. 24TH ST / 34 6TH ST, . SANTA ROSA, CA 95401

16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name	Signature	Date Month	Day	Year
		04	09	13

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year
		04	09	13

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month	Day	Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name	Signature	Date Month	Day	Year
		04	11	13

Well Abandonment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board Case No. 1TSR196

Antea Group Project No. UPR8248
December 16, 2014

Prepared for:
Janice Goebel
California Water Quality Control Board North Coast Region
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

Prepared by:
Antea®Group
1155 North First Street, Suite 201
San Jose, CA 95112 USA
+1 800 477 7411

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Appendix B Boring Logs

Well Abandonment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board
Case No. 1TSR196

1.0 INTRODUCTION

On behalf of Union Pacific Railroad (UPRR), Antea®Group has prepared this *Well Abandonment Work Plan* to outline proposed abandonment procedures for the proper destruction of wells MW-1 through MW-4, located at the above referenced site (**Figure 1**). In a letter dated December 2, 2014, the North Coast Regional Water Quality Control Board (NCRWQCB) approved destruction of all site wells at the above-reference site (**Appendix A**). The wells are being destroyed as part of the site's case closure process.

2.0 SITE LOCATION AND DESCRIPTION

Currently, the majority of the site is used as an equipment and supply storage area for Sonoma Marin Area Rail Transit (SMART) during offsite construction activities. Additionally, onsite construction activities are occurring in the northern portion of the property. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03. (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties identified as the "3 West Third Street and 60 West Sixth Street Warehouses", to the north by West Sixth Street, and on the east by the main line railroad track right-of-way and commercial properties. A site location map is provided as **Figure 1** and a site plan is provided as **Figure 2**.

3.0 WELL ABANDONMENT ACTIVITIES

3.1 Pre-field Activities

Prior to initiating field activities, Antea Group will obtain necessary well destruction permits from the Sonoma County Department of Health Services, Environmental Services Division. A licensed drilling contractor with a valid State of California C-57 license will conduct the well destruction activities. Antea Group will make notifications at least 72 hours prior to the commencement of field activities.

Antea Group will contact Underground Service Alert (USA) and UPRR's Fiber Optic Hotline to mark the site for subsurface utilities. Antea Group will also contact a private utility locator to assist in the locating of potential underground utilities in the vicinity of the drilling area.

Antea Group will ensure that the Health and Safety Plan (HASP) is updated for the current field tasks and prepared in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP will contain a list of emergency contacts, potential contaminants, personal protective equipment requirements, and a hospital route map to the nearest emergency facility. The HASP will be reviewed daily by field personnel.

3.2 Groundwater Monitoring Well Abandonments

Four (4) onsite groundwater monitoring wells (MW-1, MW-2, MW-3, and MW-4) will be destroyed by drilling out the wells to their total constructed depth of 18.5 feet below ground surface (bgs; for wells MW-3 and MW-4) and 20 feet bgs (MW-1 and MW-2) (**Table 1**). Drilling will be conducted by a licensed C-57 contractor. Prior to drilling, an air knife (vacuum) rig will clear the upper five feet of soil surrounding the well to expose potentially unmarked utilities and prevent utility damage during auger advancement. The well casing, filter pack, and backfill materials will be removed by advancing eight-inch diameter hollow-stem augers to the total constructed well depths (**Table 1**). After removing the well casing and annular material, the boreholes will be backfilled with neat cement grout through a tremie pipe to just below ground surface, then capped with concrete at the surface. Boring logs are included as **Appendix B**.

3.3 Disposal of Investigation Derived Waste

Soil cuttings, construction debris, and wastewater generated during well destruction activities will be placed in Department of Transportation (DOT) approved 55-gallon drums, sealed and labeled in accordance with the corresponding DOT protocols for non-hazardous waste. The drums will be temporarily stored on-site pending waste profiling, then transported by United Pumping, Inc. and disposed of at a licensed facility. Final non-hazardous waste manifests will be submitted with the well destruction report following completion of field activities.

4.0 SCHEDULE/REPORTING

Well abandonment activities are scheduled to occur following regulatory approval of this work plan. Antea Group anticipates that well destruction activities will take approximately three (3) days. A summary letter/report documenting well abandonment activities will be issued upon receipt of the final executed waste manifests, estimated to be received within 45 days of the completion of field activities.

The activities outlined in this work plan and the preparation of the corresponding report will be conducted under the direction of a licensed California Professional Geologist. In accordance with the California State Water Resources Control Board requirements, the well abandonment report and site plan (showing wells as destroyed) will be uploaded to the GeoTracker database under both of the site's GeoTracker identification numbers.

5.0 LIMITATIONS

The findings contained in this report represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc. does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This report is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this report.

Prepared by:

Sara Sichley
Project Professional
Antea Group

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:



Lia N. Holden
Senior Project Manager
California Registered Professional Geologist No. 8584
Antea Group

cc: GeoTracker (upload)

Marita Petersen (SRFD)- mpetersen@srcity.orgJoan
Thomas (S.M.A.R.T) – Jthomas@sonomamarintrain.org
Laura Giroud (S.M.A.R.T) – lgiroud@sonomamartintrain.org
Leslye Choate (S.M.A.R.T) – lchoate@sonomamarintrain.org

Figures

Figure 1 Site Location Map
Figure 2 Site Plan





North

0 1000 2000 FT

SCALE

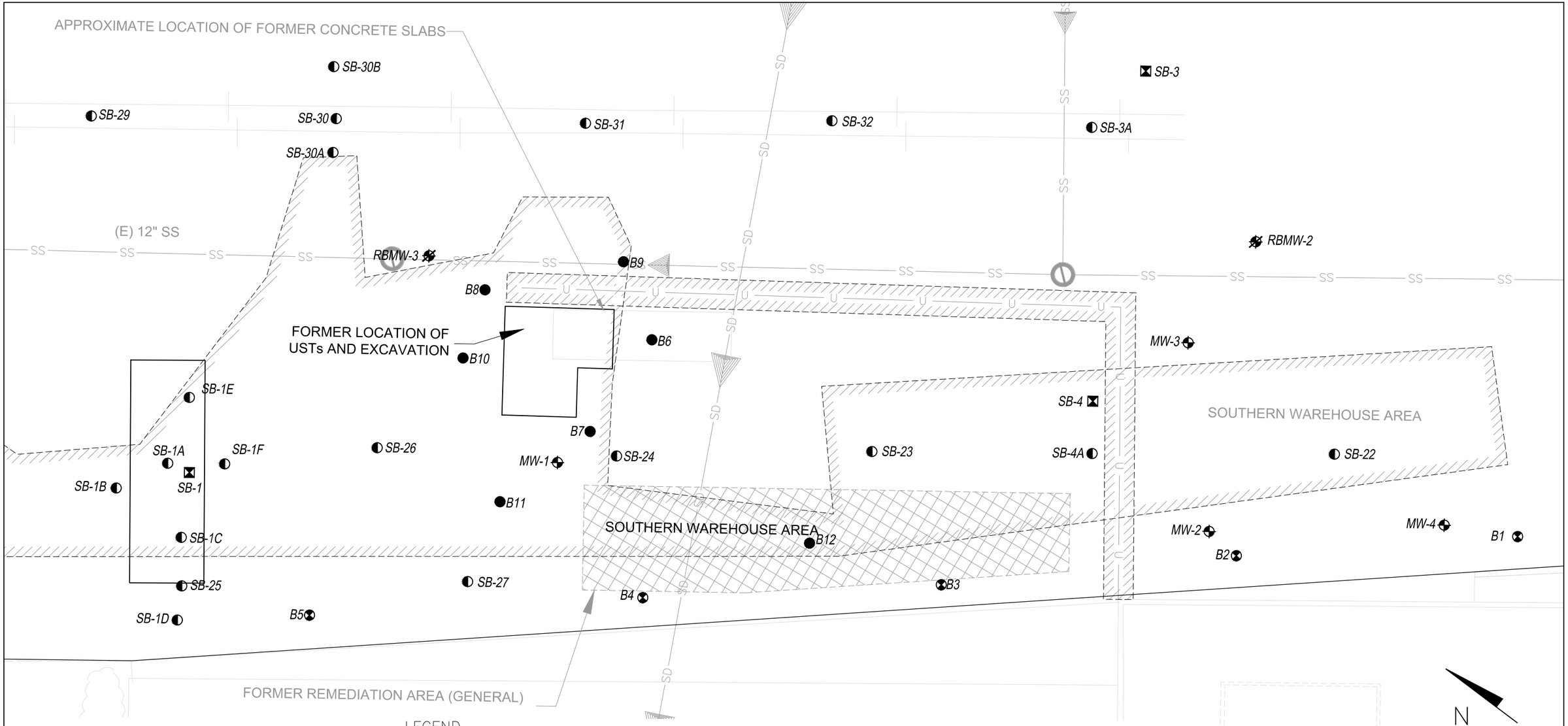
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup



LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- MONITORING WELL
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	DS	JH
DATE	REVIEWED BY	FILE NAME
3/27/14	LH	UPR8248-Site

antea group

Tables

Table 1 Monitoring Well Construction Details

TABLE 1
MONITORING WELL CONSTRUCTION DETAILS
UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

Updated 10/2/2013

Well ID	Well/Boring Completion Date	TOC Elevation[1] (ft)	Well/Boring Depth (ft bgs)	Well Casing Diameter (in)	Well Casing Material	Well Screen Slot Size (in)	Well Screen Interval (ft bgs)	Cement Grout Seal Interval (ft bgs)	Bentonite Seal Interval (ft bgs)	Filter Pack Interval (ft bgs)	Comments
MW-1	May-13	151.86	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-2	May-13	152.79	20.0	2	PVC	0.020	10.0 to 20.0	0.5 to 7.0	7.0 to 9.0	9.0 to 20.0	
MW-3	May-13	153.44	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	
MW-4	May-13	151.97	18.5	2	PVC	0.020	8.5 to 18.5	0.5 to 5.5	5.5 to 7.5	7.5 to 18.5	

Notes:

ft = feet

in = inches

TOC = Top of Casing

bgs = below ground surface

--- = information not available

MW = Monitoring Well

[1] = TOC Elevations were surveyed to the North American Vertical Datum of 1988 (NAVD 88).

Appendix A

Regulatory Correspondence

December 2, 2014

Ms. Lauren A. Mancuso
Manager of Environmental Site Remediation
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747

Dear Ms. Mancuso:

Subject: End of Public Comment Period, Request for Monitoring Well Destruction Workplan

File: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa Case No. 1TSR196 and 1NSR196

On November 24, 2014, the public comment period ended for consideration of no further action status on the former Southern Pacific Transportation Company site located at 20 West Third Street in Santa Rosa. No comments on the proposed closure were received during the public comment period.

Accordingly, a workplan proposing the destruction of the groundwater monitoring wells is requested by December 31, 2014.

If you have questions, please contact me at Janice.Goebel@waterboards.ca.gov or at (707) 576-2676.

Sincerely,

Janice M. Goebel
Sanitary Engineering Associate

141202_JMG_er_SPMWClosureRequest

cc: Ms. Leslye Choate, lchoate@sonoma-county.org
Ms. Marita Petersen, SRFD, mpetersen@srcity.org
Mr. John Nemeth, SMART, jnemeth@sonomamarintrain.org
Ms. Laura Giraud, SMART, LGiraud@sonomamarintrain.org
Ms. Lia Holden, Anteagroup, lia.holden@anteagroup.com

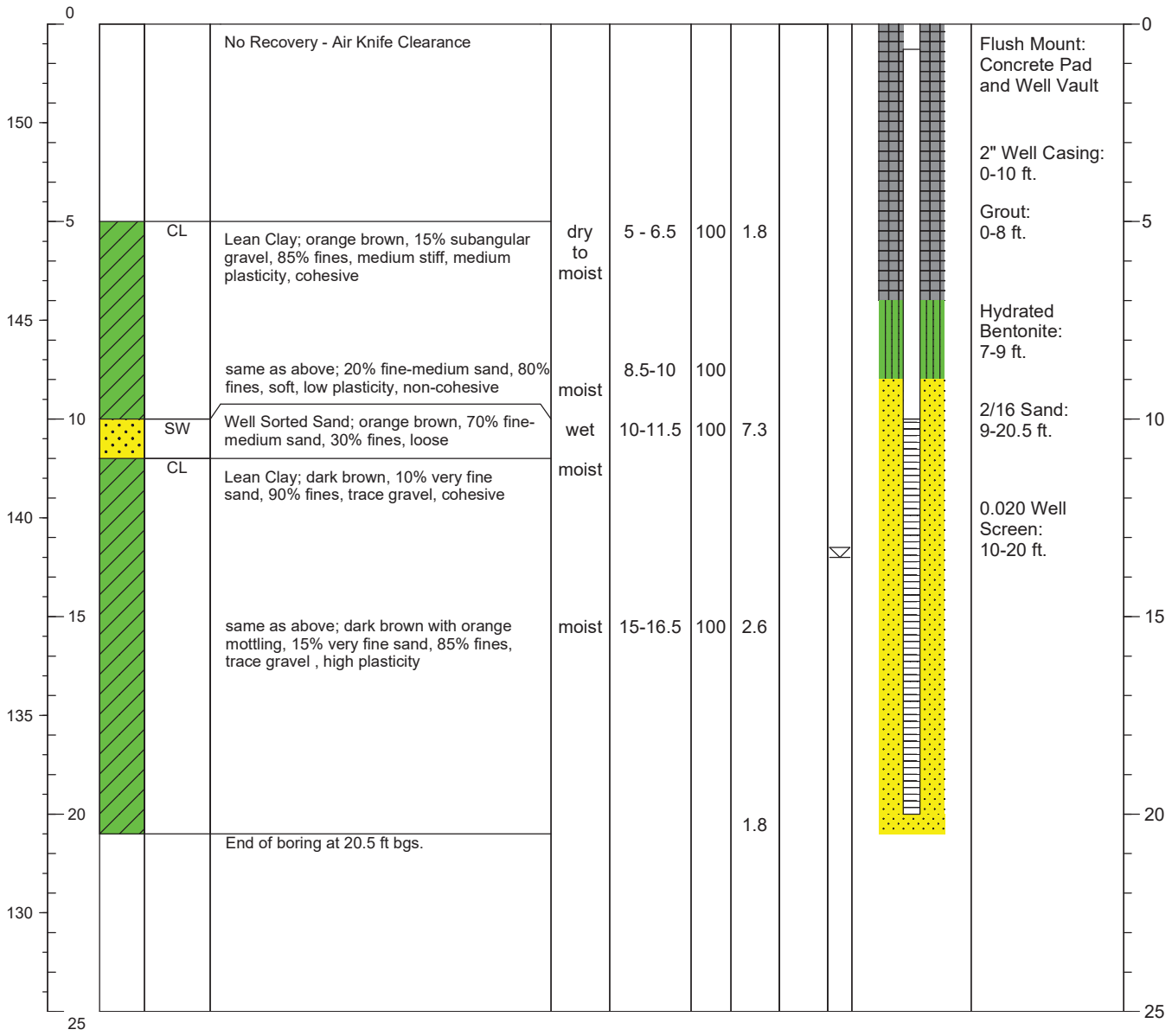
Appendix B

Boring Logs

Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			**MW-1**

Address **2 Fourth St & 34 Sixth St** **Santa Rosa California**	Drilling Contractor **Gregg Drilling**	Ground Surface Elevation: **152.50**	Top of Casing Elevation: **151.86**
	Drilling Method **Air Knife / Hollow Stem Auger**	Boring Depth **20.5 ft.**	Boring Diameter **8 in.**
Logged By / Approved By **R. Ransom** / **L. Holden**	Sampling Method **Split Spoon**	Well Depth / Casing Type **20 ft.** / **SCH 40 PVC**	Well Screen Interval / Slot Size **10 - 20 ft.** / **0.020**
Antea Group Project Number **UPR8248**	Headspace Monitoring Device **PID**	Date Drilling Started **5/15/13**	Date Drilling Completed **5/15/13**

LITHOLOGY **SAMPLING DATA**



First Encountered Groundwater Static Groundwater

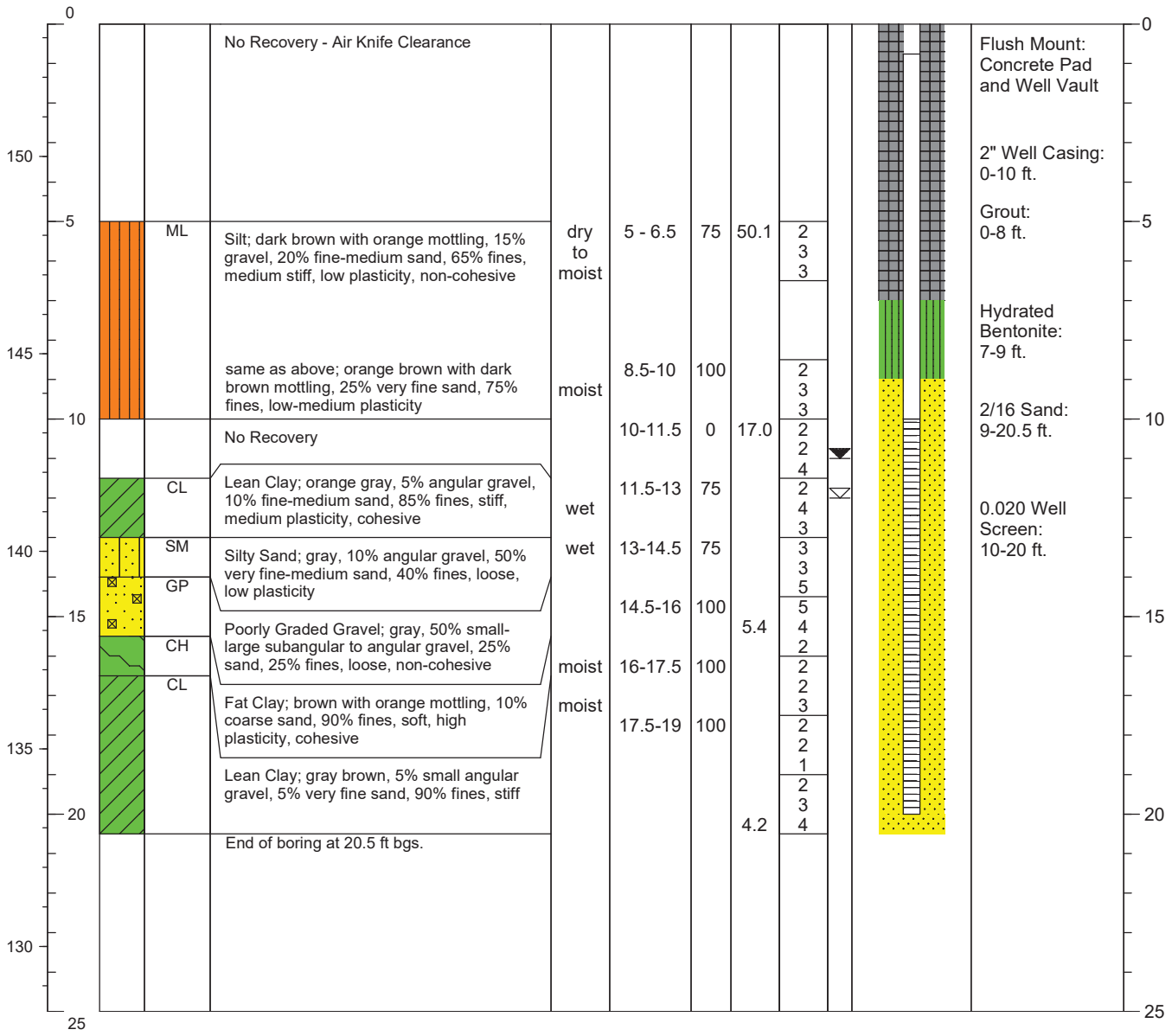
antea group

INOGEN

Project Name	Monitoring Well Construction Log	Well Number
Union Pacific Railroad		**MW-2**

Address **2 Fourth St & 34 Sixth St** **Santa Rosa California**	Drilling Contractor **Gregg Drilling**	Ground Surface Elevation: **153.55**	Top of Casing Elevation: **152.79**
	Drilling Method **Air Knife / Hollow Stem Auger**	Boring Depth **20.5 ft.**	Boring Diameter **8 in.**
Logged By / Approved By **R. Ransom** / **L. Holden**	Sampling Method **Split Spoon**	Well Depth / Casing Type **20 ft.** / **SCH 40 PVC**	Well Screen Interval / Slot Size **10 - 20 ft.** / **0.020**
Antea Group Project Number **UPR8248**	Headspace Monitoring Device **PID**	Date Drilling Started **5/15/13**	Date Drilling Completed **5/15/13**

LITHOLOGY **SAMPLING DATA**



First Encountered Groundwater Static Groundwater

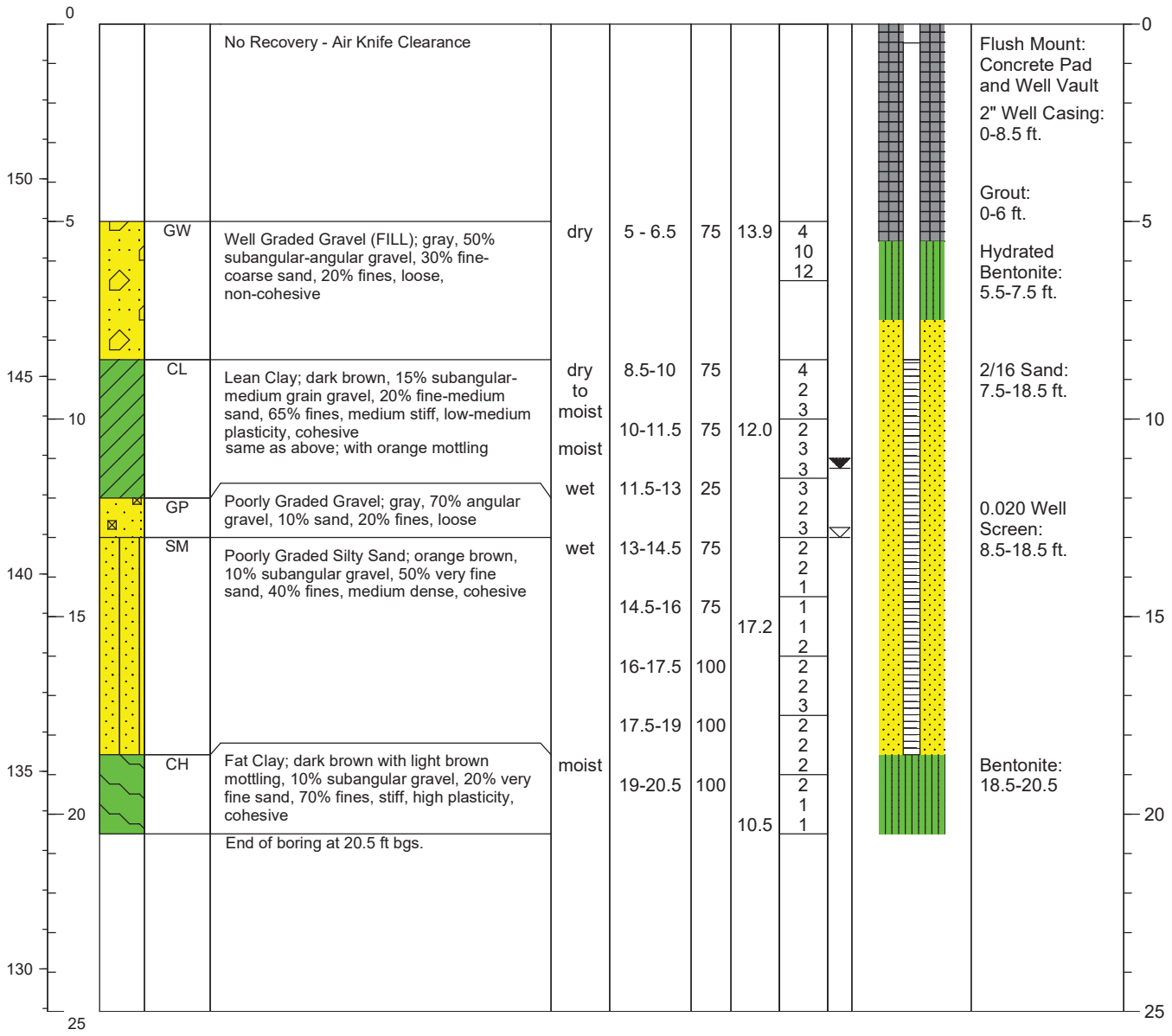
antea group

INOGEN

Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			**MW-3**

Address **2 Fourth St & 34 Sixth St** **Santa Rosa California**	Drilling Contractor **Gregg Drilling**	Ground Surface Elevation: **153.92**	Top of Casing Elevation: **153.44**
	Drilling Method **Air Knife / Hollow Stem Auger**	Boring Depth **20.5 ft.**	Boring Diameter **8 in.**
Logged By / Approved By **R. Ransom** / **L. Holden**	Sampling Method **Split Spoon**	Well Depth / Casing Type **18.5 ft.** / **SCH 40 PVC**	Well Screen Interval / Slot Size **8.5-18.5 ft.** / **0.020**
Antea Group Project Number **UPR8248**	Headspace Monitoring Device **PID**	Date Drilling Started **5/16/13**	Date Drilling Completed **5/16/13**

LITHOLOGY **SAMPLING DATA**



First Encountered Groundwater Static Groundwater

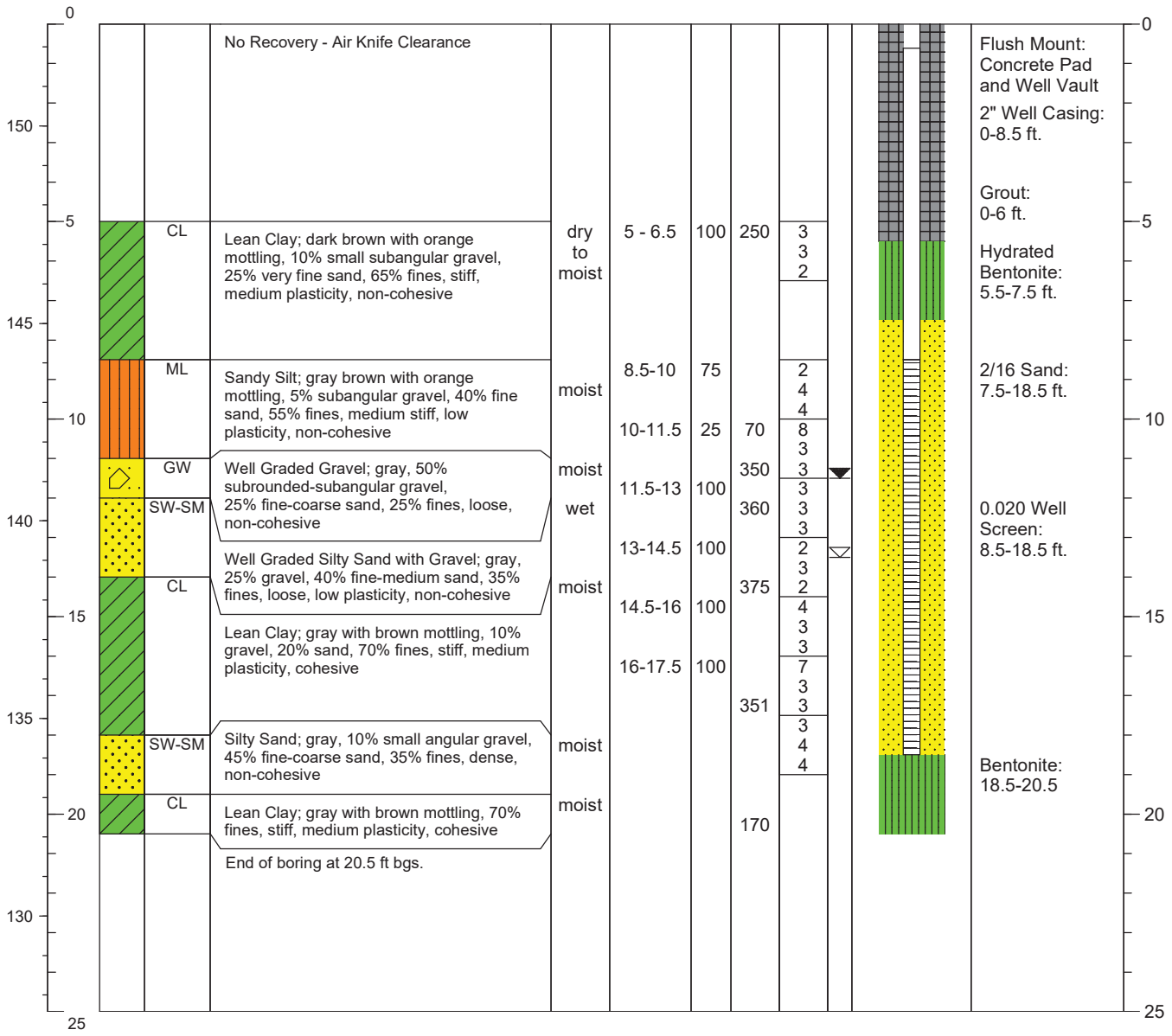
antea group

INOGEN

Project Name	Monitoring Well Construction Log	Well Number
Union Pacific Railroad		**MW-4**

Address **2 Fourth St & 34 Sixth St** **Santa Rosa California**	Drilling Contractor **Gregg Drilling**	Ground Surface Elevation: **152.58**	Top of Casing Elevation: **151.97**
	Drilling Method **Air Knife / Hollow Stem Auger**	Boring Depth **20.5 ft.**	Boring Diameter **8 in.**
Logged By / Approved By **R. Ransom** / **L. Holden**	Sampling Method **Split Spoon**	Well Depth / Casing Type **18.5 ft.** / **SCH 40 PVC**	Well Screen Interval / Slot Size **8.5 - 18.5 ft.** / **0.020**
Antea Group Project Number **UPR8248**	Headspace Monitoring Device **PID**	Date Drilling Started **5/16/13**	Date Drilling Completed **5/16/13**

LITHOLOGY **SAMPLING DATA**



First Encountered Groundwater Static Groundwater

antea group

INOGEN

California Regional Water Quality Control Board
North Coast Region
Bob Anderson, Chairman

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Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

May 27, 2009

Mr. Mike Grant
Union Pacific Railroad
Manager Environmental Site Remediation
1408 Middle Harbor Road
Oakland, CA 94607

Sonoma Marin Rail Area Rail Transit
c/o Mr. Charles McGlashan
Chair SMART Board of Directors
750 Lindaro Street, Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: Case Status
File: Southern Pacific Transportation Company, 3rd Street Property, Santa Rosa, Case No. 1TSR196

On January 16, 2009, we concurred with the EBA Engineering recommendations to remove the underground oil storage tank under permit from the Santa Rosa Fire Department, prepare a work plan to address the soil and groundwater impacts in the vicinity of SB-1A, and prepare a soil and groundwater management plan to address the shallow soil impacts prior to and during property development.

At that time, we indicated that:

- The underground storage tank needed to be removed as soon as possible;
- The work plan to address the soil and groundwater impacts in the vicinity of SB-1 was due within 60 days of issuance of the January 16, 2009 letter; and
- The soil and groundwater management plan needed to be submitted prior to property development.

As of this date, the underground tank has not been removed and the work plan has not been submitted. Therefore, on April 24, 2009, I inquired with the Santa Rosa Fire Department regarding the status of the underground storage tank and learned that an application has not been filed for tank closure.

Title 23, Article 7 regulates underground storage tank closure and requires the permanent closure of underground storage tanks in which the storage of hazardous substances has ceased. By copy of this letter, I am referring the issue of tank closure at this site to the Santa Rosa Fire Department as the permitting and enforcement agency for compliance with Title 23, Article 7, Section 2672(b).

The underground storage tank must be removed as soon as possible. A revised compliance date for the submittal of the work plan is 45-days from issuance of this letter. If you have any questions I can be reached at (707) 576-2675.

Sincerely,

Joan Fleck
Engineering Geologist

052709_JEF_SMART

cc: Fire Inspector Doug Dahme, Santa Rosa Fire Department
Fire Inspector Corey Vincent, Santa Rosa Fire Department
Mr. Jeffery Kolin, City Manager, P.O. Box 1678, Santa Rosa, CA 95402
Mr. John Nemeth, Rail Planning Manager, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Ms. Lilian Hames, Project Director, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Mr. Rob Krantz, Property Manager, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Richard Devine, Devine & Gong, Inc. 100 Bush Street, Suite 600, San Francisco, CA 94104-3703
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor San Francisco, CA 94109
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514
Mr. Paul Nelson, EBA Engineering, 825 Sonoma Avenue, Suite C, Santa Rosa, CA 95404
Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100

California Regional Water Quality Control Board
North Coast Region
Bob Anderson, Chairman

Linda S. Adams
Secretary for Environmental Protection

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Arnold Schwarzenegger
Governor

October 30, 2009

Mr. Mike Grant
Union Pacific Railroad
Manager Environmental Site Remediation
1408 Middle Harbor Road
Oakland, CA 94607

Sonoma Marin Rail Area Rail Transit
c/o Mr. Charles McGlashan
Chair SMART Board of Directors
750 Lindaro Street, Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: Underground Oil Storage Tank Removal
File: Southern Pacific Transportation Company, 3rd Street Property, Santa Rosa, Case No. 1TSR196

On January 16, 2009, we concurred with the EBA Engineering recommendations to remove the underground oil storage tank under permit from the Santa Rosa Fire Department; prepare a work plan to address the soil and groundwater impacts in the vicinity of SB-1A; and prepare a soil and groundwater management plan to address the shallow soil impacts prior to and during property development. On May 27, 2009, a follow up letter was sent reiterating the required action items for this site.

The *Soil and Groundwater Management Plan* prepared by EBA Engineering on behalf of the Railroad Square Associates LLC was submitted on August 10, 2009. The *Soil Excavation Work Plan*, also prepared by EBA Engineering on behalf of the Railroad Square Associates LLC, was submitted on October 14, 2009. However, as of this date, the underground tank has not been removed.

Title 23, Article 7 regulates underground storage tank closure and requires the permanent closure of underground storage tanks in which the storage of hazardous substances has ceased. The tank needs to be removed. The Santa Rosa Fire Department is the lead agency for tank closure activities. Ms. Corey Vincent with Santa Rosa Fire can be reached at (707) 543-3542.

If you have any questions I can be reached at (707) 576-2675.

Sincerely,

Original signed by

Joan Fleck
Engineering Geologist

103009_JEF_SMARTtank

cc: Ms. Corey Vincent, Santa Rosa Fire Department
Mr. Jeffery Kolin, City Manager, P.O. Box 1678, Santa Rosa, CA 95402
Mr. John Nemeth, Rail Planning Manager, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Ms. Lilian Hames, Project Director, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Mr. Rob Krantz, Property Manager, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
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Mr. Paul Nelson, EBA Engineering, 825 Sonoma Avenue, Suite C, Santa Rosa, CA 95404
Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100

California Regional Water Quality Control Board
North Coast Region
Geoffrey M. Hales, Chairman

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Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown, Jr.,
Governor

February 4, 2011

Mr. Mike Grant
Union Pacific Railroad
Manager Environmental Site Remediation
1408 Middle Harbor Road
Oakland, CA 94607

Sonoma Marin Area Rail Transit
c/o Mr. John Nemeth
750 Lindaro Street, Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: Case Status
File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case No. 1TSR196

On January 16, 2009, the Southern Pacific Transportation Company case was reopened as a result of new discoveries reported in the November 2008 ***Report of Findings Sonoma-Marin Area Rail Transit Property*** and the January 7, 2009 ***Additional Information*** document prepared by EBA Engineering on behalf of Railroad Square Associates, LLC. The discoveries included an underground oil storage tank (UST), heavy hydrocarbon soil and groundwater impacts in the vicinity of soil boring SB-1, and shallow soil impacts.

Following receipt of this information, Regional Water Board staff requested that Union Pacific Railroad (UPR) and Sonoma Marin Area Rail Transit (SMART) remove the UST and submit two plans; a soil groundwater management plan to address shallow soil impacts and a work plan to address soil and groundwater impacts in the SB-1 area. The Railroad Square Associates LLC responded with the submittal of the ***Soil and Groundwater Management Plan*** and the ***Soil Excavation Work Plan*** on August 10, 2009 and October 14, 2009, respectively. For the record, Railroad Square Associates LLC is not a responsible party.

Subsequent written requests regarding tank removal were directed to UPR and SMART on May 27, 2009 and October 30, 2009. As of this date, efforts to remove the tank under permit from the Santa Rosa Fire Department have not been made.

This matter was discussed during the January 20, 2011 meeting held at the Carlile-Macy office in Santa Rosa including the relationship of land development

and completion of the environmental work. In summary, completion of the environmental work is critical for these reasons:

- Underground storage tank removal and excavation work plan implementation are required by law and regulation;
- Land development at the former railroad yard is dependent on the completion of the environmental work; and
- Some of the heavy hydrocarbon groundwater impacts beneath land to the west are likely the result of on site migration. Therefore, source removal work at the site is essential for water quality protection and to provide information regarding sources of groundwater impacts beneath other properties.

Two years have passed since the January 2009 letter, which is a generous amount of time to allow Union Pacific and SMART to resolve their legal interpretations regarding environmental liability issues. However, as I explained during our recent meeting, when progress is not made within a reasonable time frame, a compliance schedule must be established by the regulatory agencies. Proposed land development elevates the priority of a case.

Therefore, within 30-days of issuance of this letter, a written commitment and schedule is needed regarding your plans for tank removal and excavation work plan implementation. For your information, on January 31, 2011, I made another referral to Santa Rosa Fire Department to the attention of Mr. Mark McCormick (Interim Fire Chief) for enforcement of tank closure regulations.

I look forward to receipt of your written commitment and schedule followed by the timely removal of the underground storage tank. If you have any questions or would like to meet again to discuss this case, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Original signed by
Joan Fleck
Engineering Geologist

110204_JEF_SMART

cc:

Santa Rosa Fire Department (GBuckheit@srcity.org)
Mr. Paul Nelson (pnelson@ebagroup.com)
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Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404

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Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, Ca 94109
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514
Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100
Ms. Joan Thomas, Real Estate Assistant (jthomas@sonomamarintrain.org)
Mr. John Nemeth (jnemeth@sonomamarintrain.org)
Ms. Lisa Pheatt, County Counsel (lpheatt@sonoma-county.org)

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Linda S. Adams
Acting Secretary for Environmental Protection

Edmund G. Brown Jr.,
Governor

July 22, 2011

Sonoma Marin Area Rail Transit
c/o Mr. John Nemeth
750 Lindaro Street, Suite 200
San Rafael, CA 94901

Dear Mr. Nemeth:

Subject: Clarification of Regional Water Board staff letter of February 4, 2011
File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case No. 1TSR196

This letter serves as a written follow up of our July 13, 2011 phone conversation regarding the Regional Water Board staff letter dated February 4, 2011. In response to your request for clarification regarding the remaining work to be completed at the 3rd Street Property, I offer the following information:

Remaining work to be completed includes the:

1. Removal of the oil underground storage tank under permit from the Santa Rosa Fire Department.

   If evidence of a discharge is revealed at the time of tank removal, contaminated soil must be removed from this area and depending upon the degree of the discharge, the impact to water quality may need to be investigated and remediated. As stated in the February 4, 2011 letter, heavy hydrocarbon impacts to groundwater exist on and off site to the west and the tank may be a contributing source.

2. Removal of known shallow contaminated soil impacts.
3. Removal of shallow contaminated soil impacts encountered during property development.
4. Proper management of soil and groundwater during property development.

   A plan has been submitted to address these items, which is the August 2009 ***Soil and Groundwater Management Plan*** (SGMP) prepared by EBA Engineering on behalf of Railroad Square Associates LLC, who is not a responsible party.

Implementation of the soil and groundwater management plan will be a condition of property development and grading permit issuance. Implementation of the plan by someone other than EBA will require the identification of the licensed professional who will be in responsible charge of the project. Responsible parties may also submit their own SGMP.

5. Removal of impacted soil contamination in the area of B-1.

   Evidence of a surface discharge in the area of B-1 was reported in the November 2008 ***Report of Findings*** prepared by EBA Engineering. A plan has been submitted for the excavation of impacted soil in this area, which is the October 2009 ***Soil Excavation Work Plan*** prepared by EBA Engineering on behalf of the Railroad Square Associates LLC.

   The proposed scope of work must be implemented as soon as possible and prior to property development. Implementation of the plan by someone other than EBA will require the identification of the licensed professional who will be in responsible charge of the project. Responsible parties may also submit their own soil excavation work plan.

   Ground water impacts exist in the area of B-1. The extent will need to be defined and the impacts remediated.

If you have any questions or require further clarification, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Original signed by

Joan Fleck
Engineering Geologist

110722_JEF_SMART

cc:

Mr. James Diel, Union Pacific Railroad,9451 Atkinson Street, Suite 100, Roseville, CA 95747
Santa Rosa Fire Department (GBuckheit@srcity.org)
Mr. Paul Nelson (pnelson@ebagroup.com)
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Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Richard Devine, Devine & Gong, Inc. 100 Bush Street, Suite 600, San Francisco, CA 94104-3703 (rdevine@devinegong.com)
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101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, Ca 94109
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Mr. John Nemeth (jnemeth@sonomamarintrain.org)
Ms. Lisa Pheatt, County Counsel (lpheatt@sonoma-county.org)

California Regional Water Quality Control Board
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Matt Rodriquez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

January 19, 2012

Mr. James Diel
Union Pacific Railroad
9451 Atkinson Street
Suite 100
Roseville, CA 95747

Mr. John Nemeth
Sonoma Marin Area Rail Transit
750 Landaro Street,
Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: Case Status

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case Nos. 1TSR196 and 1NSR196

In the Regional Water Board staff letter dated July 22, 2011, remaining items to be completed were identified, which included the removal of the oil underground storage tank; removal of known shallow soil impacts; and removal of impacted soil in the vicinity of SB-1. It was stated that if evidence of a discharge is revealed at the time of tank removal, contaminated soil must be removed and depending upon the degree of discharge, the impact to water quality may need to be investigated. The purpose of this letter is to bring this file up to date summarizing work conducted since July 2011 and reiterating work items that remain to be completed.

Underground Storage Tanks

On November 3, 2011, the underground oil storage tank was removed. At the time of removal, a second tank was discovered and removed along with visually impacted soil. The excavation was continued to groundwater where separate phase oil product was observed.

Based on recent communications with Antea Group staff working on behalf of Union Pacific Railroad, report preparation is in progress and submittal is anticipated in the next few weeks.

.

Shallow Soil Impacts

As previously stated, shallow soil impacts may be addressed prior to and/or during property development.

Soil Removal at SB-1

Soil removal in the area of SB-1 must be completed as soon as possible and prior to land development activities. The work may be conducted according to the existing work plan prepared by EBA Engineering submitted on behalf of the Railroad Square Associates, LLC (who is not a responsible party) or a new work plan. If someone other than EBA Engineering implements the existing work plan, the licensed professional in responsible charge of the project must be identified.

Based on the current development plans, a delay in completing remedial actions in the area of SB-1 may impact the installation of proposed infrastructure.

Extent of Groundwater Impacts

In addition to the soil removal project at SB-1, a work plan must be submitted to investigate the extent of groundwater impacts including the presence of separate phase oil at the former tank location, groundwater impacts in the area of SB-1, and clarify the relationship of on-site discharges and off-site impacts to the west beneath adjacent properties. The work plan is due within 45-days of issuance of this letter.

If you have any questions or would like to meet to discuss this case, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Original signed by

Joan Fleck
Engineering Geologist

120119_JEF_SPTransCo

cc:

Santa Rosa Fire Department (GBuckheit@srcity.org)
Mr. Paul Nelson (pnelson@ebagroup.com)
Ms. Joan Thomas, SMART jthomas@sonomamarintrain.org
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Mr. Richard Devine, Devine & Gong, Inc. 100 Bush Street, Suite 600, San Francisco, CA 94104-3703 (rdevine@devinegong.com)
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
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Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100
Mr. John Nemeth (jnemeth@sonomamarintrain.org)
Ms. Lisa Pheatt, County Counsel (lpheatt@sonoma-county.org)

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

March 19, 2012

Mr. James Diel
Union Pacific Railroad
9451 Atkinson Street
Suite 100
Roseville, CA 95747

Mr. John Nemeth
Sonoma Marin Area Rail Transit
750 Landaro Street,
Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: UST Removal Report and Site Assessment Work Plan

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case Nos. 1TSR196 and 1NSR196

Regional Water Board staff (staff) reviewed the January 24, 2012 *UST Removal Report* and the February 29, 2012 *Site Assessment Work Plan* prepared by Antea™Group for the former rail yard in Santa Rosa. Staff has no comments on the *UST Removal Report*. The *Site Assessment Work Plan* was discussed with Antea™Group staff on March 15, 2012. The discussions included:

- The excavation of impacted soil in the vicinity of SB-1 (as proposed in the EBA Engineering *Soil Excavation Work Plan* dated October 2009) is acceptable. The excavation depth is to groundwater and groundwater/separate phase hydrocarbon removal from the open excavation is planned.
- The drilling of qualitative borings using the CPT-UVOST technology is acceptable. However, the extent of dissolved phase hydrocarbons must also be defined. Staff request that grab groundwater samples also be collected for chemical analysis.
- The drilling of the exploratory soil borings on the southwestern boundary is acceptable.

By copy of this letter, Santa Rosa Fire and Sonoma County Environmental Health have been informed of our concurrence to enable the processing of the excavation and drilling permits, respectively. Due to competing interests at this property and the need to coordinate efforts, an expedited work plan implementation schedule is highly encouraged.

If you have any questions, I can be reached at (707) 576-2675 and Jfleck@waterboards.ca.gov.

Sincerely,

Original signed by

Joan Fleck
Engineering Geologist

120319_JEF_UPRR

cc:

Santa Rosa Fire Department GBuckheit@srcity.org
Mr. Paul Nelson pnelson@ebagroup.com
Ms. Joan Thomas, SMART jthomas@sonomamarintrain.org
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Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100
Mr. John Nemeth, SMART jnemeth@sonomamarintrain.org
Ms. Lisa Pheatt, County Counsel lpheatt@sonoma-county.org
Ms. Laura Giraud, SMART Real Estate Manager lgiraud@sonomamarintrain.org
Ms. Lia Holden, Antea™Group, lia.holden@anteagroup.com
Ms. Kathleen A. Millison, City Manager, City of Santa Rosa kmillison@srcity.org

August 10, 2012

Mr. Jim Diel
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747
JEDiel@up.com

Dear Mr. Diel:

Subject: **Request for Cost Reimbursement**

File: Southern Pacific Transportation Company
3rd Street Property
Santa Rosa, California
Case No 1NSR196

The California Water Code (Porter-Cologne Water Quality Control Act), Section 13304, allows the Regional Water Board to recover reasonable expenses from a responsible party for overseeing cleanup of unpermitted discharges, contaminated properties, and other unregulated releases adversely affecting the water of the State. Historic property uses have resulted in soil and groundwater contamination. Discharges from the above-referenced site threaten to affect the State's water, specifically site groundwater. The beneficial uses of areal groundwater include domestic water supply, agricultural supply, and industrial supply.

Further monitoring, investigation, and cleanup are required, and it is our intent to recover costs for the regulatory oversight. The oversight work includes site inspections, coordination with other agencies, sampling, meetings, case discussions and review of technical reports, workplans, and other related materials. Also, in compliance with AB2507, our agency is obligated to inform you every year of the following information regarding our recovery of oversight costs:

1. A detailed estimate of the work to be performed or services to be provided;
2. A statement of the expected outcome of that work;

3. The billing rates of all individuals and classes or employees expected to engage in the work; and
4. An estimate of all expected charges to be billed to you by this agency.

ESTIMATE OF WORK TO BE PERFORMED:

Regional Water Board staff estimate that the following work will be performed during fiscal year 2012/2013 on the Southern Pacific Transportation Company, 3rd Street site:

- Evaluate the site status to assess compliance with Regional Water Board requirements and California Water Code;
- Review monitoring reports;
- Review interim remedial action implementation plan;
- Review of reports, and any needed plans to complete investigation of the vertical and horizontal extent of groundwater contamination;
- Meet with and provide written correspondence and telephone communication with representatives of the Union Pacific Railroad Company, Sonoma Marin Area Rail Transit, Santa Rosa Fire Department, and other responsible third parties;
- Conduct internal communications (i.e., meetings, memos, etc.) regarding the project;
- Encourage public involvement in remediation issues at critical points; and
- Conduct site inspections.

STATEMENT OF EXPECTED OUTCOME

- Confirm appropriate groundwater monitoring parameters;
- Written comments on workplans and reports;
- Comply with public participation and other needs of the California Environmental Quality Act (CEQA);
- Identify and fill data gaps as needed to develop a final remedial action plan;
- Ensure compliance with the California Environmental Quality Act;
- Ensure consistency with the California Water Code, regulations, and policies;
- Continue evaluation of threats to water quality from site contaminants;
- Verify adequacy of reports and plans; and
- Prepare meeting summaries, telephone conversation summaries, etc. to document the file record and site progress.

BILLING RATES

Enclosure 1 is a description of the billing process and Enclosure 2 is a summary of the billing rates for employees expected to perform the work. The names and

classifications of employees that charge time to this site will be listed on the invoices. The average billing rate is about $150 per hour.

ESTIMATION OF EXPECTED CHARGES

Regional Water Board staff expects to charge about 60 hours of work related to this site during fiscal year 2012/2013 (July 1, 2012 through June 30, 2013). Based on the average billing rate of $150 per hour, the estimate billing charge for this site during fiscal year 2012/2013 is about $9,000.

Please sign and return to our agency the enclosed acknowledgement form (Enclosure 3) to our Agency by August 15, 2012.

If you have any questions, please contact me at (707) 576-2676 or by e-mail at jgoebel@waterboards.ca.gov.

Sincerely,

Original signed by Craig Hunt for

Janice M. Goebel
Sanitary Engineering Associate

120810_JMG_UP3rd Street_CRLetter

Enclosures:

1. Billing Rate Process
2. Billing Rate Summary
3. Acknowledgement of Receipt

cc: Mr. Toru Okamoto, Cost Recovery Program Manager,
Division of Financial Assistance, SWRCB toru.okamoto@waterboards.ca.gov
Kasey Ashley, RWQCB

ACKNOWLEDGEMENT OF RECEIPT OF
CLEANUP AND ABATEMENT COST RECOVERY LETTER

I, _____, acknowledge that I have received and read a copy of the enclosed REIMBURSEMENT PROCESS FOR REGULATORY OVERSIGHT and the cover letter dated **August 10, 2012** concerning cost reimbursement for Regional Water Board staff costs involved with oversight of cleanup and abatement efforts at **Southern Pacific, 3rd Street Property** located at 2 Fourth Street and 34 Sixth Street in Santa Rosa, Sonoma County, California.

I understand the reimbursement process and billing procedures as explained in the letter. I am willing to participate in the cost recovery program and pay all subsequent billings in accordance with the terms in your letter and its enclosures. I also understand that signing this form does not constitute any admission of liability, but rather only an intent to pay for costs associated with regulatory oversight activities. Billings for payment of oversight costs should be mailed to the following:

BILLING CONTACT _____

BILLING ADDRESS _____

_____

_____

TELEPHONE NO. _____

FAX NO. _____

SIGNATURE OF FACILITY CONTACT

_____
(Signature)

_____
(Title)

_____
(Date)

Staff: JMG
Case No. 1NSR196
120810_JMG_UP3rdstreet_CR

August 10, 2012

Mr. Jim Diel
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747
JEDiel@up.com

Dear Mr. Diel:

Subject: Project Update and Request for Report/Workplan

File: Southern Pacific Transportation Company
3rd Street Property, Santa Rosa, California
Case No 1NSR196

On July 11, 2012, I inspected the excavation at the former Union Pacific 3rd Street property with the Santa Rosa Fire Department. Prior to the inspection, I reviewed the Site Assessment Work Plan dated February 29, 2012, prepared by Anteagroup. The Work Plan states that soil and groundwater samples will be collected, but not analyzed for volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs).

Review of the analytical data generated for the site indicates VOCs and SVOCs are present in soil and groundwater at the site. Future soil and groundwater sampling shall include these constituents of concern in the sampling program.

The Work Plan also stated on Page 5, Section 2.3.3 Monitoring Well Installations, that four groundwater monitoring wells will be installed. However, the timing for installation is stated as contingent upon site redevelopment activities. The schedule for well installation is considered vague, and a workplan proposing the locations of the monitoring wells and schedule for installation is needed.

This site has soil and groundwater contamination from underground storage tanks release(s), and from other spills and discharges not associated with underground storage tanks. The majority of the site contamination is related to spills and discharges.

Therefore, reports generated as part of the site investigation and cleanup should be uploaded to Geotracker under the Case No. 1NSR196.

Accordingly, pursuant to Section 13267(b) of the California Water Code, the report of the excavation and boring program, including the monitoring well installation workplan and schedule is requested by September 7, 2012.

If you have any questions, please contact me at (707) 576-2676 or via e-mail at Janice.Goebel@waterboards.ca.gov.

Sincerely,

Original signed by Craig Hunt for

Janice M. Goebel
Sanitary Engineering Associate

120810_JMG_UP3rdstreetupdate

cc: Marita Petersen, SRFD, mpetersen@srcity.org
John Nemeth, SMART, 750 Landro Street, Suite 200, San Rafael, CA 94901
jnemeth@sonomamarintrain.org
Lia Holden, Anteagroup, lia.holden@anteagroup.com

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

February 26, 2013

Mr. Jim Diehl
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747
JEDiel@up.com

Dear Mr. Diehl:

Subject: Comments on Site Remedial Action and Investigation Report

File: Southern Pacific Transportation Company, 3rd Street Property, Santa Rosa, California, Case No 1NSR196

On October 18, 2012, Regional Water Board staff received the *Site Remedial Action and Investigation Report*, prepared by Antea Group for the former Southern Pacific Third Street property. Antea Group documents work conducted at the site including the data from removal of an underground storage tank, and soil and groundwater sampling data on the southwest side of the property. In addition, four groundwater monitoring wells are proposed to be drilled at the site.

The soil and groundwater sampling data shows Motor Oil Range Organics (MORO) and Diesel Range Organics (DRO) in soil and groundwater samples. The highest levels of MORO and DRO are present in groundwater grab sample locations B1, B2, and B3.

Table 1 of the report lists the soil sampling analytical data, and compares the results to Residential, Commercial and Industrial San Francisco Bay Regional Water Board's Environmental Screening Levels. For Benzo(a)pyrene [B(a)P] the California Human Health Screening Levels is 0.13 mg/kg.

Antea is proposing to install four groundwater monitoring wells at the site. I concur with the installation of the wells as proposed.

Recently, SRMW-08 was abandoned because of construction activities associated with the SMART train depot. In reviewing the construction details of this well, upgradient well SRMW-07 is screened across two water bearing zones. At some point, Monitoring Well SRMW-07 should be destroyed.

A schedule for the installation of the wells and report of the well installation is requested by March 22, 2013.

If you have any questions, please contact me at (707) 576-2676 or at Janice.goebel@waterboards.ca.gov

Sincerely,

Original Signed By

Janice M. Goebel
Sanitary Engineering Associate

130226_JMG_ef_SPRRSq

cc: Marita Petersen, SRFD, mpetersen@srcity.org
Mr. Paul Nelson, pnelson@ebagroup.com
Ms. Joan Thomas, SMART, jthomas@sonomamarintrain.org
Mr. Richard Devine, Devine & Gong, Inc.rdevine@devinegong.com
Mr. John Nemeth, SMART, jnemeth@sonomamarintrain.org
Ms. Lisa Pheatt, County Counsel, lpheatt@sonoma-county.org
Ms. Laura Giraud, SMART Real Estate Manager, lgiraud@sonomamarintrain.org
Ms. Lia Holden, Antea™Group, lia.holden@anteagroup.com
Ms. Kathleen A. Millison, City Manager, City of Santa Rosa, kmillison@srcity.org
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, CA 94109
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514
Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

June 11, 2013

Mr. James Diehl
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747

Dear Mr. Diehl:

Subject: Comments on Well Abandonment Work Plan

File: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa
Case No 1NSR196

On May 1, 2013, Regional Water Board staff received the Well Abandonment Work Plan, prepared by Antea Group, for the former Southern Pacific railroad property located on West Third Street in Santa Rosa. Antea Group is proposing to overdrill groundwater monitoring well SRMW-07. We concur with the destruction of SRMW-07 as proposed.

If you have any questions, please contact me at (707) 576-2676 or at Janice.Goebel@waterboards.ca.gov.

Sincerely,

Original signed by

Janice M. Goebel
Sanitary Engineering Associate

130611_JMG_dp_SPabandonment

cc: Matt Villaber, Sonoma County Environmental Health Department,
Matt.Villaber@sonoma-county.org
Lia Holden, Antea Group, Lia.Holden@anteagroup.com

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

June 11, 2013

Mr. James Diehl
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747

Dear Mr. Diehl:

Subject: Comments on Well Abandonment Work Plan

File: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa
Case No 1NSR196

On May 1, 2013, Regional Water Board staff received the Well Abandonment Work Plan, prepared by Antea Group, for the former Southern Pacific railroad property located on West Third Street in Santa Rosa. Antea Group is proposing to overdrill groundwater monitoring well SRMW-07. We concur with the destruction of SRMW-07 as proposed.

If you have any questions, please contact me at (707) 576-2676 or at Janice.Goebel@waterboards.ca.gov.

Sincerely,

Original signed by

Janice M. Goebel
Sanitary Engineering Associate

130611_JMG_dp_SPabandonment

cc: Matt Villaber, Sonoma County Environmental Health Department,
Matt.Villaber@sonoma-county.org
Lia Holden, Antea Group, Lia.Holden@anteagroup.com

July 2, 2013

Mr. Jim Diel
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747

Dear Mr. Diel:

Subject: **ANNUAL ESTIMATION LETTER**

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, California
Case No 1NSR196; (201-0122)

The California Water Code (Porter-Cologne), Section 13304, allows the Regional Water Board to recover reasonable expenses from a responsible party for overseeing site investigation and cleanup of unregulated discharges adversely affecting or threatening to affect State's waters. The Regional Water Board intends to continue to recover costs for regulatory oversight work conducted at this site in accordance with our prior correspondence on this matter. In compliance with AB2057, our agency is obligated to inform you every year of the following information regarding our recovery of oversight costs:

1. A detailed estimate of the work to be performed or services to be provided;
2. A statement of the expected outcome of that work;
3. The billing rates of all individuals and classes or employees expected to engage in the work; and
4. An estimate of all expected charges to be billed to you by this agency.

ESTIMATE OF WORK TO BE PERFORMED:

Regional Water Board staff estimate that the following work will be performed during fiscal year 2013/2014 on the former Southern Pacific 3rd Street site:

- Evaluate the site status to assess compliance with Regional Water Board requirements and California Water Code;
- Review monitoring reports;
- Review of reports, and any needed plans to complete investigation of the vertical and horizontal extent of groundwater contamination;
- Review interim remedial action implementation plan;

- Meet with and provide written correspondence and telephone communication with representatives of Union Pacific Railroad Company, and other responsible third parties;
- Conduct internal communications (i.e., meetings, memos, etc.) regarding the project;
- Encourage public involvement in remediation issues at critical points; and
- Conduct site inspections.

STATEMENT OF EXPECTED OUTCOME

- Confirm appropriate groundwater monitoring parameters;
- Written comments on workplans and reports;
- Comply with public participation and other needs of the California Environmental Quality Act (CEQA);
- Identify and fill data gaps as needed to develop a final remedial action plan;
- Ensure compliance with the California Environmental Quality Act;
- Ensure consistency with the California Water Code, regulations, and policies;
- Continue evaluation of threats to water quality from site contaminants;
- Verify adequacy of reports and plans; and
- Prepare meeting summaries, telephone conversation summaries, etc. to document the file record and site progress.

BILLING RATES

Enclosure 1 is a summary of the billing rates for employees expected to perform the work. The names and classifications of employees that charge time to this site will be listed on the invoices. The average billing rate is about $150.00 per hour.

ESTIMATION OF EXPECTED CHARGES

Regional Water Board staff expects to charge about 60 hours of work related to this site during fiscal year 2013/2014 (July 1, 2013 through June 30, 2014). Based on the average billing rate of $150.00 per hour, the estimated billing charge for this site during fiscal year 2013/2014 is about $9,000.

If you have any questions, please call me at (707) 576-2676.

Sincerely,

Original Signed By Kasey Ashley For

Janice M. Goebel
Sanitary Engineering Associate

130702_JMG_ef_2010122_SP3rdStreet_ACR

Enclosure: Billing Cost Explanation

cc: Ms. Amy Sunahara, Cost Recovery Program, Division of Financial Assistance, SWRCB, 201-0122, Amy.Sunahara@waterboards.ca.gov
Kasey Ashley, RWQCB

July 28, 2014

Mr. Jim Diel
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747
jediel@up.com

Dear Mr. Diel:

Subject: **ANNUAL ESTIMATION LETTER**

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, CA; Case No 1NSR196; (201-0122)

The California Water Code (Porter-Cologne), Section 13304, allows the Regional Water Board to recover reasonable expenses from a responsible party for overseeing site investigation and cleanup of unregulated discharges adversely affecting or threatening to affect State's waters. The Regional Water Board intends to continue to recover costs for regulatory oversight work conducted at this site in accordance with our prior correspondence on this matter. In compliance with AB2057, our agency is obligated to inform you every year of the following information regarding our recovery of oversight costs:

1. A detailed estimate of the work to be performed or services to be provided;
2. A statement of the expected outcome of that work;
3. The billing rates of all individuals and classes or employees expected to engage in the work; and
4. An estimate of all expected charges to be billed to you by this agency.

ESTIMATE OF WORK TO BE PERFORMED:

Regional Water Board staff estimate that the following work will be performed during fiscal year 2014/2015 on the former Southern Pacific 3rd Street site:

- Evaluate the site status to assess compliance with Regional Water Board requirements and California Water Code;
- Review monitoring reports;
- Review of reports, and any needed plans to complete investigation of the vertical and horizontal extent of groundwater contamination;

- Meet with and provide written correspondence and telephone communication with representatives of Union Pacific Railroad Company, and other responsible third parties;
- Conduct internal communications (i.e., meetings, memos, etc.) regarding the project;
- Encourage public involvement in remediation issues at critical points; and
- Conduct site inspections;
- Evaluate the site for no further action.

STATEMENT OF EXPECTED OUTCOME:

- Confirm appropriate groundwater monitoring parameters;
- Written comments on workplans and reports;
- Comply with public participation and other needs of the California Environmental Quality Act (CEQA);
- Ensure compliance with the California Environmental Quality Act;
- Ensure consistency with the California Water Code, regulations, and policies;
- Continue evaluation of threats to water quality from site contaminants;
- Verify adequacy of reports and plans;
- Prepare meeting summaries, telephone conversation summaries, etc. to document the file record and site progress;
- Evaluate the site for no further action.

BILLING RATES:

Enclosure 1 is a summary of the billing rates for employees expected to perform the work. The names and classifications of employees that charge time to this site will be listed on the invoices. The average billing rate is about $150 per hour.

ESTIMATION OF EXPECTED CHARGES

Regional Water Board staff expects to charge about 30 hours of work related to this site during fiscal year 2014/2015 (July 1, 2014 through June 30, 2015). Based on the average billing rate of $150 per hour, the estimated billing charge for this site during fiscal year 2014/2015 is about $4,500.

If you have any questions, please call me at (707) 576-2676.

Sincerely,

Original signed by Craig Hunt for:

Janice M. Goebel
Sanitary Engineering Associate

140728_JMG_er_2010122_SouthernPacific3rdStreet_ACR

Enclosure: Billing Cost Explanation

cc: Ms. Amy Sunahara, Cost Recovery Program, 201-0122,
Amy.Sunahara@waterboards.ca.gov

TO: Craig Hunt
File

FROM: Janice Goebel

DATE: September 15, 2014

SUBJECT: Case Evaluation and Recommendation for Case Closure

FILE: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa, Case No. 1TSR196 and 1NSR196

The site is located at 20 West Third Street in Santa Rosa as shown on Figures 1 and 2. The property has been a railroad freight depot and maintenance/fueling yard from the late 1800's through the 1960's. The site has been vacant and generally unused since the late 1960's. In 2008, the Sonoma Marin Area Rail Transit (SMART) was granted an option to purchase the site. As part of that transaction, an environmental assessment was conducted by SMART that identified additional areas needing investigation, including the removal of an underground storage tank. SMART is currently using this portion of the site for construction storage.

The site has had several soil and groundwater investigations beginning in 1987. An extensive cleanup of the site has also been conducted, and the site was closed for no further action in 2007. On January 16, 2009, the site was reopened based on the findings of two 550 underground storage tanks (USTs), and an area of soil and groundwater contamination near Boring SB-1.

In November of 2011, the USTs were removed and approximately 213 tons of soil excavated and transported off-site for disposal. In addition approximately 500 gallons of oily water from the base of the excavation was removed and transported off-site for disposal. The area near Boring SB-1 was also excavated. Approximately 758 tons of soil was excavated and disposed, and 1,500 gallons of water pumped and properly disposed.

Four groundwater monitoring wells have been installed at the site and sampled five times for diesel range organics (DRO) and motor oil range organics (MORO) with and without silica gel cleanup, and PAHs. No PAHs have been detected in groundwater at the method detection limits. DRO and MORO have been reported below the detection limit to a high of 340 ug/L for DRO and 210 ug/L for MORO without silica gel cleanup. With silica gel

cleanup, DRO and MORO have been detected in a range below the detection limit to 70 µg/L and 110 µg/L, respectively.

In summary, low levels of DRO and MORO have been detected in groundwater in one groundwater monitoring well. The site meets the Low Threat Closure Criteria for groundwater under No 1.5 which states: "The regulatory agency determines, based on an analysis of site specific conditions, that the site under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame".

In addition, the site is served by city water, and even though Santa Rosa Creek is 160 feet away from the site, the heavy end hydrocarbons are not migrating. A site located in between the rail yard and Santa Rosa Creek, (the Franchetti site located at 60 West Sixth Street, Santa Rosa) installed groundwater monitoring wells that did not detect petroleum hydrocarbons, and was subsequently closed.

Accordingly, I recommend that the site be noticed for 60 day public comment period proposing no further action at the site.

September 25, 2014

Ms. Lauren A. Mancuso
Manager of Environmental Site Remediation
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747

Dear Ms. Mancuso:

Subject: Concurrence with Request for Case Closure, Public Notice Requirements

File: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa, Case No. 1TSR196 and 1NSR196

On July 30, 2014, Regional Water Board staff received the "Second Quarter 2014 Quarterly Monitoring Report and Case Closure Request", prepared by Anteagroup for the former Southern Pacific Transportation rail yard located at 20 West Third Street in Santa Rosa.

The data from the last groundwater sampling detected low levels of diesel range organics (DRO) and motor oil range organics (MORO) in one groundwater monitoring well. Over 1,000 tons of soil was removed from the former underground storage tank area and the area around SB-1. Approximately 2,000 gallons of groundwater was removed from both excavations and properly disposed. Based on the review of all the data, Regional Water Board staff concurs with the request for closure.

Enclosed is a copy of the public notice proposing that the case be closed and no further action is needed. The public notice period lasts 60 days and solicits comments from interested persons on the proposed "no further action". The public notice will be posted on our web page. Please have the notice circulated to all contiguous landowners and businesses. Proof that the notice has been distributed to all adjacent landowners and business owners needs to be submitted to our office within two weeks of the date of this letter. Please also post a copy of the notice at the site.

If no new or substantial comments are received during the public comment period, you will receive a request for a workplan to destroy all the remaining monitoring wells. Once this has been completed and documentation submitted that all wastes have been removed from the site, you will receive the "no further action" letter.

If you have any questions, please contact me at (707) 576-2676 or via e-mail at Janice.Goebel@waterboards.ca.gov.

Sincerely,

Original signed by:

Janice M. Goebel
Sanitary Engineering Associate

140925_JMG_er_SPltr

Enclosure: Notice of Proposed No Further Action

cc: Leslye Choate, , lchoate@sonoma-county.org
Marita Petersen, SRFD, mpetersen@srcity.org
John Nemeth, SMART, jnemeth@sonomamarintrain.org
Lia Holden, Anteagroup, lia.holden@anteagroup.com

September 25, 2014

Ms. Lauren A. Mancuso
Manager of Environmental Site Remediation
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747

Dear Ms. Mancuso:

Subject: Concurrence with Request for Case Closure, Public Notice Requirements

File: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa, Case No. 1TSR196 and 1NSR196

On July 30, 2014, Regional Water Board staff received the "Second Quarter 2014 Quarterly Monitoring Report and Case Closure Request", prepared by Anteagroup for the former Southern Pacific Transportation rail yard located at 20 West Third Street in Santa Rosa.

The data from the last groundwater sampling detected low levels of diesel range organics (DRO) and motor oil range organics (MORO) in one groundwater monitoring well. Over 1,000 tons of soil was removed from the former underground storage tank area and the area around SB-1. Approximately 2,000 gallons of groundwater was removed from both excavations and properly disposed. Based on the review of all the data, Regional Water Board staff concurs with the request for closure.

Enclosed is a copy of the public notice proposing that the case be closed and no further action is needed. The public notice period lasts 60 days and solicits comments from interested persons on the proposed "no further action". The public notice will be posted on our web page. Please have the notice circulated to all contiguous landowners and businesses. Proof that the notice has been distributed to all adjacent landowners and business owners needs to be submitted to our office within two weeks of the date of this letter. Please also post a copy of the notice at the site.

If no new or substantial comments are received during the public comment period, you will receive a request for a workplan to destroy all the remaining monitoring wells. Once this has been completed and documentation submitted that all wastes have been removed from the site, you will receive the "no further action" letter.

If you have any questions, please contact me at (707) 576-2676 or via e-mail at Janice.Goebel@waterboards.ca.gov.

Sincerely,

Original Signed by

Janice M. Goebel
Sanitary Engineering Associate

140925_JMG_er_SPltr

Enclosure: Notice of Proposed No Further Action

cc: Leslye Choate, , lchoate@sonoma-county.org
Marita Petersen, SRFD, mpetersen@srcity.org
John Nemeth, SMART, jnemeth@sonomamarintrain.org
Lia Holden, Anteagroup, lia.holden@anteagroup.com

Notice of Proposed No Further Action
For
Southern Pacific Transportation Company
20 West Third Street
Santa Rosa, California
Case No. 1TSR196 and 1NSR196
Sonoma County

Notice Posting Date: **September 25, 2014**
Comment Period Ends: **November 24, 2014**

Problem Description
This property has been a railroad freight depot and maintenance/fueling yard from the late 1800's through the 1960's. The site has been vacant and generally unused since the late 1960's. In 2008, the Sonoma Marin Area Rail Transit (SMART) was granted an option to purchase the site. As part of that transaction, an environmental assessment was conducted by SMART that identified additional areas needing investigation, including the removal of underground storage tanks (USTs).

Actions Completed

In November of 2011, two USTs were removed and approximately 213 tons of soil excavated and transported off-site for disposal, and 500 gallons of oily water was pumped from the base of the excavation and transported off-site for disposal. The area near Boring SB-1 was also excavated. Approximately 758 tons of soil was excavated and disposed, and 1,500 gallons of water pumped from the excavation and properly disposed.

Four groundwater monitoring wells have been installed at the site and sampled five times for diesel range organics (DRO) and motor oil range organics (MORO) with the silica gel cleanup, and PAHs. No PAHs have been detected in groundwater at the method detection limits. Low levels of DRO and MORO have been reported in one groundwater monitoring well at the site.

Proposed Action
Unless significant comments are received or new information is presented regarding the site, Regional Water Board staff plans to proceed with the "no further action" determination upon conclusion of the comment period. Please contact Janice Goebel at (707) 576-2676 or e-mail, Janice.Goebel@waterboards.ca.gov for all issues concerning the subject case. Written comments may also be submitted to:

North Coast Regional Water Quality Control Board
Attention: Janice Goebel
5550 Skylane Blvd, Suite A
Santa Rosa, CA 95403

The Regional Water Board records for the site are contained in the file known as Southern Pacific Transportation Company, 20 West Third Street in Santa Rosa, Case No. 1TSR196. The file may be reviewed at the North Coast Regional Water Quality Control Board office from 8:00 am to 5:00 pm Monday through Friday. Appointments are recommended and can be arranged by calling (707) 576-2220. Information on the site can also be found at the State Water Resources Control Board's Geotracker web site at the following link:

http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=SL0002016200

December 2, 2014

Ms. Lauren A. Mancuso
Manager of Environmental Site Remediation
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747

Dear Ms. Mancuso:

Subject: End of Public Comment Period, Request for Monitoring Well Destruction Workplan

File: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa Case No. 1TSR196 and 1NSR196

On November 24, 2014, the public comment period ended for consideration of no further action status on the former Southern Pacific Transportation Company site located at 20 West Third Street in Santa Rosa. No comments on the proposed closure were received during the public comment period.

Accordingly, a workplan proposing the destruction of the groundwater monitoring wells is requested by December 31, 2014.

If you have questions, please contact me at Janice.Goebel@waterboards.ca.gov or at (707) 576-2676.

Sincerely,

Janice M. Goebel
Sanitary Engineering Associate

141202_JMG_er_SPMWClosureRequest

cc: Ms. Leslye Choate, lchoate@sonoma-county.org
Ms. Marita Petersen, SRFD, mpetersen@srcity.org
Mr. John Nemeth, SMART, jnemeth@sonomamarintrain.org
Ms. Laura Giraud, SMART, LGiraud@sonomamarintrain.org
Ms. Lia Holden, Anteagroup, lia.holden@anteagroup.com

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

January 9, 2015

Ms. Lauren A. Mancuso
Manager of Environmental Site Remediation
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747
lamancus@up.com

Dear Ms. Mancuso:

Subject: Concurrence with "Well Abandonment Work Plan"

Site: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa
Case No. 1TSR196 and 1NSR196

On December 16, 2014, the "Well Abandonment Work Plan" was received for the former Southern Pacific Transportation Company's rail yard located off West Third Street in Santa Rosa. We concur with the well abandonment work plan as written.

Please provide documentation on the well destruction and that all wastes have been removed from the site. Once that information is received, you will receive a letter indicating no further action is required.

If you have questions, please contact me at Janice.Goebel@waterboards.ca.gov or (707) 576-2676.

Sincerely,

Janice M. Goebel
Sanitary Engineering Associate

150109_JMG_er_SPWellaban

cc: Ms. Leslye Choate, lchoate@sonoma-county.org
Ms. Marita Petersen, SRFD, mpetersen@srcity.org
Ms. Laura Giraud, SMART, LGiraud@sonomamarintrain.org
Ms. Lia Holden, Anteagroup, lia.holden@anteagroup.com

Antea USA, Inc.
1155 North First Street, Suite 201
San Jose, California 95112 USA
www.anteagroup.com

March 22, 2013

Ms. Janice M. Goebel
California Regional Water Quality Control Board – North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Subject: **Planned Well Installation & Reporting Schedule**
Southern Pacific Transport Company, 3rd Street Property
Santa Rosa, California
CRWQCB – North Coast Region Case Nos. 1TSR196/1NSR196

Dear Ms. Goebel:

In response to your February 26, 2013 correspondence, on behalf of Union Pacific Railroad (UPRR), Antea Group is providing the California Regional Water Quality Control Board – North Coast Region (NCRWQCB) with the planned well installation and reporting schedule. Four groundwater monitoring wells will be installed as proposed in our October 18, 2012 *Site Remedial Action and Investigation Report*. Antea Group will coordinate planned field activities with the property owner [Sonoma Marin Area Rail Transit District (SMART)], obtain permits from Sonoma County Environmental Health, and proceed with the well installation according to the following schedule:

- Well installation field activities will commence on or before **May 30, 2013**.
- Newly installed wells will be properly developed 72 hours following their completion.
- A minimum of 72 hours following development, groundwater samples will be collected from each well.
- Analytical data will be available 14 days following sample submittal to the laboratory.
- Antea Group will prepare and submit a report detailing field activities and analytical results on or before **July 30, 2013**.

If you have any questions please do not hesitate to contact me at the number below.

Sincerely,

Lia N. Holden
Senior Project Manager
(408) 606-4919
lia.holden@anteagroup.com
Antea Group

Well Abandonment Work Plan

Union Pacific Railroad

2 Fourth Street and 34 Sixth Street

Santa Rosa, California

North Coast Regional Water Quality Control Board Case Nos. 1TSR19 and 1NSR196

Antea Group Project No. UPR8248
April 25, 2013

Prepared for:
Janice Goebel
North Coast Regional Water Quality Control Board
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

Prepared by:
Antea™Group
1155 North First Street, Suite 201
San Jose, CA 95112
+1 800 477 7411

Prepared for:
Matt L. Villaber
Registered Environmental Health Specialist
Sonoma County Environmental Health
625 5th Street
Santa Rosa, CA 95404

Antea USA, Inc.

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Appendix C Well Construction Details

Well Abandonment Work Plan

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California
North Coast Regional Water Quality Control Board
Case Nos. 1TSR19 and 1NSR196

1.0 INTRODUCTION

Antea™Group has prepared this Well Abandonment Work Plan to outline proposed abandonment procedures for the proper destruction of well SRMW-07, located at the above referenced site. The North Coast Regional Water Quality Control Board (NCRWQCB) approved the installation of four previously proposed groundwater monitoring wells, and requested the abandonment of well SRMW-07 in their February 26, 2013 directive letter**. (Appendix A).**

2.0 SITE LOCATION AND DESCRIPTION

Currently, the majority of the site is used as a construction equipment and supply storage area for SMART during offsite construction activities. Additionally, onsite construction activities are occurring in the northern portion of the property. The site is composed of two contiguous parcels of land, identified as Sonoma County Assessor Parcel Numbers (APN) 010-171-004 (2 Fourth Street) and 010-166-03 (34 Sixth Street). The site is bounded to the south by Third Street, to the west by former commercial properties (identified as the 3 West Third Street and 60 West Sixth Street Warehouses), to the north by West Sixth Street, and on the east by the main-line railroad track right-of-way and commercial properties. A site location map is provided as **Figure 1**; site features are shown on **Figure 2.**

3.0 PRE-FIELD ACTIVITIES

Prior to initiating field activities, Antea Group will ensure that the Health and Safety Plan (HASP) is updated for the current field tasks and prepared in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP will contain a list of emergency contacts, potential contaminants, personal protective equipment requirements, and a hospital route map to the nearest emergency facility. The HASP will be reviewed daily by field personnel.

Antea Group will contact Underground Service Alert and UPRR's Fiber Optic Hotline to mark the site for subsurface utilities. Well destruction permits will be obtained from the Sonoma County Department of Health Services, Environmental Health Division. The permit application is included as **Appendix B.**

4.0 GROUNDWATER MONITORING WELL ABANDONMENT

One (1) onsite groundwater monitoring wells (SRMW-07) will be destroyed by drilling out the well to its total constructed depth of 22 feet below ground surface (bgs). Drilling will be conducted by a licensed C-57 contractor. Prior to drilling, an air knife (vacuum) rig will clear the upper five feet of soil surrounding the well to expose potentially unmarked utilities and prevent utility damage during auger advancement. The well casing, filter pack, and backfill materials will be removed by advancing eight-inch diameter hollow-stem augers to the total constructed well depth (22 feet bgs). After removing the well casing and annular material, the bore will be backfilled with neat cement grout through a tremie pipe to just below ground surface, then capped with concrete at the surface. The boring log illustrating the well's original construction detail is provided as **Appendix C**.

5.0 DISPOSAL OF INVESTIGATION DERIVED WASTE

Soil cuttings, construction debris, and wastewater generated during well destruction activities will be placed in Department of Transportation (DOT) approved 55-gallon drums, sealed and labeled in accordance with DOT protocols for non-hazardous waste. The drums will be temporarily stored on-site pending waste profiling, then transported by United Pumping, Inc. and disposed of at a licensed facility. Final non-hazardous waste manifests will be submitted with the well destruction report following completion of field activities.

6.0 SCHEDULE/REPORTING

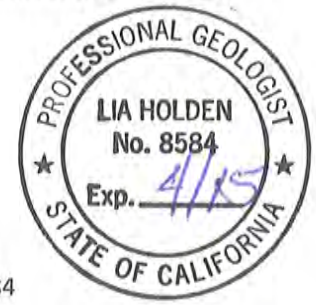
The abandonment of SRMW-07 is scheduled to occur in May 2013, and will be conducted concurrently with the approved well installation activities referenced in the attached agency correspondence (**Appendix A**). A summary report documenting field activities will be issued following receipt of the final executed waste manifests, estimated to be received within 45 days of the completion of field activities.

The activities outlined in this work plan and the preparation of the corresponding report will be conducted under the direction of a licensed California Professional Geologist. In accordance with the California State Water Resources Control Board requirements, the well abandonment report and site plan (showing the well as destroyed) will be uploaded to the GeoTracker database under both of the site's case numbers.

7.0 REMARKS

The findings contained in this document represent Antea Group's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. For any reports cited that were not generated by Antea USA, Inc., the data from those reports are used "as is" and is assumed to be accurate. Antea USA, Inc does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. This document is based upon a specific scope of work requested by the client. The Contract between Antea Group and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document were performed. This report is intended only for the use of Antea Group's Client and anyone else specifically listed on this report. Antea Group will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea Group makes no express or implied warranty as to the contents of this document.

Sincerely,



Lia N. Holden
Senior Project Manager
California Registered Professional Geologist No. 8584
Antea Group

Figures

Figure 1 Site Location Map
Figure 2 Site Plan





North

0 1000 2000 FT

SCALE

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup

SRMW-08
Abandoned
2/15/13

SRMW-07
Proposed
Abandonment

LEGEND

2012 INVESTIGATION (ANTEA GROUP)
- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)

2008 INVESTIGATION (EBA)
- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

1996 INVESTIGATION (GEOMATRIX)
- SOIL BORING

- SRMW-07 EXISTING MONITORING WELL
- SRMW-10 DESTROYED MONITORING WELL
- SANITARY SEWER
- STORM DRAIN
- WATER
- PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE
- PROPOSED MONITORING WELL LOCATION

ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

N

0 80 FT
SCALE

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
UPR8248	RR	JH	anteagroup
DATE	REVIEWED BY	FILE NAME	
10/15/12	LH	UPR8248-Site	

Appendix A

Agency Correspondence

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

February 26, 2013

Mr. Jim Diehl
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747
JEDiel@up.com

Dear Mr. Diehl:

Subject: Comments on Site Remedial Action and Investigation Report

File: Southern Pacific Transportation Company, 3rd Street Property, Santa Rosa, California, Case No 1NSR196

On October 18, 2012, Regional Water Board staff received the *Site Remedial Action and Investigation Report*, prepared by Antea Group for the former Southern Pacific Third Street property. Antea Group documents work conducted at the site including the data from removal of an underground storage tank, and soil and groundwater sampling data on the southwest side of the property. In addition, four groundwater monitoring wells are proposed to be drilled at the site.

The soil and groundwater sampling data shows Motor Oil Range Organics (MORO) and Diesel Range Organics (DRO) in soil and groundwater samples. The highest levels of MORO and DRO are present in groundwater grab sample locations B1, B2, and B3.

Table 1 of the report lists the soil sampling analytical data, and compares the results to Residential, Commercial and Industrial San Francisco Bay Regional Water Board's Environmental Screening Levels. For Benzo(a)pyrene [B(a)P] the California Human Health Screening Levels is 0.13 mg/kg.

Antea is proposing to install four groundwater monitoring wells at the site. I concur with the installation of the wells as proposed.

Recently, SRMW-08 was abandoned because of construction activities associated with the SMART train depot. In reviewing the construction details of this well, upgradient well SRMW-07 is screened across two water bearing zones. At some point, Monitoring Well SRMW-07 should be destroyed.

A schedule for the installation of the wells and report of the well installation is requested by March 22, 2013.

If you have any questions, please contact me at (707) 576-2676 or at Janice.goebel@waterboards.ca.gov

Sincerely,

Original Signed By

Janice M. Goebel
Sanitary Engineering Associate

130226_JMG_ef_SPRRSq

cc: Marita Petersen, SRFD, mpetersen@srcity.org
Mr. Paul Nelson, pnelson@ebagroup.com
Ms. Joan Thomas, SMART, jthomas@sonomamarintrain.org
Mr. Richard Devine, Devine & Gong, Inc.rdevine@devinegong.com
Mr. John Nemeth, SMART, jnemeth@sonomamarintrain.org
Ms. Lisa Pheatt, County Counsel, lpheatt@sonoma-county.org
Ms. Laura Giraud, SMART Real Estate Manager, lgiraud@sonomamarintrain.org
Ms. Lia Holden, Antea™Group, lia.holden@anteagroup.com
Ms. Kathleen A. Millison, City Manager, City of Santa Rosa, kmillison@srcity.org
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor, San Francisco, CA 94109
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514
Ms. Deborah Fudge, P.O. Box 100, Windsor, CA 95492-0100

Appendix B

Well Abandonment Permit Application

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
625 5th Street, Santa Rosa, CA 95404
Phone (707) 565-6565 Fax (707) 565-6525 www.sonoma-county.org

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment / LOP Lead

For Office Use Only
Amount paid _____
Receipt number _____
Payment date _____ Rev. code _____
Site ID# _____
Permit # _____

Well type: ■Monitoring well ☐Recovery extraction well ☐Boring ☐Injection well ■Destruct ☐Environmental assessment
☐Soil gas survey ☐Direct push ☐Air sparging/venting ☐Remediation well ☐Other _____

Well depth 22 feet Boring depth 22 feet

On-site well/boring SRMW-07 ID # _____ # Off-site well/boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address 2 Fourth Street and 34 Sixth Street AP# _____

Facility Name _____

On-site Owner Sonoma Marin Area Rail Transit (SMART) Phone _____

Street 490 Mendocino Avenue, Suite102 City Santa Rosa State CA Zip 95401

Responsible Party Union Pacific Railroad Phone _____

Street 2 Fourth Street and 34 Sixth Street City _____ State _____ Zip _____

Consultant Antea Group Phone _____

Street 1155 N First Street, Suite 201 City San Jose State CA Zip 95112

License #/Type 548062 - State Contractors License

Drilling Contractor Gregg Drilling & Testing, Inc. Phone _____

Street 950 Howe Road City Martinez State CA Zip 94553

C-57 License # 485615

Type of work: ☐Initial investigation _____ # Wells ☐Subsequent investigation _____ # Wells ■Destruct 1 # Wells

Groundwater investigation due to: ■Underground tank ☐Surface impoundment ■Environmental assessment
☐Surface disposal practice—specify involved industry _____
☐Other _____

Perforated intervals _____ Chemical constituents _____

Disposal method for soil cuttings 55 gallon drum Disposal method for development water _____

Drilling method well abandonment (see below) Method of drill equip. rinsate containment _____

If destroying a well, abandonment method air-knife to 5 feet bgs, advance hollow stem augers to well depth (22 ft) and grout to surface

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leachfield? ○Yes ◉No
50 feet of any sanitary sewer line? ○Yes ◉No
25 feet of any private sanitary sewer line? ○Yes ◉No

In addition, all monitoring wells must include ***identification system*** affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only

Address _____

_____

Site ID# _____

Permit # _____

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by this Department within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit ***only*** after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

_____ Date 4/15/13

Signature of Well Driller—***no proxies***

Insurance Carrier Acord AKW0041101 Expiration Date 8/31/13

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

_____

_____

_____

_____

_____

_____

_____

❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

Permit approved by _____ Date ____/____/____

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ____/____/____

RWQCB / LOP approval _____ Date ____/____/____

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

Appendix C

Well Construction Details

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Well No. SRMW-7**
BORING LOCATION: 145' S of 6th St., 170' W of railroad tracks	TOP OF CASING ELEVATION AND DATUM: 151.25' MSL (NAD 83', Zone 2; State of CA)
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 9/27/01 / DATE FINISHED: 9/27/01
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 22.0 / SCREEN INTERVAL (ft.): 10.7-20.0
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST 16.0, COMPL. 16.0 / CASING: 2" Sch. 40 PVC
SAMPLING METHOD: CME continuous core system [5' x 3"]	LOGGED BY: B. Mulholland
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo / REG. NO. CE038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 151.75' MSL	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					AGGREGATE BASE and WOOD DEBRIS	Traffic Rated Well Box
1					LEAN CLAY with SAND (CL): brown (7.5YR 4/2), moist, 85% fines, 15% fine sand, low to medium plasticity, soft	8.25" diameter borehole
2						2" diameter Schedule 40 PVC casing
3						Type I-II neat cement grout
4						
5						
6					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): black (7.5YR 2.5/1), moist, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	
7						
8						Bentonite chip seal
9						
10						#0/30 filter pack sand
11						
12					LEAN CLAY with SAND (CL): brown (7.5YR 4/3), moist, 85% fines, 15% fine sand, low to medium plasticity, soft	2" diameter Schedule 40 PVC (0.010-inch slot size) screen
13						
14						
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Well No. SRMW-7 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					LEAN CLAY with SAND (CL): Cont'd wet	2" diameter Schedule 40 PVC (0.010-inch slot size) screen
17						8.25" diameter borehole
18					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): very dark gray (7.5YR 3/1), wet, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	
19						
20						Schedule 40 PVC endcap
21						#0/30 filter pack sand
22					Bottom of boring at 22.0 feet	
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

File

GEOMATRIX

Additional Soil Investigation

Union Pacific Railroad Company

Santa Rosa Station/Third Street Property

Southern Property

Santa Rosa, California

Prepared for:

Union Pacific Railroad Company
49 Stevenson Street, 15th Floor
San Francisco, California 94105

October 2000

Project No. 2770.005

Geomatrix Consultants

2101 Webster Street
12th Floor
Oakland, CA 94612
(510) 663-4100 • FAX (510) 663-4141

GEOMATRIX

October 27, 2000
Project 2770.005

Ms. Joan Fleck
North Coast Regional Water Quality Control Board
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Subject: Additional Soil Investigation Report
Santa Rosa Station, Southern Property
Santa Rosa, California

Dear Ms. Fleck:

Geomatrix Consultants, Inc. (Geomatrix) has prepared this report to present the results of an additional soil sampling and chemical analysis program conducted at the Santa Rosa Station, Southern Property site. This work was conducted in accordance with the scope of work presented in our April 2000 "Work Plan for Additional Soil Sampling" report. The April 2000 work plan was approved by the California Regional Water Quality Control Board, North Coast Region in a letter, dated July 17, 2000, to Mr. John Moe of Union Pacific Railroad.

Please contact either of the undersigned if you have any questions regarding this report.

Sincerely,
GEOMATRIX CONSULTANTS, INC.

Tony Choi
Project Engineer

Susan M. Gallardo, P.E.
Principal Engineer

I:\Doc_Safe\2000s\2770.05\Lead-Rpt\Adtl-Lead-Samp-Ltr.doc
TC/SMG/nji

Enclosure:

cc: Mr. John Moe, Union Pacific Railroad Company
Mr. David Solomon, Northwestern Pacific Railroad Authority
Ms. Leah Goldberg, Hanson, Bridgett, Marcus, Vlahos & Rudy

GEOMATRIX

Additional Soil Investigation

Union Pacific Railroad Company

Santa Rosa Station/ Third Street Property

Southern Property

Santa Rosa, California

Prepared for:

Union Pacific Railroad Company
49 Stevenson Street, 15th Floor
San Francisco, California 94105

Prepared by:

Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, California 94612
(510) 663-4100

October 2000

Project No. 2770.005

Geomatrix Consultants

GEOMATRIX

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Table 1 Analytical Results for Soil Samples, August 2000

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Figure 2 Site Map
Figure 3 Soil Sampling Results

APPENDIXES

Appendix A County of Sonoma Department of Health Services Drilling Permit
Appendix B Boring Logs
Appendix C Analytical Laboratory Reports and Chain-of-Custody Records
Appendix D Historic Soil Analytical Results

At the request of the RWQCB and SRFD, the excavation work plan set a cleanup goal of 65 mg/kg; this objective was developed from "background" lead concentrations at the site. The remediation objective was achieved for average soil concentrations within the two excavations performed at SRB13 and SRB14. Specifically, in the excavation surrounding SRB13, side-wall and bottom confirmation samples contained lead at concentrations of 48, 4.6, 15, 130, 17, and 71 mg/kg; the average concentration of lead in this excavation is 48 mg/kg. In the excavation surrounding SRB14, side wall and bottom confirmation samples contained lead at concentrations of 64, 74, 53, 48, 24 and 30 mg/kg; the average concentration of lead in this excavation is 49 mg/kg. As documented in the excavation implementation report (Geomatrix, 1999b), clean import soil was placed in the excavations and regulatory closure was requested. It should be noted that miscellaneous debris consisting of concrete, wood, and metal was encountered within the SRB14 excavation and that concrete debris was encountered in part of the SRB13 excavation, concentrated in shallow (0.5 to 1.5 feet below ground surface [bgs]) soil in both excavations. The RWQCB in its March 21, 2000 letter, expressed concern that elevated lead concentrations in soil could be related to the presence of debris containing lead, and that the extent of the debris at the site is unknown.

According to documentation provided by the RWQCB, the City of Santa Rosa performed soil and groundwater sampling along the base of the north bank of Santa Rosa Creek. This work was conducted in preparation for the planning and construction of a bicycle/pedestrian path as part of the Prince Memorial Greenway, Creek Restoration Project (PMGP). One soil sample, designated K-24, was collected and analyzed for lead near the base of the creek bed (Figure 2), approximately 50 feet laterally from the site and approximately 22 feet below the creek bank. This sample contained a maximum lead concentration of 389 mg/kg. Based on the result from this one sample, the RWQCB requested that UPRR and the NWPRA explore the possibility of a correlation between the presence of lead at the site and in the creek (RWQCB, 2000).

3.0 SAMPLING AND CHEMICAL ANALYSIS PROGRAM

Four borings were advanced along the southern boundary of the Southern Property (Figure 3) to collect soil samples for chemical analysis. A description of the field sampling and chemical analysis program is presented below.

Prior to commencing fieldwork, a drilling permit was obtained from the Sonoma County Department of Health Services (Appendix A). Underground utilities were identified by notifying Underground Service Alert, a regional subsurface notification center 48 hours prior to

the start of field work and by contracting a private utility locator, Cruz Brothers Subsurface Locators, Inc., of Milpitas, California, to perform a utility clearance at each of the boring locations.

3.1 FIELD METHODS

Geomatrix retained Precision Sampling, Inc. (Precision) of Richmond, California, a state-licensed drilling contractor to advance four borings (SSR30 through SSR33) at the site on August 24, 2000. Each boring was advanced to maximum depths between 25 to 28 feet bgs using a XD-1, direct-push (DP) technology drill rig and the Enviro-Core continuous sampling system.[1] A continuous soil core was collected using a three-foot long continuous core barrel lined with clean butyrate liners. Recovered soil was described and logged by a Geomatrix geologist using the American Society Testing and Material (ASTM) Standard D2488-90 and Munsell color designations (lithologic logs are included as Appendix B), and samples were collected for chemical analyses.

Drilling and sampling equipment was steam cleaned or triple washed with Alconox and distilled water before use at each boring location. During the drilling operation, an organic vapor monitor equipped with a photoionization detector (PID) was used as a screening instrument to evaluate the presence of volatile constituents in the recovered soil samples.

3.1.1 Soil Sampling

Soil samples were collected at approximate two-foot intervals to depths of between 25-feet in borings SSR31 and SSR32 and 28-feet in borings SSR30 and SSR33. The work plan called for analysis of shallow soil samples (collected at approximately 1, 3, 5, and 10 feet bgs) from each boring. The actual field sampling depths are presented on Table 1. Soil samples were collected in $1^{11}/_{16}$-inch by 6-inch butyrate liners sealed at each end with Teflon sheets and closed with plastic end caps and duct tape. All samples were enclosed in plastic bags and stored in an ice-chilled cooler for transport to the analytical laboratory under Geomatrix chain-of-custody procedures.

[1] The Enviro-Core sampling system utilizes a 2.5-inch (outside diameter) steel sample barrel to core soil from borings. If subsurface debris were encountered, depending on the density of the material, the sample barrel would either retrieve debris, advance with no recovery, or would encounter sampling refusal. However, due to the small diameter of EnviroCore sample barrel relative to the area being investigated, other field exploration methods may more effectively evaluate the presence of buried debris.

3.2 ANALYTICAL METHODS

Soil samples were submitted to Entech Analytical Labs, Inc. (Entech), of Sunnyvale, California, and Friedman and Bruya, Inc. (Friedman), of Seattle, Washington, state-certified analytical laboratories, under Geomatrix chain-of-custody procedures. A copy of the laboratory analytical results and the chain-of-custody record is included in Appendix C.

Selected soil samples were analyzed for the following constituents:

- Lead using EPA Method 6010
- Benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tert-butyl ether (MTBE) using EPA method 8020. One soil sample was also analyzed using EPA Method 8260 for MTBE

As described in the approved work plan, a sequential sampling methodology was proposed. Soil samples collected from greater than 10 feet bgs would be held by the laboratory pending analytical results for the shallow soil samples. Chemical analysis were actually performed by Entech on the first three and fifth soil samples from each boring (e.g., from SSR30 -1.5, 4.0, 5.5, 10.5 feet bgs). Soil samples collected at depths greater than 4 feet that were analyzed did not demonstrate lead concentrations above "background." Therefore, soil samples collected below depths greater that 11.5 feet that were placed on hold were not analyzed for lead.

At each boring location, odor was encountered between 16 and 23 feet bgs by Geomatrix field personnel. Soil samples near depths associated with relatively higher PID readings were submitted to Friedman and analyzed for BTEX and MTBE. Additionally, these samples were analyzed for total volatile extractable petroleum hydrocarbons (quantified as gasoline, diesel, and motor oil); however, these analyses were performed outside of each sample's holding time. Analytical results for the petroleum hydrocarbon analyses are presented for informational purposes only.

4.0 SITE STRATIGRAPHY

Lithologic observations during drilling of borings SSR30 through SSR33 are generally consistent with observations from previous investigations. The site is generally underlain by aggregate base rock consisting of poorly graded sand with silt and gravel from the ground surface to approximately 1.5 feet bgs. The aggregate base rock is underlain by silt and fine-grained sand [sandy silt and silt with sand (ML)] to depths ranging between 18 and 22 feet bgs.

The thickness of this unit ranged between approximately 16.5 (SSR32) feet to 20.5 feet (SSR30). A clay (CL) unit was encountered in boring SSR33 from 19.5 to 22 feet bgs. Beneath these finder-grained units, a silty sand with gravel (SM) was encountered to the bottom of each boring. No debris was observed at any of the boring locations. Complete lithologic descriptions of subsurface materials encountered during drilling are presented in boring logs presented in Appendix B.

A saturated lens was encountered in each boring at approximate depths ranging from 13.7 to 14.5 feet bgs. The saturated lens was typically approximately 0.4 (SSR33) to 1.5 feet (SSR32) thick. During previous sampling events, groundwater has been encountered at the site at approximate depths of 13 to 14.5 feet bgs.

5.0 LABORATORY ANALYTICAL RESULTS

Soil analytical results are summarized in Table 1. Analytical laboratory data reports are included in Appendix C. The analytical results for soil samples were compared to a site specific background concentration of 65 mg/kg that was agreed upon among the SRFD, RWQCB, UPRR and NWPRA.[2]

5.1 LEAD

Lead was detected above the background concentration in 3 of 16 soil samples. In boring SSR30 at depths of 1.5 and 4.0 feet bgs, lead was detected at concentrations of 140 and 91 mg/kg, respectively. In boring SSR33 at a depth of 2 feet bgs, lead was detected at a concentration of 80 mg/kg. At depths greater than 4 and 2 feet bgs in borings SSR30 and SSR33, respectively, and in borings SSR31 and SSR32 soil lead concentrations were substantially below the "background" concentration of 65 mg/kg.

5.2 PETROLEUM HYDROCARBONS

Four samples, SSR30-22.0, SSR31-23.5, SSR32-21.0, and SSR33-17.5 were analyzed to evaluate the presence of petroleum hydrocarbons. These samples were selected for analyses because they were at or near depths where higher PID readings were recorded.

[2] It should be noted that this concentration is considerably below the residential preliminary remediation goal for lead of 400 mg/kg, established by the United States Environmental Protection Agency, Region 9 (October, 1999). Furthermore, analytical results for deeper soil samples from the previous and current sampling efforts, which contain decreasing lead concentrations demonstrate that lead in shallow soil at the site is insoluble and immobile. Based on this, lead in soil does not appear to pose a threat to human health or groundwater quality.

No petroleum hydrocarbons quantified as gasoline, diesel, or motor oil were detected; however, as previously noted these samples were analyzed outside of holding times. Benzene was detected in two of four samples; ethylbenzene, toluene, and total xylenes were detected in three of four samples. No BTEX or MTBE was detected in boring SSR31. MTBE was detected in sample SSR30-22.0 at a concentration of 0.02 mg/kg (at the reportable limit) using EPA Method 8021. However, after analyzing this sample using EPA Method 8260, which confirms sample results using mass spectrometry, the initial result was shown to be a false positive. MTBE was not detected in the four soil samples.

6.0 DISCUSSION

No debris was observed in the four borings advanced at the site. Analytical results indicate that elevated concentrations of lead relative to "background" (site specific) primarily occur in the upper two feet of soil at two boring locations. The sporadic presence of lead in shallow soil is generally consistent with previous sampling results.

It is unlikely that the source of lead found in Santa Rosa Creek is from the Santa Rosa Station, Southern Section. The concentration of lead detected at sampling location K-24 (389 mg/kg-in Santa Rosa Creek) is approximately two and a half times the average of pre- and post-excavation lead concentrations (145-mg/kg)[3] in the upper two feet of soil at the site. Additionally, the current average of lead concentrations in soil, considering recent soil sampling results (Table 1) in the uppermost two feet of soil overlying the site, is 59 mg/kg. This is below the site-specific "background" lead concentration of 65 mg/kg in soil agreed upon by the RWQCB and the SFRD. Given the historic average lead concentration and the current concentrations in soil, it appears unlikely that the presence of lead in Santa Rosa Creek is sourced at the site.

Petroleum product components (BTEX) were detected in deeper soil at the site; the depth at which the samples were collected appear to be within the zone of groundwater fluctuation. The source of BTEX in the deeper soil is not defined at this time.

[3] Pre-excavation sampling (Table D-1, Appendix D): 590 mg/kg in boring SRB13 at 1.5 feet bgs, 170 mg/kg in boring SRB14 at 1.5 feet bgs, and 22 mg/kg in boring SRB15 at 1.0 feet bgs; post-excavation sampling (Table 1): 140 mg/kg in boring SSR30 at 1.5 feet bgs, 11 mg/kg in boring SSR31 at 2.0 feet bgs, 5.0 mg/kg in boring SSR32 at 2.0 feet bgs, and 80 mg/kg in boring SSR33 at 2.0 feet bgs.

7.0 RECOMMENDATIONS

From observations made during this investigation, it does not appear that significant debris is present near the top of the creek embankment in the vicinity of soil borings SSR30 through SSR33. It appears that debris was present primarily in the area of the excavations. Additionally, the average lead concentration in shallow soil is below the site "background" concentration; lead concentrations in deeper soil are generally well below concentrations detected in the shallow soil. There does not appear to be a correlation between concentrations of lead detected at the site and in the creek. Based on this information, we recommend no further action with respect to lead in shallow soil at the site.

A coordinated groundwater sampling effort from existing Mead Clark Lumber Company wells between UPRR and the Mead Clark Lumber Company is planned to further evaluate the presence of petroleum hydrocarbons at the site. This sampling will be performed pending the finalization of an entry license agreement between NWPRA and the Mead Clark Lumber Company.

8.0 REFERENCES

California Code of Regulations, Title 22, Section 66261.24.

California Regional Water Quality Control Board, 2000, Letter to Union Pacific Railroad Company, March 21.

Geomatrix Consultants, Inc. (Geomatrix), 1996, Results of Soil and Groundwater Sampling, Property near Santa Rosa Station, Santa Rosa, California, October.

Geomatrix, 1997, Results of Soil and Groundwater Sampling, Northwestern Pacific Railroad, Santa Rosa Station Option Property, Santa Rosa, California, February.

Geomatrix, 1999a, Work Plan for Excavation of Lead-Affected Soil, Santa Rosa Station/Third Street Property, Southern Section, Santa Rosa, California, August 31.

Geomatrix, 1999b, Implementation Report, Excavation of Lead-Affected Soil, 4 West Third Street, Santa Rosa Station/Third Street Property – Southern Section, Santa Rosa, California, December 15.

Geomatrix, 2000, Workplan for Additional Soil Sampling, Case N. ITSR196, Santa Rosa Station/Third Street Property, Santa Rosa, California, April.

Lawrence Berkeley Laboratory (LBL), 1995, Protocol for determining Background Concentrations of Metals in Soil at Lawrence Berkeley National Laboratory (LBNL), August 1.

Shacklette, H.T., and Boerngen, J.G., 1984, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States, U.S. Geological Survey Professional Paper 1270.

U.S. Environmental Protection Agency, 1999, Region 9, Preliminary Remediation Goals (PRGs) 1999, U.S. EPA, San Francisco, California, October.

GEOMATRIX

TABLE

GEOMATRIX

TABLE 1

ANALYTICAL RESULTS FOR SOIL SAMPLES
AUGUST 2000
Santa Rosa Station/Third Street Property
Southern Section
Santa Rosa, California

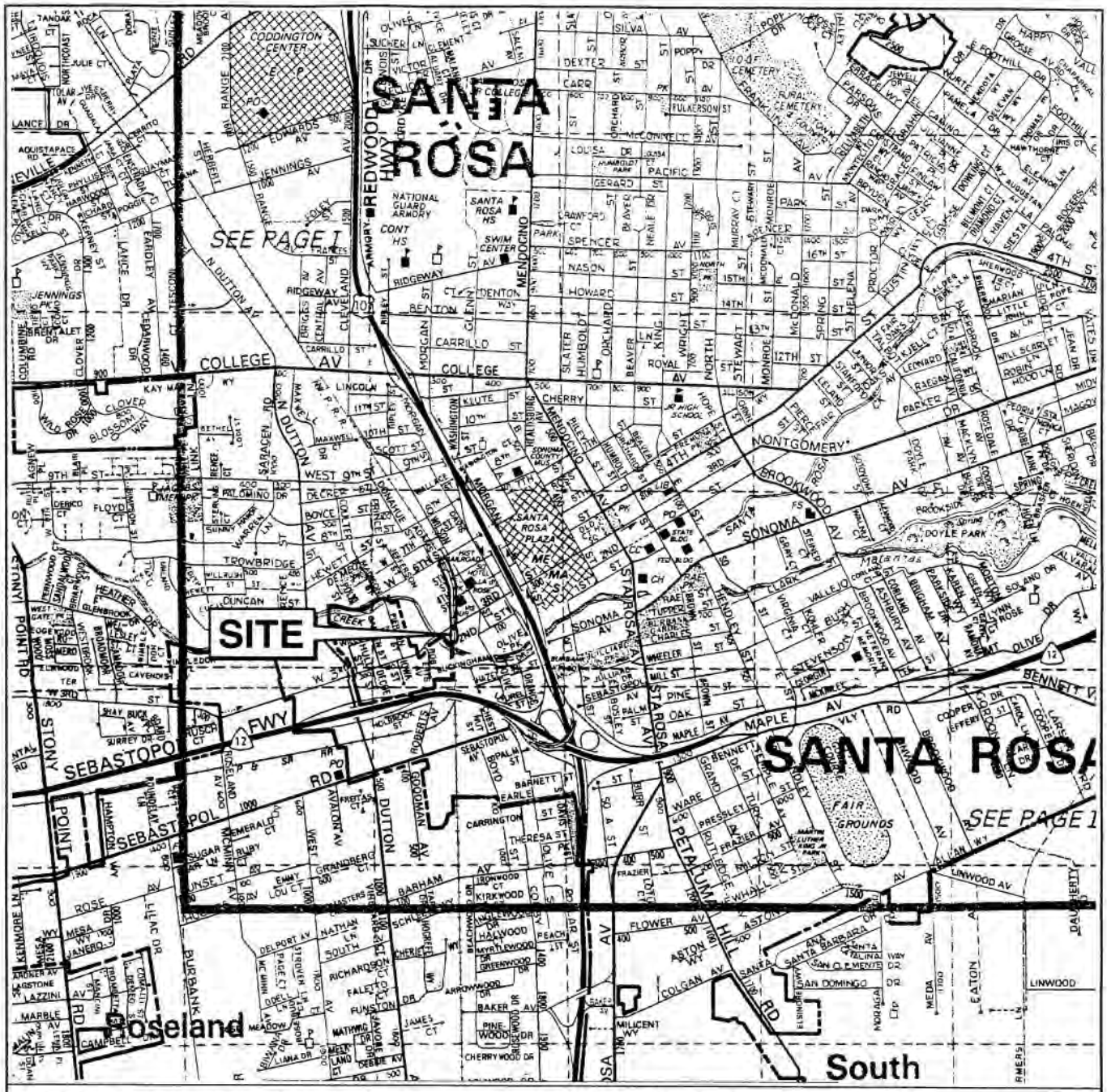
Concentrations in milligrams per kilogram (mg/kg)

Boring	Sample Depth	Date Sampled	Sample Number	Constituent[1]	Reportable Limit	Result
SSR30	1.0-1.5	8/24/00	SSR30-1.5	Lead	5	**140**[2]
	3.5-4.0	8/24/00	SSR30-4.0	Lead	5	**91**
	5.0-5.5	8/24/00	SSR30-5.5	Lead	5	7.2
	10.0-10.5	8/24/00	SSR30-10.5	Lead	5	7.8
	21.5-22.0	8/24/00	SSR30-22.0	Benzene	0.005	0.076
				Toluene	0.005	0.18
				Ethylbenzene	0.005	0.11
				Total Xylenes	0.005	0.17
				MTBE[3]	0.02	< 0.005[4,5]
SSR31	1.5-2.0	8/24/00	SSR31-2.0	Lead	5	11
	3.5-4.0	8/24/00	SSR31-4.0	Lead	5	5.2
	5.5-6.0	8/24/00	SSR31-6.0	Lead	5	5.6
	10.0-10.5	8/24/00	SSR31-10.5	Lead	5	6.8
	23.0-23.5	8/24/00	SSR31-23.5	Benzene	0.005	<0.005
				Toluene	0.005	<0.005
				Ethylbenzene	0.005	<0.005
				Total Xylenes	0.005	<0.005
				MTBE	0.02	<0.02
SSR32	1.5-2.0	8/24/00	SSR32-2.0	Lead	5	5.0
	5.0-5.5	8/24/00	SSR32-5.5	Lead	5	7.5
	7.0-7.5	8/24/00	SSR32-7.5	Lead	5	5.6
	10.5-11.0	8/24/00	SSR32-11.0	Lead	5	8.2
	21.0-21.5	8/24/00	SSR32-21.0	Benzene	0.005	<0.005
				Toluene	0.005	0.013
				Ethylbenzene	0.005	0.015
				Total Xylenes	0.005	0.028
				MTBE	0.02	<0.02
SSR33	1.5-2.0	8/24/00	SSR33-2.0	Lead	5	**80**
	4.0-4.5	8/24/00	SSR33-4.5	Lead	5	6.9
	7.0-7.5	8/24/00	SSR33-7.5	Lead	5	7.0
	10.8-11.3	8/24/00	SSR33-11.5	Lead	5	6.6
	17.0-17.5	8/24/00	SSR33-17.5	Benzene	0.005	0.013
				Toluene	0.005	0.049
				Ethylbenzene	0.005	0.054
				Total Xylenes	0.005	0.076
				MTBE	0.02	<0.02

Notes:

1. Analytical methods were as follows:
   Lead - United State Environmental Protection Agency (EPA) Method 6010;
   Benzene, toluene, ethylbenzene, total xylenes, and MTBE - EPA Method 8021.
2. Lead results in "bold" type are those that exceed the site-specific background concentration of 65 mg/kg.
3. MTBE = Methyl tert-butyl ether.
4. MTBE concentration confirmed by EPA Method 8260.
5. < = less than reported detection limit.

FIGURES



Base map from *The Thomas Guide, 1992 Sonoma/Marin Counties Street Guide and Directory*. Reproduced with permission granted by THOMAS BROS. MAPS®. This map is copyrighted by THOMAS BROS. MAPS®. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission. All rights reserved.

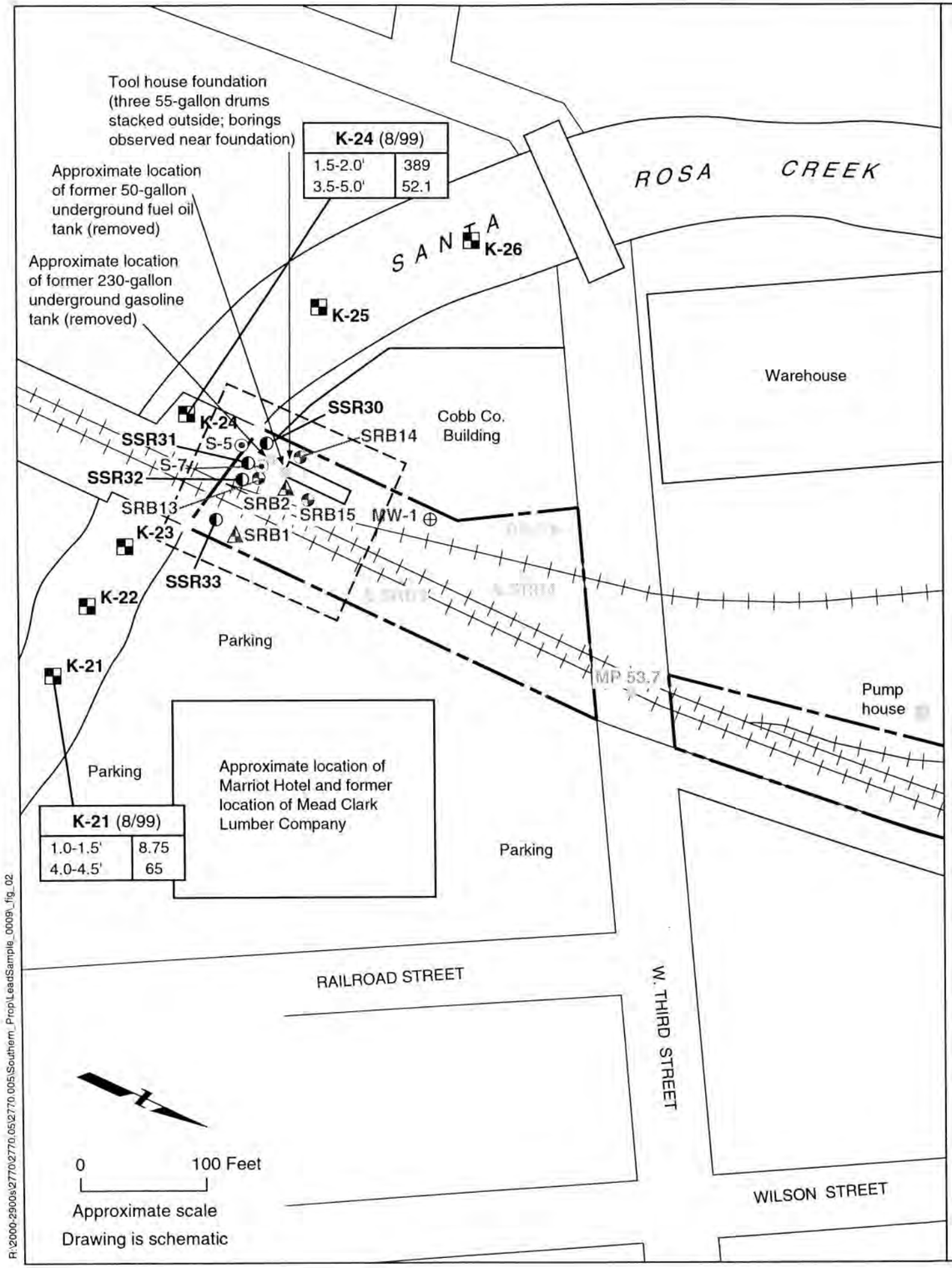
GEOMATRIX

SITE LOCATION MAP
Santa Rosa Station/Third Street Property
Southern Section
Santa Rosa, California

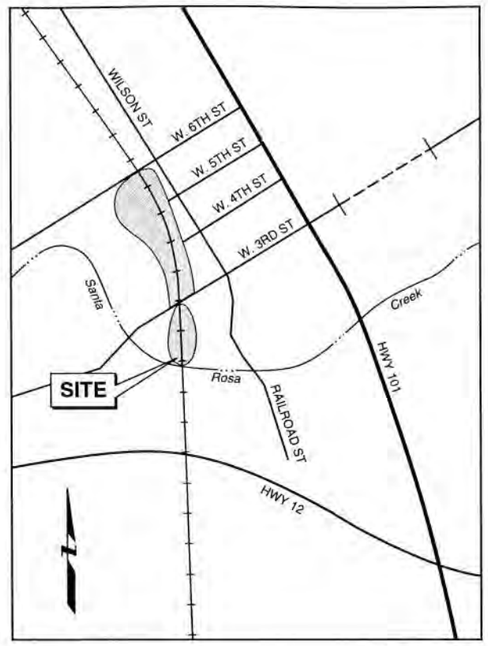
Figure
1

Project No.
2770.005

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LOCATION MAP

EXPLANATION

- Indicates historical feature for which no surface features were observed
- **SSR30** Soil sampling location
- MW-1 Monitoring well installed by NCRWQCB (April 1990)
- SRB13 Phase III boring location
- SRB3 Phase II boring location
- RB-5 Soil boring installed by NCRWQCB (April 1990)
- S-5 Soil boring installed by Industrial Compliance (May 1992)
- Approximate location of NWPRR right-of-way
- Property sale boundary
- **K-22** Approximate location of soil boring performed by Kleinfelder (August 1999)

SRB4 (2/28/95)	
2.0' & 5.5'	15
9.5' & 12.5'	<5

Boring location and date

Lead concentration in milligrams per kilogram

Sample depth in feet below ground surface; if more than one depth is shown, result is for composite analysis of samples.

Figure 3 detail

Note:
Figure adapted from Northwestern Pacific Railroad (NWPRR) Valuation Map No. V-2/S-8d.

SITE MAP
Santa Rosa Station/Third Street Property
Southern Section
Santa Rosa, California

GEOMATRIX	Project No. 2770.005	Figure 2

Previous Excavation (SRB 14)

Previous Excavation (SRB 13)

SSR30

SSR 30		
1.0 - 1.5	Pb	140
3.5 - 4.0	Pb	91
5.0 - 5.5	Pb	7.2
10.0 - 10.5	Pb	7.8
21.5 - 22.0	B	0.076
	T	0.18
	E	0.11
	X	0.17
	M	0.02

SSR31

SSR 31		
1.5 - 2.0	Pb	11
3.5 - 4.0	Pb	5.2
5.5 - 6.0	Pb	5.6
10.0 - 10.5	Pb	6.8
23.0 - 23.5	B	<0.005
	T	<0.005
	E	<0.005
	X	<0.005
	M	<0.02

SSR32

SSR 32		
1.5 - 2.0	Pb	5.0
5.0 - 5.5	Pb	7.5
7.0 - 7.5	Pb	5.6
10.5 - 11.0	Pb	8.2
21.0 - 21.5	B	<0.005
	T	0.013
	E	0.015
	X	0.028
	M	<0.02

SSR33

SSR 33		
1.5 - 2.0	Pb	80
4.0 - 4.5	Pb	6.9
7.0 - 7.5	Pb	7.0
10.8 - 11.3	Pb	6.6
17.0 - 17.5	B	0.013
	T	0.046
	E	0.066
	X	0.076
	M	<0.02

Santa Rosa Creek

EXPLANATION

SSR30 ⊕ Soil sampling location

Property boundary

Slope pointing down

Areas of previous soil excavation

SSR 32		
1.5 - 2.0	Pb	5
5.0 - 5.5	Pb	7.5
7.0 - 7.5	Pb	5.6
10.5 - 11.0	Pb	8.2
17.0 - 17.5	B	<0.003
	T	0.013
	E	0.015
	X	0.028
	M	<0.02

← Soil sample location

↑ Sample interval depth in feet below ground surface

B: Benzene
T: Toluene
E: Ethylbenzene
X: Total Xylenes
M: Methyl tertbutyl ether (MtBE)
Pb: Lead

N

0 10 Feet

SOIL SAMPLING RESULTS
Santa Rosa Station/Third Street Property
Southern Section
Santa Rosa, California

GEOMATRIX

Project No. 2770.005

Figure 3

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GEOMATRIX

APPENDIX A

County of Sonoma Department of Health Services Drilling Permit

WC - oh

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
1030 Center Drive, Suite A, Santa Rosa, CA 95403-2087
(707) 565-6565 www.sonoma-county.org

APPLICATION FOR MONITORING WELL PERMIT
for Regional Board Lead/Environmental Assessment

For Office Use Only
Amount paid 152 00
Receipt number 8248
Payment date 8/15/00 Rev. code 1383
Site ID# 23041
Permit# 2999-HMW

001343D
WELL PER 152.00
TTL/HT 152.00
CHECKS 152.00
CHANGE 0.00
8248 #2 9:24

Well type: [ ] Monitoring well [ ] Recovery extraction well [✓] Boring [ ] Injection well [ ] Destruct [ ] Environmental assessment
[ ] Soil gas survey [ ] Direct push [ ] Air sparging/venting [ ] Remediation well [ ] Other 08/15/00

Well depth _____ Boring depth ≈25' bgs

On-site well/boring 4 ID# SSR30-SSR33 # Off-site well/boring 0 ID# _____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address SANTA ROSA STATION ~~9~~ 9 4TH STREET, SANTA ROSA, CA APN# _____

Facility Name SANTA ROSA STATION

On-site Owner UNION PACIFIC RAILROAD COMPANY Phone _____

Street 49 STEVENSON, 15TH FLOOR City SAN FRANCISCO State CA Zip 94105

Responsible Party UNION PACIFIC RAILROAD COMPANY Phone _____

Street 49 STEVENSON, 15TH FLOOR City SAN FRANCISCO State CA Zip 94105

Consultant GEOMATRIX CONSULTANTS Phone _____

Street 2101 WEBSTER STREET, 12TH FLOOR City OAKLAND State CA Zip 94612

License #/Type A/HAZ 601450 EXP 8/2

Drilling Contractor PRECISION SAMPLING INC Phone _____

SONOMA COUNTY PUBLIC HEALTH.

SOUTH 50TH STREET City RICHMOND State CA Zip 94804

636387

al investigation _____ # Wells [✓] Subsequent investigation 4 # Wells Borings [ ] Destruct _____ # Wells

lon due to: [ ] Underground tank [ ] Surface impoundment [ ] Environmental assessment
[ ] Surface disposal practice—specify involved industry _____
[✓] Other CONTINUATION OF PREVIOUS INVESTIGATION WORK

8/15/00

001343D
ELL PER 152.00
TLHT 152.00
CHECKS 152.00
HANGE 0.00
8248 #2 9:24

N/A Chemical constituents Pb

il cuttings DRUM ONSITE PENDING ANALYSIS Disposal method for development water DRUM ONSITE PENDING ANALYSIS

IRECT PUSH Method of drill equip. rinsate containment DRUM ONSITE PENDING ANALYSIS

ndonment method N/A

s in relation to all sewer or septic lines.

well to be constructed within: 100 feet of a septic tank or leachfield? [ ] Yes [✓] No
50 feet of any sanitary sewer line? [ ] Yes [✓] No
25 feet of any private sanitary sewer line? [ ] Yes [✓] No

DEPARTMENT OF HEALTH SERVICES
AUG 15 2000
ENVIRONMENTAL HEALTH DIVISION

addition, all monitoring wells must include *identification system* affixed to interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

ell identification number and well type shall be *affixed* to the *exterior surface* security structure.

For Office Use Only
Address
Site ID#
Permit #

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by this Department within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit.*only* after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

C57 # 636387

Signature of Well Driller—*no proxies* (Cory Bean Precision) Date 8/9/00

Insurance Carrier JE H Marsh Canada Limited (Policy # WCI-0811-072339-010) Expiration Date 04/23/01

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH DIVISION

Permit approved by John L Anderson Date 8/21/00

Const. approved by _____ Observed? [ ] Yes [ ] No Well # _____ Date ___/___/___

RWQCB approval Joan Eric Lentz Date 7/17/00

m:\...well.frm.doc (Revised 01/00) Copies: White—File Yellow—Driller Pink—Consultant Gold—Owner/Resp. Party

GEOMATRIX

APPENDIX B

Boring Logs

PROJECT: SANTA ROSA STATION, SOUTHERN PROPERTY Santa Rosa, California	**Log of Boring No. SSR30**
BORING LOCATION: 5' N. of top of slope and 32' W. of utility pole	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Inc.	DATE STARTED: 8/24/00 | DATE FINISHED: 8/24/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 28.0 | MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER | FIRST: 13.8 | COMPL.: ND
SAMPLING METHOD: Enviro-core [3' x 1 5/8"]	LOGGED BY: T. Choi
HAMMER WEIGHT: NA | DROP: NA	RESPONSIBLE PROFESSIONAL: B. Thompson, R.G. | REG. NO. 7018

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0					CONCRETE	
0.5					AGGREGATE BASE	Modified California drive sampler [1.5' x 2.5"] advanced to 2.5' bgs.
1	SSR30 -1.5				SILT with SAND (ML): very dark gray (2.5Y 3/1), moist, 80% fines, 20% fine sand, medium plasticity, hard	
4	SSR30 -4.0					
5	SSR30 -5.5					OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
8	SSR30 -8.0					
10	SSR30 -10.5					
12	SSR30 -12.0					
14	SSR30 -14.0				Wet	
15				1.8		

PROJECT: SANTA ROSA STATION, SOUTHERN PROPERTY
Santa Rosa, California

Log of Boring No. SSR30 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SSR30 -16.5				SILT with SAND (ML): (Cont.)	
17						
18	SSR30 -18.5					
19						
20	SSR30 -20.0					
21				302		
22	SSR30 -22.0				SILTY SAND with GRAVEL (SM): dark gray brown (2.5Y 4/2), moist, 60% fine to coarse sand, 25% low-plasticity fines, 15% fine angular to subangular gravel	
23				3.6		
24	SSR30 -24.0					Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
25	SSR30 -25.5					
26						
27						
28					Bottom of boring at 28.0 feet	
29						
30						
31						
32						
33						

PROJECT: SANTA ROSA STATION, SOUTHERN PROPERTY Santa Rosa, California	Log of Boring No. SSR31	
BORING LOCATION: 5' N. and 13' W. of utility pole	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling, Inc.	DATE STARTED: 8/24/00	DATE FINISHED: 8/24/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 25.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER | FIRST 14.5	COMPL. ND
SAMPLING METHOD: Enviro-core [3' x 1 5/8"]	LOGGED BY: T. Choi	
HAMMER WEIGHT: NA | DROP: NA	RESPONSIBLE PROFESSIONAL: B. Thompson, R.G.	REG. NO. 7018

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0					CONCRETE	
1					AGGREGATE BASE	Modified California drive sampler [1.5' x 2.5"] advanced to 2.5' bgs.
2	SSR31 -2.0				SANDY SILT (ML): very dark brown (2.5Y 3/1), moist, 70% fines, 30% fine sand, medium plasticity, hard	
3						
4	SSR31 -4.0					OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
5						
6	SSR31 -6.0					
7						
8	SSR31 -8.0					
9						
10	SSR31 -10.5					
11					SILTY SAND with GRAVEL (SM)	
12						
13	SSR31 -13.5					Sampling refusal at 13 feet bgs. Companion boring advanced approximately one foot to the north. Sampling at companion boring begins at 10 feet bgs.
14					wet	
15						

PROJECT: SANTA ROSA STATION, SOUTHERN PROPERTY
Santa Rosa, California

Log of Boring No. SSR31 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SSR31 -15.25				SANDY SILT ML): (Cont.)	
16	SSR31 -16.5					
17				5.2		
18	SSR31 -17.5					
19						
20	SSR31 -20.0					
21						
22	SSR31 -22.0				SILTY SAND with GRAVEL (SM): dark gray brown (2.5Y 4/2), moist, 60% fine to coarse sand, 25% low-plasticity fines, 15% low angular to subangular gravel	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
23	SSR31 -23.5			641		
24						
25					Bottom of boring at 25.0 feet	
26						
27						
28						
29						
30						
31						
32						
33						

PROJECT: SANTA ROSA STATION, SOUTHERN PROPERTY Santa Rosa, California	**Log of Boring No. SSR32**	
BORING LOCATION: 5' N. and 2.5' W. of utility pole	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling, Inc.	DATE STARTED: 8/24/00	DATE FINISHED: 8/24/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 25.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER — FIRST: 14.25	COMPL.: ND
SAMPLING METHOD: Enviro-core [3' x 1 5/8"]	LOGGED BY: T. Choi	
HAMMER WEIGHT: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: B. Thompson, R.G.	REG. NO. 7018

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
					CONCRETE	
1					AGGREGATE BASE	Modified California drive sampler [1.5' x 2.5"] advanced to 2.5' bgs.
2	SSR32 -2.0				SILTY SAND with GRAVEL (SM): very dark gray (2.5Y 3/1), dry, 60% fine to coarse sand, 25% non plastic fines, 15% fine gravel	
3					SANDY SILT (ML): very dark gray (2.5Y 3/1), moist, 60% fines, 40% fine sand, medium plasticity, firm	
4					SILT with SAND (ML): very dark gray (2.5Y 3/1), moist, 80% fines, 20% fine sand, medium plasticity, hard	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
5	SSR32 -5.5					
6						
7	SSR32 -7.5					
8	SSR32 -8.5					
9						
10						
11	SSR32 -11.0					
12					SILTY SAND with GRAVEL (SM)	
13	SSR32 -13.0				SANDY SILT (ML): very dark gray (2.5Y 3/1), moist, 60% fines, 40% fine sand, medium plasticity, firm	
14					wet	
15						

PROJECT: SANTA ROSA STATION, SOUTHERN PROPERTY
Santa Rosa, California

Log of Boring No. SSR32 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SSR32 -15.0					
17	SSR32 -17.0				SILT with SAND (ML): very dark gray (2.5Y 3/1), moist, 90% fines, 10% fine sand, medium plasticity, firm	
18					SILTY SAND with GRAVEL (SM): dark gray brown (2.5Y 4/2), moist, 60% fine to coarse sand, 25% low-plasticity fines, 15% subangular gravel, firm	
19						
20						
21	SSR32 -21.0					
22				3.6		Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
23	SSR32 -23.0			7.2		
24						
25					Bottom of boring at 25.0 feet	
26						
27						
28						
29						
30						
31						
32						
33						

PROJECT: SANTA ROSA STATION, SOUTHERN PROPERTY Santa Rosa, California	Log of Boring No. SSR33	
BORING LOCATION: 18' N. of E. bridge walkway and 11' E. of eastern track	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling, Inc.	DATE STARTED: 8/24/00	DATE FINISHED: 8/24/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 28.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER — FIRST: 13.7 — COMPL.: ND	
SAMPLING METHOD: Enviro-core [3' x 1 5/8"]	LOGGED BY: T. Choi	
HAMMER WEIGHT: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: B. Thompson, R.G.	REG. NO. 7018

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
0					AGGREGATE BASE	
1						Modified California drive sampler [1.5' x 2.5"] advanced to 2.5' bgs.
2	SSR33 -2.0				SANDY SILT (ML): very dark gray (2.5Y 3/1), moist, 70% fines, 30% fine sand, medium plasticity, hard	
3						
4	SSR33 -4.5					OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
5						
6						
7	SSR33 -7.5					
8				1.8		
9	SSR33 -9.0					
10						
11	SSR33 -11.3					Due to poor recovery, soil sample SSR30-9.0 collected from companion boring located approximately 1.5 feet to the north.
12						
13	SSR33 -13.5					
14				0	SILTY SAND (SM): very dark gray brown (2.5Y 3/21), wet, 85% fine sand, 15% non plastic fines	
15						

PROJECT: SANTA ROSA STATION, SOUTHERN PROPERTY
Santa Rosa, California

Log of Boring No. SSR33 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SSR33 -15.5			212	SANDY SILT (ML): very dark gray (2.5Y 3/1), moist, 70% fines, 30% fine sand, medium plasticity, hard SANDY SILT (ML): (Cont.) SILTY SAND/SANDY SILT (SM/ML): dark greenish gray (GLEY2 4/1), moist, 60/40 fine to coarse sand, 40/60 low-plasticity fines	
17	SSR33 -17.5					
18						
19	SSR33 -19.5					
20					LEAN CLAY (CL): dark gray (5Y 4/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	
21	SSR33 -21.5					
22					SILTY SAND with GRAVEL (SM): dark gray brown (2.5Y 4/2), moist, 60% fine to coarse sand, 25% low-plasticity fines, 15% angular gravel	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
23	SSR33 -23.5					
24						
25	SSR33 -25.5					
26						Sampling refusal at 26.5 feet bgs.
27						
28					Bottom of boring at 28.0 feet	
29						
30						
31						
32						
33						

GEOMATRIX

APPENDIX C

Analytical Laboratory Reports and Chain-of-Custody Records

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

September 06, 2000

Tony Choi
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	22016	**Date Collected:**	8/24/00
Project Name:	Santa Rosa	**Date Received:**	8/29/00
Project Number:	2770.005	**P.O. Number:**	Invoice UPRR
Project Notes:			

On August 29, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Lead	EPA 6010B

Chemical analysis of these samples bas been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Tony Choi

Date: 9/6/00
Date Received: 8/29/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UPRR
Sampled By: Client

Certified Analytical Report

Order ID: 22016 Lab Sample ID: 22016-001 Client Sample ID: SSR32-2.0
Sample Time: 9:40 AM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	5.0	5	1	5	mg/Kg	8/31/00	9/1/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-002 Client Sample ID: SSR32-5.5
Sample Time: 8:25 AM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	7.5	5	1	5	mg/Kg	8/31/00	9/1/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-003 Client Sample ID: SSR32-7.5
Sample Time: 8:40 AM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	5.6	5	1	5	mg/Kg	8/31/00	9/1/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-004 Client Sample ID: SSR32-11.0
Sample Time: 8:50 AM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	8.2	5	1	5	mg/Kg	8/31/00	9/1/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-005 Client Sample ID: SSR31-2.0
Sample Time: 10:05 AM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	11	5	1	5	mg/Kg	8/31/00	9/1/00	SM000821	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Tony Choi

Date: 9/6/00
Date Received: 8/29/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UPRR
Sampled By: Client

Certified Analytical Report

Order ID: 22016 Lab Sample ID: 22016-006 Client Sample ID: SSR31-4.0
Sample Time: 10:07 AM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	5.2	5	1	5	mg/Kg	8/31/00	9/1/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-007 Client Sample ID: SSR31-6.0
Sample Time: 10:26 AM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	5.6	5	1	5	mg/Kg	8/31/00	9/1/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-008 Client Sample ID: SSR31-10.5
Sample Time: 11:10 AM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.8	5	1	5	mg/Kg	8/31/00	9/1/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-009 Client Sample ID: SSR30-1.5
Sample Time: 12:30 PM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	140	5	1	5	mg/Kg	8/31/00	9/5/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-010 Client Sample ID: SSR30-4.0
Sample Time: 12:35 PM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	91	5	1	5	mg/Kg	8/31/00	9/5/00	SM000821	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Tony Choi

Date: 9/6/00
Date Received: 8/29/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UPRR
Sampled By: Client

Certified Analytical Report

Order ID: 22016 Lab Sample ID: 22016-011 Client Sample ID: SSR30-5.5
Sample Time: 12:38 PM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	7.2	5	1	5	mg/Kg	8/31/00	9/5/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-012 Client Sample ID: SSR30-10.5
Sample Time: 12:43 PM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	7.8	5	1	5	mg/Kg	8/31/00	9/5/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-013 Client Sample ID: SSR33-2.0
Sample Time: 1:35 PM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	80	5	1	5	mg/Kg	8/31/00	9/5/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-014 Client Sample ID: SSR33-4.5
Sample Time: 1:51 PM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.9	5	1	5	mg/Kg	8/31/00	9/5/00	SM000821	EPA 6010B

Order ID: 22016 Lab Sample ID: 22016-015 Client Sample ID: SSR33-7.5
Sample Time: 1:56 PM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	7.0	5	1	5	mg/Kg	8/31/00	9/5/00	SM000821	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94085 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Tony Choi

Date: 9/6/00
Date Received: 8/29/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UPRR
Sampled By: Client

Certified Analytical Report

Order ID: 22016 Lab Sample ID: 22016-016 Client Sample ID: SSR33-11.5

Sample Time: 2:03 PM Sample Date: 8/24/00 Matrix: Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Lead	6.6	5	1	5	mg/Kg	8/31/00	9/5/00	SM000821	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Matrix Spike and Matrix Spike Duplicate
METHOD: EPA 6010

QC Batch #: SM000821
Matrix: Solid
Units: mg/kg

Date Analyzed: 09/01/00
Date Digested: 08/31/00
Digestion Method: EPA 3050
Spiked Sample: 22029-020

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	40.	80	36.	72	11.2	25.0	64- 102
Arsenic	6010	<1.0	50.	0.0	45.	91	49.	99	8.8	25.0	64- 115
Barium	6010	<1.0	50.	7.7	55.	94	55.	95	0.3	25.0	75- 113
Beryllium	6010	<1.0	50.	0.0	48.	96	48.	95	0.4	25.0	71- 110
Cadmium	6010	<1.0	50.	0.0	45.	90	45.	89	1.3	25.0	70- 100
Chromium	6010	<1.0	50.	14.4	63.	97	64.	99	1.9	25.0	68- 112
Cobalt	6010	<1.0	50.	0.0	53.	105	52.	104	1.0	25.0	59- 114
Copper	6010	<1.0	50.	0.0	49.	98	49.	97	0.6	25.0	75- 109
Lead	6010	<1.0	50.	5.6	50.	88	50.	89	0.5	25.0	64- 115
Molybdenum	6010	<1.0	50.	0.0	46.	93	47.	93	0.8	25.0	69- 113
Nickel	6010	<1.0	50.	17.8	67.	99	68.	101	1.4	25.0	60- 112
Selenium	6010	<1.0	50.	0.0	49.	97	45.	90	7.2	25.0	67- 103
Silver	6010	<1.0	50.	0.0	23.	46	31.	63	30.4	25.0	65- 111
Thallium	6010	<1.0	50.	0.0	62.	124	58.	117	5.7	25.0	70- 109
Vanadium	6010	<1.0	50.	8.8	55.	93	55.	92	1.0	25.0	69- 114
Zinc	6010	<1.0	50.	10.4	57.	94	57.	92	1.4	25.0	69- 119

Calculated Recoveries Outside of Control Limits:
Silver
Thallium

Not Analyzed in QC batch
nc: Not Calculated
MB: Method Blank
SA: Spike Added
SR: Sample Result
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes
METHOD: EPA 6010

QC Batch #: SM000821
Matrix: Solid
Units: mg/kg

Date Analyzed: 09/01/00
Date Digested: 08/31/00
Digestion Method: EPA 3050
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	46.	92	45.	90	2.2	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	43.	85	44.	87	2.0	25.0	75-125
Barium	6010	<1.0	50.	0.0	46.	93	46.	93	0.2	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	46.	91	46.	91	0.5	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	42.	83	42.	84	1.0	25.0	75-125
Chromium	6010	<1.0	50.	0.0	47.	93	47.	94	1.0	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	47.	93	47.	94	1.0	25.0	75-125
Copper	6010	<1.0	50.	0.0	46.	91	46.	92	0.3	25.0	75-125
Lead	6010	<1.0	50.	0.0	45.	89	45.	91	1.8	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	46.	93	47.	93	0.5	25.0	75-125
Nickel	6010	<1.0	50.	0.0	47.	94	48.	96	1.2	25.0	75-125
Selenium	6010	<1.0	50.	0.0	42.	83	45.	89	6.8	25.0	75-125
Silver	6010	<1.0	50.	0.0	43.	85	51.	102	18.4	25.0	75-125
Thallium	6010	<1.0	50.	0.0	47.	93	47.	95	1.6	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	45.	91	46.	91	0.6	25.0	75-125
Zinc	6010	<1.0	50.	0.0	43.	86	43.	87	1.0	25.0	75-125

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Chain-of-Custody Record

003881

Date: 8/24/00

Page 1 of 4

Project No.: 2770.005

Samplers (Signature:)

ANALYSES

REMARKS

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	HOLD	LEAD (METHOD 6010)	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
																				SOIL SAMPLES
																				BILL DIRECTLY TO UNION PACIFIC RAILROAD CO.
8/24/00	0940	SSR32-2.0												X	S	—	—	Y	1	2"x6" STAINLESS STEEL LINER
	0825	SSR32-5.5												X	S	—	—	Y	1	1.5"x6" ACETATE LINER
	0840	SSR32-7.5												X	S	—	—	Y	1	
	0844	SSR32-8.5											X		S	—	—	Y	1	
	0850	SSR32-11.0												X	S	—	—	Y	1	
	0900	SSR32-13.0											X		S	—	—	Y	1	
	0905	SSR32-15.0											X		S	—	—	Y	1	
	0910	SSR32-17.0											X		S	—	—	Y	1	
	0915	SSR32-19.0											X		S	—	—	Y	1	
	0920	SSR32-21.0											X		S	—	—	Y	1	00 AUG 29 12:20
	0925	SSR32-23.0											X		S	—	—	Y	1	
	1005	SSR31-2.0												X	S	—	—	Y	1	2"x6" STAINLESS STEEL LINER
	1007	SSR31-4.0												X	S	—	—	Y	1	1.5"x6" ACETATE LINER
	1026	SSR31-6.0												X	S	—	—	Y	1	
	1030	SSR31-8.0											X		S	—	—	Y	1	

Laboratory: ENTECH

Turnaround Time: STANDARD

Results to: TONY CHOI

Total No. of Containers: 15/48

Relinquished by (Signature):	Date: 8/25/00	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Printed Name: TONY CHOI	Time: 1830	Printed Name:	Time:	Printed Name:	Time:
Company: GEOMATRIX		Company:		Company:	
Received by: Amy Dombaski	Date: 8/29	Received by:	Date:	Received by:	Date:
Printed Name: Amy Dombaski	Time: 1220	Printed Name:	Time:	Printed Name:	Time:
Company: Entech		Company:		Company:	

Method of Shipment: COURIER PICK-UP

Laboratory Comments and Log.No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Chain-of-Custody Record

003882

Date: 8/24/00

Project No.: 2770.005

Samplers (Signature:)

ANALYSES

REMARKS

Date	Time	Sample Number	EPA Method 6021 (Full Scan)	EPA Method 6021 (Hal. VOCs only)	EPA Method 6021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	HOLD	LEAD (METHOD 6010)	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
8/24/00	1110	SSR31-10.5												X	S	—	—	Y	1	SOIL SAMPLES
"	1115	SSR31-13.5											X		S	—	—	Y	1	BILL DIRECTLY TO UNION
"	1120	SSR31-15.25											X		S	—	—	Y	1	PACIFIC RAILROAD CO.
"	1125	SSR31-16.5											X		S	—	—	Y	1	
"	1130	SSR31-17.5											X		S	—	—	Y	1	
"	1135	SSR31-20.0											X		S	—	—	Y	1	
"	1140	SSR31-22.0											X		S	—	—	Y	1	
"	1145	SSR31-23.5											X		S	—	—	Y	1	
"	1230	SSR30-1.5												X	S	—	—	Y	1	2"x6" STAINLESS STEEL LINER
"	1235	SSR30-4.0												X	S	—	—	Y	1	1.5"x6" ACETATE LINER
	1238	SSR30-5.5												X	S	—	—	Y	1	
"	1241	SSR30-8.0											X		S	—	—	Y	1	
"	1243	SSR30-10.5												X	S	—	—	Y	1	
"	1245	SSR30-12											X		S	—	—	Y	1	
"	1250	SSR30-14											X		S	—	—	Y	1	

00 AUG 29 12:20

Laboratory: ENTECH

Turnaround Time: STANDARD

Results to: TONY CHOI

Total No. of Containers: 30/48

Relinquished by (Signature):	Date: 8/25/00	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment: COURIER PICK-UP
Printed Name: TONY (HOI)	Time: 1800	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: GEOMATRIX		Company:		Company:		
Received by: Amy Dombroski	Date: 8/29	Received by:	Date:	Received by:	Date:	
Printed Name: Amy Dombroski	Time:	Printed Name:	Time:	Printed Name:	Time:	
Company: Entech		Company:		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

CHAIN-OF-CUSTODY RECORD

№ 13490 | Date: 8/24/00 | Page 3 of 4

Project No.: 2770.005

Samplers (Signatures):

12346

Date	Time	Sample Number	EPA Method 8010	EPA Method 8020	EPA Method 8020 (BTEX only)	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	HOLD	LEAD (EPA 6010)	Cooled	Soil (S), Water (W), or Vapor (V)	Acidified	Number of containers
CB5	8/24/00	1257	SSR30-16.5							X		Y	S	—	1
CB6	"	1300	SSR30-18.5							X		Y	S	—	1
CB7	"	1302	SSR30-20.0							X		Y	S	—	1
CB8	"	1304	SSR30-22.0							X		Y	S	—	1
CB9	"	1308	SSR30-24.0							X		Y	S	—	1
CB10	"	1315	SSR30-25.5							X		Y	S	—	1
CB13	"	1335	SSR33-2.0								X	Y	S	—	1
CB14	"	1351	SSR33-4.5								X	Y	S	—	1
CB15	"	1356	SSR33-7.5						TPH		X	Y	S	—	1
CB16	"	1403	SSR33-11.5								X	Y	S	—	1
CB11	"	1408	SSR33-13.5							X		Y	S	—	1
CB12	"	1410	SSR33-15.5							X		Y	S	—	1

ENTECH

Turnaround time: STANDARD

Results to: TONY CHOI

Total No. of containers: 12/48

REMARKS

Additional Comments

SOIL SAMPLES

BILL DIRECTLY TO UNION PACIFIC C/O JOHN NOE RAILROAD CO.

6"x1.5" ACETATE LINER

6"x2" STAINLESS STEEL LINER

6"x1.5" ACETATE LINER

00 AUG 29 12:20

Relinquished by (signature)	Date	Relinquished by (signature)	Date	Relinquished by (signature)	Date
Printed Name: TONY CHOI	Time: 18:00	Printed Name:	Time:	Printed Name:	Time:
Company: GEOMATRIX		Company:		Company:	
Received by (signature): Amy Dimbaski	Date: 8/25/00	Received by (signature):	Date:	Received by (signature):	Date:
Printed Name: Amy Dimbaski	Time: 1220	Printed Name:	Time:	Printed Name:	Time:
Company: Entech		Company:		Company:	

Method of Shipment: COURIER PICKUP

Laboratory Comments and Log No.:

GEOMATRIX
Geomatrix Consultants
2101 Webster Street
12th Floor
Oakland, CA 94612
510 663 4100

CHAIN-OF-CUSTODY RECORD

Nº 13491

Date: 8/24/00

Page 4 of 4

Project No.: 2770.005

Samplers (Signatures):

220116

Date	Time	Sample Number
-043 8/24/00	14:13	SSR33-17.5
-044	14:18	SSR33-19.5
-045	14:22	SSR33-21.5
-046	14:29	SSR33-23.5
-047	14:41	SSR33-25.5
-048	15:00	SSR33-9.0
	~~16:00~~	~~WG 3 TC~~

ANALYSES

EPA Method 8010	EPA Method 8020	EPA Method 8020 (BTEX only)	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	Metals	LEAD (EPA 6010)	Cooled	Soil (S), Water (W), or Vapor (V)	Acidified	Number of containers
							X		Y	S	—	1
							X		Y	S	—	1
							X		Y	S	—	1
							X		Y	S	—	1
							X		Y	S	—	1
							X		Y	S	—	1

REMARKS

Additional Comments

SOIL SAMPLES

BILL DIRECTLY TO SOUTHERN PACIFIC RAILROAD CO. A/O JOHN MOE

ACETATE LINER 6"x2"

00 AUG 29 12:20

ENTECH

Turnaround time: STANDARD

Results to: TONY CHOI

Total No. of containers: 48/48

Relinquished by (signature)	Date	Relinquished by (signature)	Date	Relinquished by (signature)	Date
	8/25/5				
Printed Name: TONY CHOI	Time: 1800	Printed Name:	Time:	Printed Name:	Time:
Company: GEOMATRIX		Company:		Company:	
Received by (signature): Amy Dombroski	Date: 8/29/00	Received by (signature):	Date:	Received by (signature):	Date:
Printed Name: Amy Dombroski	Time: 1220	Printed Name:	Time:	Printed Name:	Time:
Company: Entech		Company:		Company:	

Method of Shipment: COURIER PICK-UP

Laboratory Comments and Log No.:

GEOMATRIX
Geomatrix Consultants
2101 Webster Street
12th Floor
Oakland, CA 94612
510 663 4100

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

September 18, 2000

Tony Choi, Project Manager
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, CA 94612

Dear Mr. Choi:

Included are the results from the testing of material submitted on September 1, 2000 from your 2770.005 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Jensen

Charlene Jensen
Chemist

Enclosures
GMC0918R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on September 1, 2000 by Friedman & Bruya, Inc. from the Geomatrix Consultants, Inc. 2770.005 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Geomatrix Consultants, Inc.
009004-01	SSR32-17.0
009004-02	SSR32-21.0
009004-03	SSR31-16.5
009004-04	SSR31-23.5
009004-06	SSR30-16.5
009004-07	SSR30-22.0
009004-08	SSR30-25.5
009004-09	SSR33-17.5
009004-10	SSR33-21.5
009004-11	SSR33-25.5

All quality control requirements were within acceptable limits.

Date of Report: 09/18/00
Date Received: 09/01/00
Project: 2770.005
Date Extracted: 09/08/00
Date Analyzed: 09/08/00

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLE FOR FORENSIC EVALUATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID)

Sample ID	GC Characterization
SSR32-21.0	The GC trace using the flame ionization detector (FID) showed an absence of material above the detection limit of the analysis. The detection limit for gasoline, diesel fuel, and motor oil are approximately 25, 50, and 100 ppm, respectively. The large peaks seen between 18 and 26 minutes on the GC/FID trace are surrogates added as a quality assurance check for this GC analysis.
SSR31-23.5	The GC trace using the flame ionization detector (FID) showed an absence of material above the detection limit of the analysis. The detection limit for gasoline, diesel fuel, and motor oil are approximately 25, 50, and 100 ppm, respectively. The large peaks seen between 18 and 26 minutes on the GC/FID trace are surrogates added as a quality assurance check for this GC analysis.
SSR30-22.0	The GC trace using the flame ionization detector (FID) showed an absence of material above the detection limit of the analysis. The detection limit for gasoline, diesel fuel, and motor oil are approximately 25, 50, and 100 ppm, respectively. The large peaks seen between 18 and 26 minutes on the GC/FID trace are surrogates added as a quality assurance check for this GC analysis.

Date of Report: 09/18/00
Date Received: 09/01/00
Project: 2770.005
Date Extracted: 09/08/00
Date Analyzed: 09/08/00

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLE FOR FORENSIC EVALUATION BY CAPILLARY GAS CHROMATOGRAPHY USING A FLAME IONIZATION DETECTOR (FID)

Sample ID	GC Characterization
SSR33-17.5	The GC trace using the flame ionization detector (FID) showed an absence of material above the detection limit of the analysis. The detection limit for gasoline, diesel fuel, and motor oil are approximately 25, 50, and 100 ppm, respectively. The large peaks seen between 18 and 26 minutes on the GC/FID trace are surrogates added as a quality assurance check for this GC analysis.

Date of Report: 09/18/00
Date Received: 09/01/00
Project: 2770.005
Date Extracted: 09/06/00
Date Analyzed: 09/06/00

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR MTBE, BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES USING EPA METHOD 8021B

Results Reported as µg/g (ppm)

Sample ID Laboratory ID	MTBE	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Surrogate (% Recovery)
SSR32-21.0 009004-02	<0.02	<0.005	0.013	0.015	0.028	91
SSR31-23.5 009004-04	<0.02	<0.005	<0.005	<0.005	<0.005	94
SSR30-22.0 009004-07	0.02	0.076	0.18	0.11	0.17	127
SSR33-17.5 009004-09	<0.02	0.013	0.049	0.054	0.076	117
Method Blank	<0.02	<0.005	<0.005	<0.005	<0.005	102

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260B

Client Sample ID:	SSR30-22.0	Client:	Geomatrix Consultants, Inc.
Date Received:	09/01/00	Project:	2770.005
Date Extracted:	09/07/00	Lab ID:	009004-07
Date Analyzed:	09/07/00	Data File:	090706.D
Matrix:	Soil	Instrument:	5972 -Ins
Units:	ug/g (ppm)	Operator:	YA

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Dibromofluoromethane	104	50	150
1,2-Dichloroethane-d4	71	50	150
Toluene-d8	227 ip	50	150
4-Bromofluorobenzene	87	50	150

Compounds:	Concentration ug/g (ppm)
Methyl t-butyl ether (MTBE)	<0.005

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

Date of Report: 09/18/00
Date Received: 09/01/00
Project: 2770.005

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES USING EPA METHOD 8021B

Laboratory Code: 009004-09 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD	Acceptance Criteria
Benzene	µg/g (ppm)	0.013	0.013	0	0-20
Toluene	µg/g (ppm)	0.049	0.046	6	0-20
Ethylbenzene	µg/g (ppm)	0.054	0.066	20	0-20
Xylenes	µg/g (ppm)	0.076	0.076	0	0-20
MTBE	µg/g (ppm)	<0.02	<0.02	nm	0-20

Laboratory Code: 009004-09 (Matrix Spike)

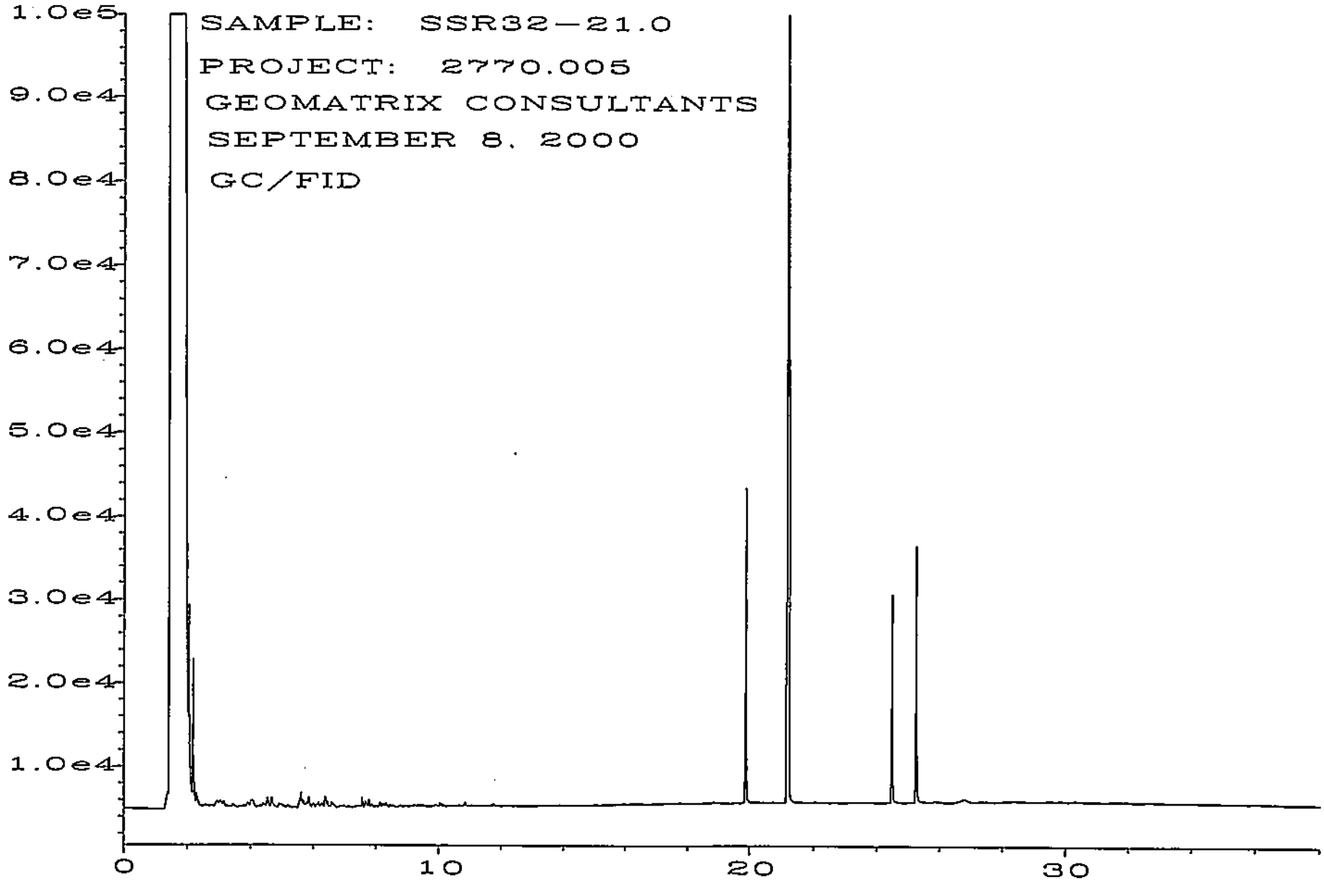
Analyte	Reporting Units	Spike Level	Sample Result	% Recovery MS	% Recovery MSD	Acceptance Criteria	RPD
Benzene	µg/g (ppm)	0.05	0.013	124	122	50-150	2
Toluene	µg/g (ppm)	0.05	0.049	137 ai	156 ai	50-150	13
Ethylbenzene	µg/g (ppm)	0.05	0.054	199 ai	137 ai	50-150	37 ai
Xylenes	µg/g (ppm)	0.15	0.076	173 ai	161 ai	50-150	7
MTBE	µg/g (ppm)	0.05	<0.02	96	97	50-150	1

Laboratory Code: Laboratory Control Sample

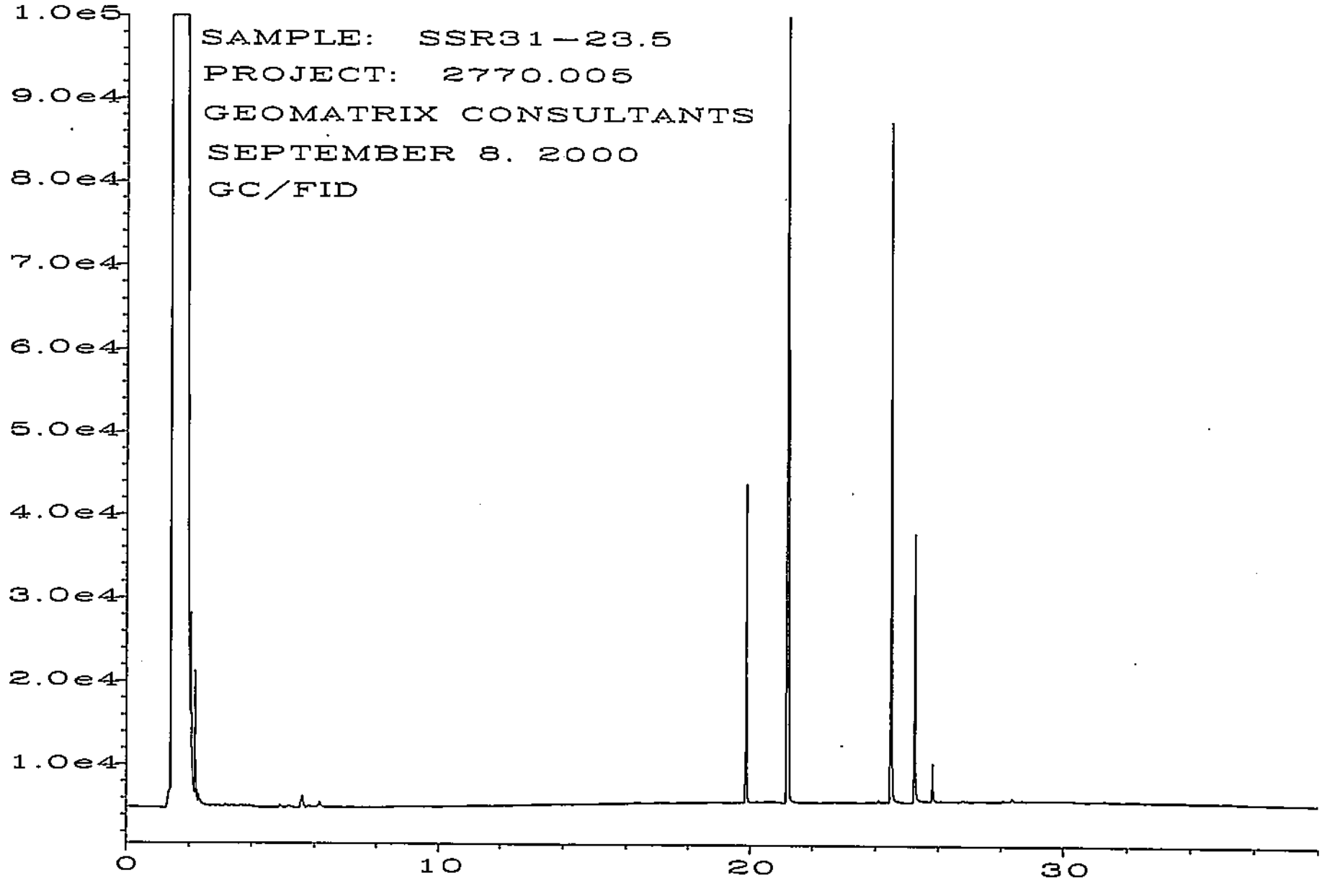
Analyte	Reporting Units	Spike Level	% Recovery LCS	Acceptance Criteria
Benzene	µg/g (ppm)	0.05	93	50-150
Toluene	µg/g (ppm)	0.05	93	50-150
Ethylbenzene	µg/g (ppm)	0.05	95	50-150
Xylenes	µg/g (ppm)	0.15	94	50-150
MTBE	µg/g (ppm)	0.05	94	50-150

ai- The amount spiked was insufficient to give meaningful recovery data.

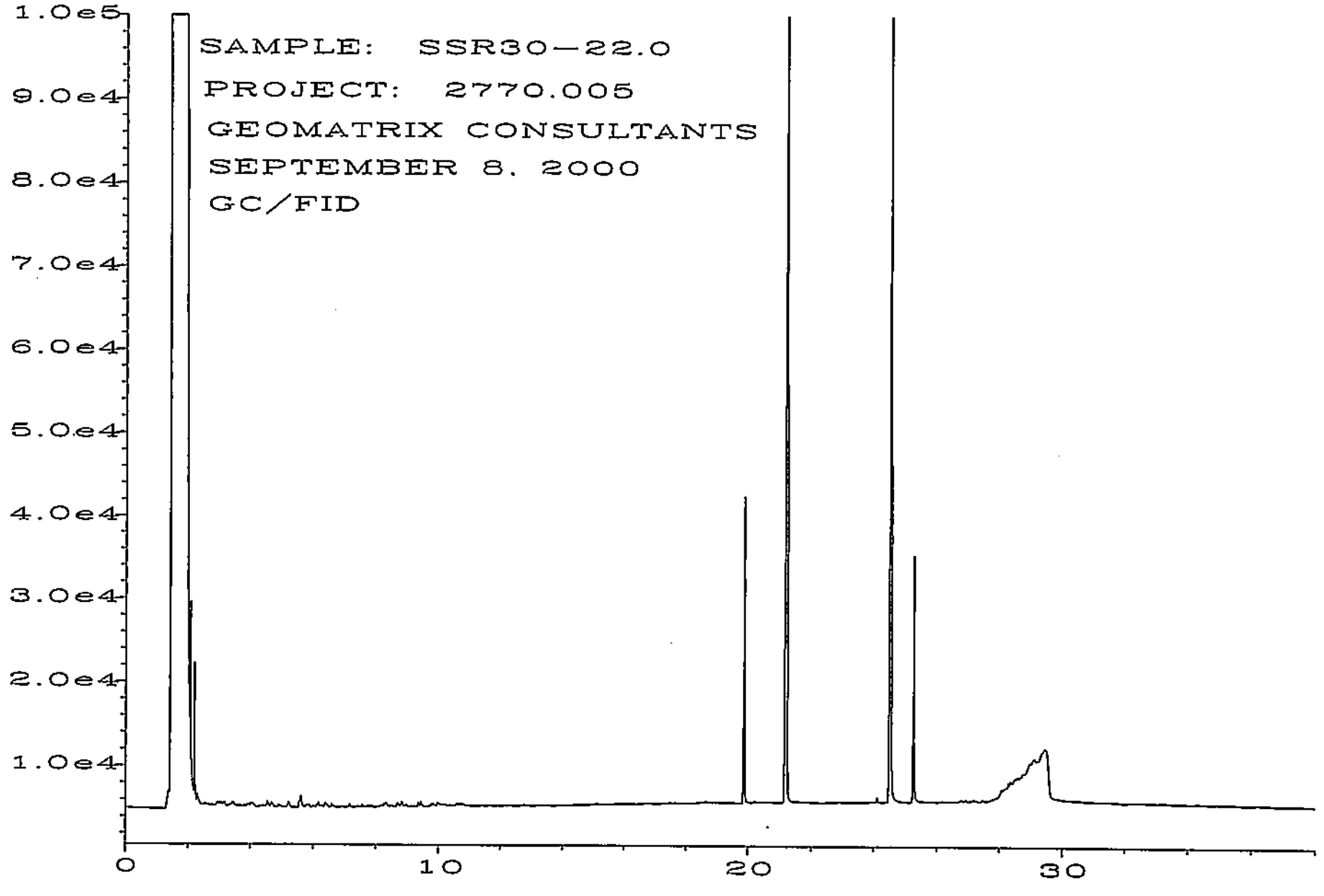
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.



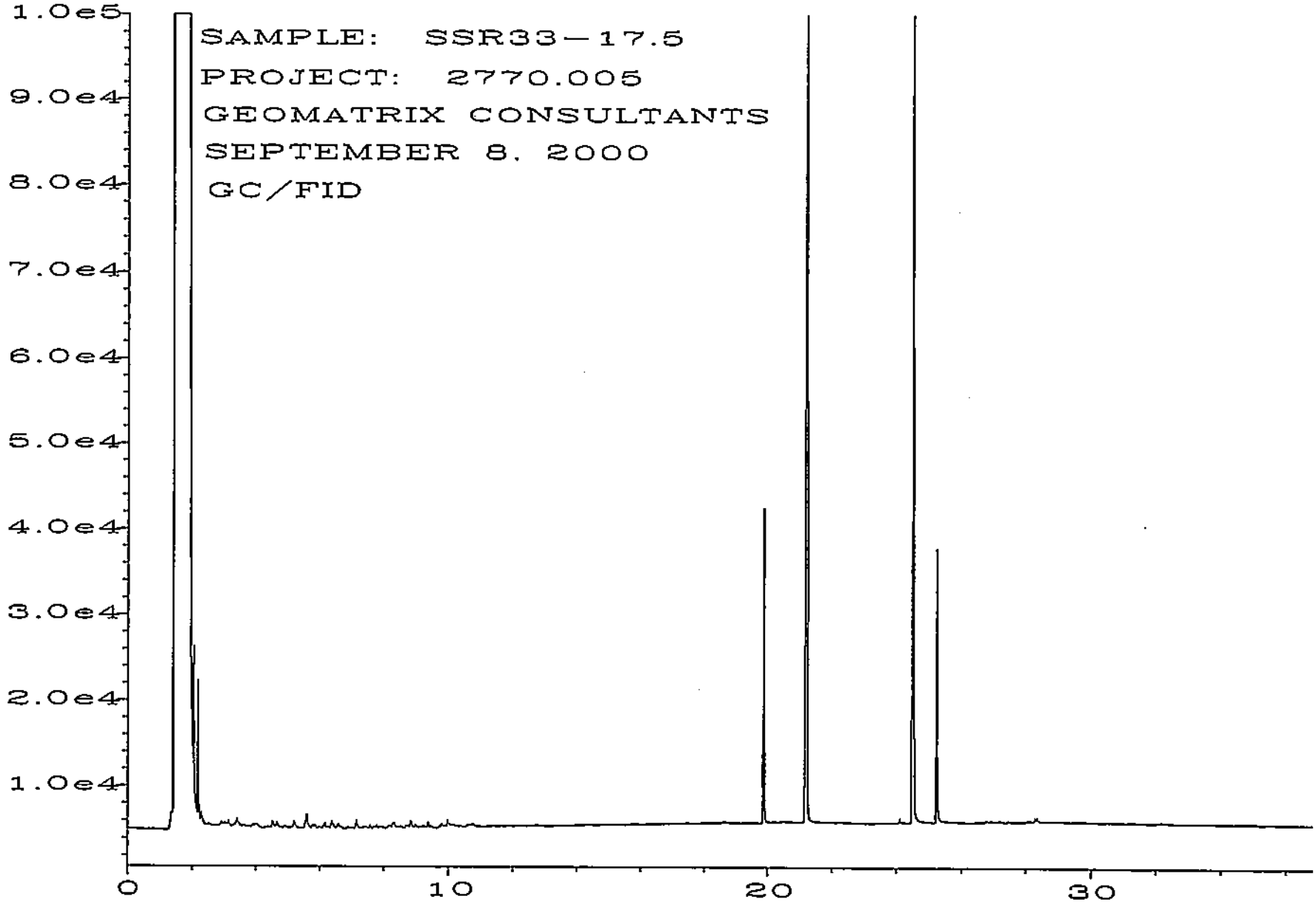
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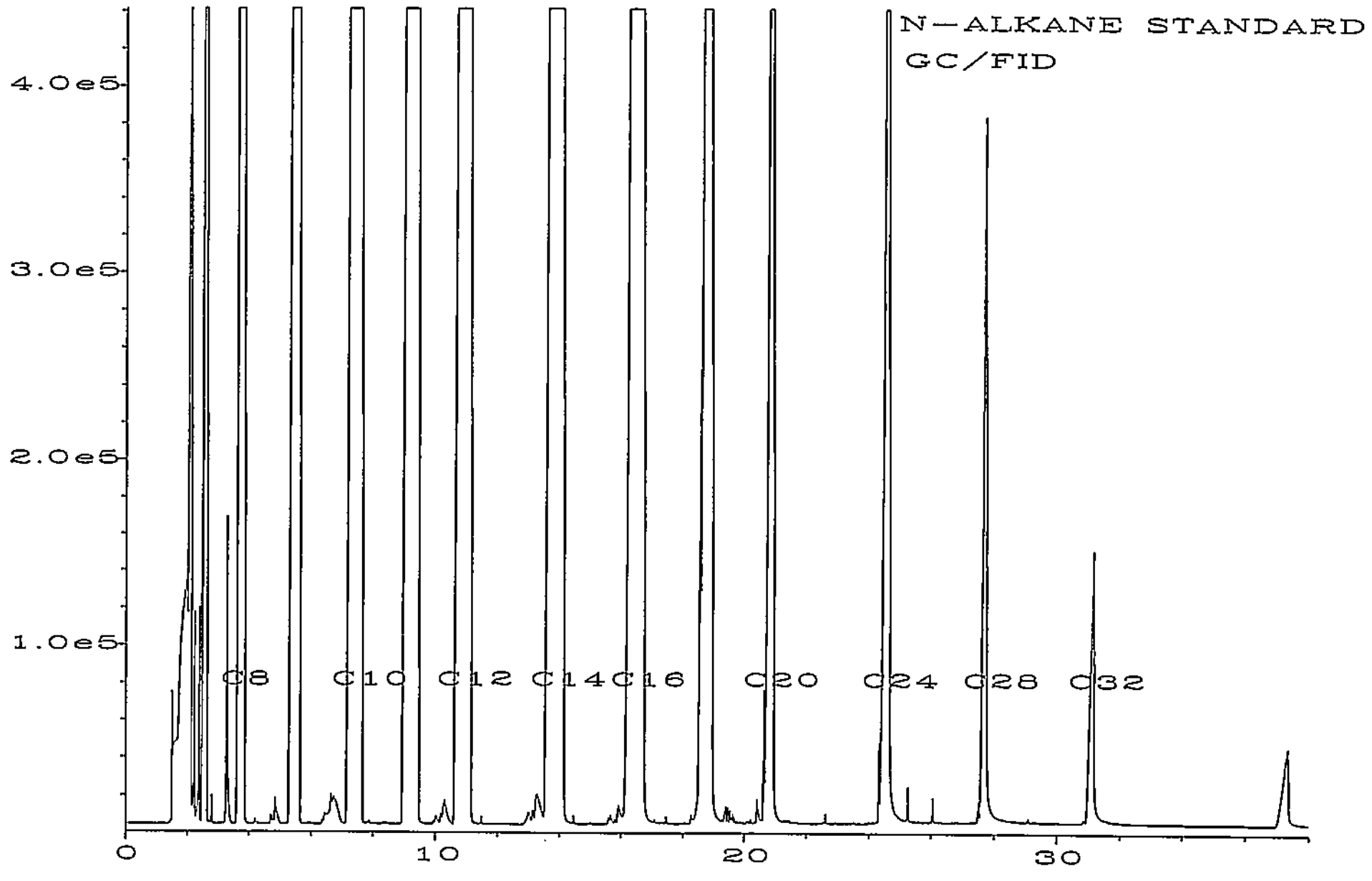
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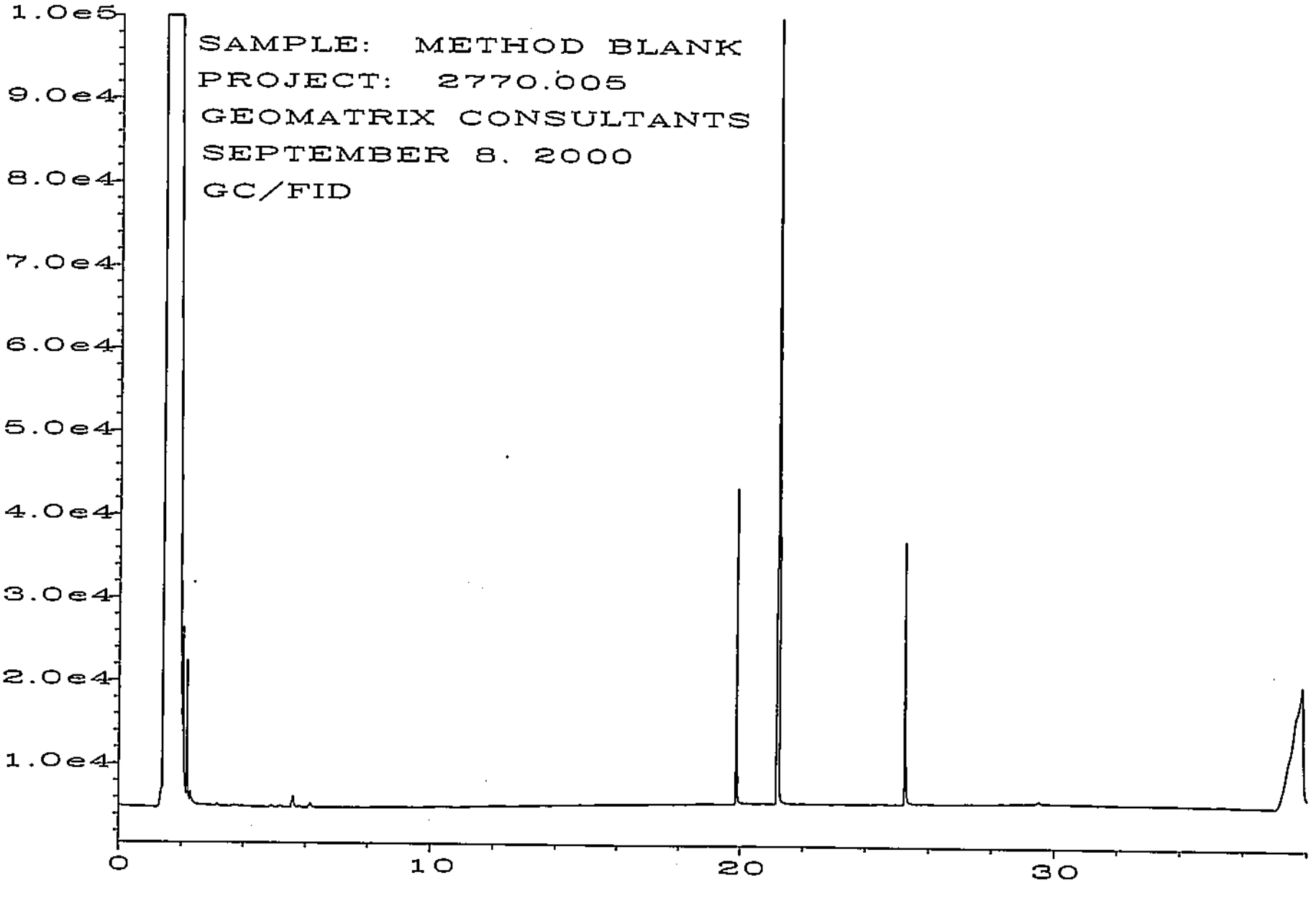
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Sig. 1 in E:\GC6\09-08-00\006F0501.D

Chain-of-Custody Record

003681

Project No.: 2770.005

Samplers (Signature:)

Date: 8/24/00

Page 1 of 4

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHs only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	HOLD	LEAD (METHOD 6010)
8/24/00	0940	SSR32-2.0												X
	0825	SSR32-5.5												X
	0840	SSR32-7.5												X
	0844	SSR32-8.5											X	
	0850	SSR32-11.0												X
	0900	SSR32-13.0											X	
	0905	SSR32-15.0											X	
	0910	SSR32-17.0											X	
	0915	SSR32-19.0											X	
	0920	SSR32-21.0											X	
	0925	SSR32-23.0											X	
	1005	SSR31-2.0												X
	1007	SSR31-4.0												X
	1026	SSR31-6.0												X
	1030	SSR31-8.0											X	

REMARKS

Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
S	—	—	Y	1
				15/48

Additional Comments

SOIL SAMPLES

BILL DIRECTLY TO UNION PACIFIC RAILROAD Co. FBC Sample #

2" x 6" STAINLESS STEEL LINER

1.5" x 6" ACETATE LINER

00 AUG 29

2" x 6" STAINLESS STEEL LINER

1.5" x 6" ACETATE LINER

Laboratory: ENTECH

Turnaround Time: STANDARD

Results to: TONY CHOI

Total No. of Containers: 15/48

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Printed Name: TONY CHOI	8/25/00	1800	Printed Name: ERIC YOUNG	9/1/00	0140
Company: GEOMATRIX			Company: FBC		
Received by: Amy Dambowski	Date: 8/29		Relinquished by (Signature):	Date:	
Printed Name: Amy Dambowski	Time: 1020		Printed Name:	Time:	
Company: Entech			Company:		

Method of Shipment: COURIER PICK-UP

Laboratory Comments and Log No.:

Geometrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

9/1/00 AO

Chain-of-Custody Record

003882

Date: 8/24/00 Page 2 of 4

Project No.: 2770.005

Samplers (Signature:)

ANALYSES

REMARKS

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	HOLD	LEAD (Method 6010)	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
8/24/00	1110	SSR31-10.5												X	S	—	—	Y	1	SOIL SAMPLES
"	1115	SSR31-12.5											X		S	—	—	Y	1	BILL DIRECTLY TO UNION
"	1120	SSR31-15.25											X		S	—	—	Y	1	PACIFIC RAILROAD CO.
"	1125	SSR31-16.5											X		S	—	—	Y	1	
"	1130	SSR31-17.5											X		S	—	—	Y	1	1.5"x6" ACETATE LINER
"	1135	SSR31-20.0											X		S	—	—	Y	1	
"	1140	SSR31-22.0											X		S	—	—	Y	1	
"	1145	SSR31-23.5											X		S	—	—	Y	1	
"	1230	SSR30-1.5												X	S	—	—	Y	1	2"x6" STAINLESS STEEL LINER
"	1235	SSR30-4.0												X	S	—	—	Y	1	1.5"x6" ACETATE LINER
	1238	SSR30-5.5												X	S	—	—	Y	1	
"	1241	SSR30-8.0											X		S	—	—	Y	1	
"	1243	SSR30-10.5												X	S	—	—	Y	1	
"	1245	SSR30-12											X		S	—	—	Y	1	
"	1250	SSR30-14											X		S	—	—	Y	1	

Laboratory: ENTECH

Turnaround Time: STANDARD

Results to: TONY CHOI

Total No. of Containers: 30/48

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Printed Name: TONY CHOI	8/25/00 Time:	Printed Name:	Time:	Printed Name:	Time:
Company: GEOMATRIX	1800	Company:		Company:	
Received by:	Date:	Received by:	Date:	Received by:	Date:
Printed Name: Amy Dambaski	8/29 Time:	Printed Name: ERIC YOUNG	9/1/00 Time:	Printed Name:	Time:
Company: Entech		Company: EC	10:40	Company:	

Method of Shipment: COURIER PICK-UP

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

00 AUG 29 2:20

CHAIN-OF-CUSTODY RECORD

№ 13490 | Date 8/24/00 | Page 3 of 4

Project No.: 2770.005

Samplers (Signatures):

Date	Time	Sample Number	EPA Method 8010	EPA Method 8020	EPA Method 8020 (BTEX only)	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	HOLD	LEAD (EPA 6010)	Cooled	Soil (S), Water (W), or Vapor (V)	Acidified	Number of containers
8/24/00	1257	SSR30-16.5								X		Y	S	—	1
"	1300	SSR30-18.5								X		Y	S	—	1
"	1302	SSR30-20.0								X		Y	S	—	1
"	1304	SSR30-22.0								X		Y	S	—	1
"	1308	SSR30-24.0								X		Y	S	—	1
"	1315	SSR30-25.5								X		Y	S	—	1
"	1335	SSR33-2.0									X	Y	S	—	1
"	1351	SSR33-4.5									X	Y	S	—	1
"	1358	SSR33-7.5									X	Y	S	—	1
"	1403	SSR33-11.5									X	Y	S	—	1
"	1408	SSR33-13.5								X		Y	S	—	1
"	1410	SSR33-15.5								X		Y	S	—	1

ANALYSES

REMARKS

Additional Comments

SOIL SAMPLES

BILL DIRECTLY TO UNION PACIFIC C/O JOHN MUE RAILROAD CO

6"x1.5" ACETATE LINER

6"x2" STAINLESS STEEL LINER

6"x1.5" ACETATE LINER

08 AUG 29 1[illegible]:28

ENTECH

Turnaround time: STANDARD

Results to: TONY CHOI

Total No. of containers: 12/48

Relinquished by (signature)	Date	Relinquished by (signature)	Date	Relinquished by (signature)	Date
Printed Name: TONY CHOI	Time: 18:00	Printed Name:	Time:	Printed Name:	Time:
Company: GEOMATRIX		Company:		Company:	
Received by (signature):	Date: 8/29/00	Received by (signature):	Date:	Received by (signature):	Date: 9/1/00
Printed Name: Amy Dombaski	Time: 1220	Printed Name:	Time:	Printed Name: ERIC YOUNG	Time: 10:40
Company: Entech		Company: ERIC YOUNG 9/1/00 FBI		Company: FBI	

Method of Shipment: COURIER PICKUP

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street
12th Floor
Oakland, CA 94612
510 663 4100

Forms(PF).012 (Revised 4/00)

CHAIN-OF-CUSTODY RECORD

No. 13491

Date: 8/24/00

Page 4 of 4

Project No.: 2770.005

Samplers (Signatures):

Date	Time	Sample Number
8/24/00	14:13	SSR33-17.5
	14:18	SSR33-19.5
	14:22	SSR33-21.5
	14:29	SSR33-23.5
	14:41	SSR33-25.5
	15:00	SSR33-9.0
	16:00	WC-3

ANALYSES

EPA Method 8010	EPA Method 8020	EPA Method 8020 (BTEX only)	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	Hold	LEAD (EPA 6010)
							X	
							X	
							X	
							X	
							X	
							X	

REMARKS

Cooled	Soil (S), Water (W), or Vapor (V)	Acidified	Number of containers
Y	S	—	1
Y	S	—	1
Y	S	—	1
Y	S	—	1
Y	S	—	1
Y	S	—	1

Additional Comments

SOIL SAMPLES

BILL DIRECTLY TO SOUTHERN PACIFIC RAILROAD CO. C/O JOHN MOE

ACETATE LINER 6 X 2"

99 AUG 29 12:20

ENTECH

Turnaround time: STANDARD

Results to: TONY CHOI

Total No. of containers: 6/48

Relinquished by (signature):	Date: 8/25/00	Relinquished by (signature):	Date:	Relinquished by (signature):	Date:	Method of Shipment: COURIER PICK-UP	
Printed Name: TONY CHOI	Time: 1800	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:	
Company: GEOMATRIX		Company:		Company:			
Received by (signature): Amy Dombroski	Date: 8/29/00	Received by (signature):	Date:	Received by (signature): Eric Young	Date: 9/1/00		
Printed Name: Amy Dombroski	Time: 1220	Printed Name:	Time:	Printed Name: ERIC YOUNG	Time: 10:40		
Company: Entech		Company: Eric Young 9/1/00 Entech FRI		Company: FBI			

Geomatrix Consultants
2101 Webster Street
12th Floor
Oakland, CA 94612
510 663 4100

Forms(PF).012 (Revised 4/00)

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Jensen, M.S.
Bradley T. Benson, B.S.
Kurt Johnson, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
TEL: (206) 285-8282
FAX: (206) 283-5044
e-mail: fbi@isomedia.com

September 29, 2000

Tony Choi, Project Manager
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, CA 94612

Dear Mr. Choi:

Included are the results from the additional testing of material submitted on September 1, 2000 from your 2770.005 project.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Jensen

Charlene Jensen
Chemist

Enclosures
GMC0929R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 09/29/00
Date Received: 09/01/00
Project: 2770.005
Date Extracted: 09/20/00
Date Analyzed: 09/23/00

RESULTS FROM THE SCREENING ANALYSIS OF THE SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE

Results Reported as µg/g (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery)
SSR32-21.0 009004-02	29	123
SSR31-23.5 009004-04	<1	95
SSR30-22.0 009004-07	68	186 vo
SSR33-17.5 009004-09	32	139 vo
Method Blank	<1	93

vo - The value reported fell outside the control limits established for this analyte.

Note: The samples were extracted past normal holding time. Results should be considered estimates.

Date of Report: 09/29/00
Date Received: 09/01/00
Project: 2770.005
Date Extracted: 09/08/00
Date Analyzed: 09/19/00 and 09/20/00

RESULTS FROM THE SCREENING ANALYSIS OF THE SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL

Results Reported as µg/g (ppm)

Sample ID Laboratory ID	Diesel Range	Surrogate (% Recovery)
SSR32-21.0 009004-02	18	72
SSR31-23.5 009004-04	19	75
SSR30-22.0 009004-07	41	77
SSR33-17.5 009004-09	36	74
Method Blank	<10	75

Note: The samples were extracted past normal holding time. Results should be considered estimates.

Date of Report: 09/29/00
Date Received: 09/01/00
Project: 2770.005
Date Extracted: 09/08/00
Date Analyzed: 09/19/00 and 09/20/00

RESULTS FROM THE SCREENING ANALYSIS OF THE SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL

Results Reported as µg/g (ppm)

Sample ID Laboratory ID	Motor Oil Range	Surrogate (% Recovery)
SSR32-21.0 009004-02	<50	72
SSR31-23.5 009004-04	<50	75
SSR30-22.0 009004-07	<50	77
SSR33-17.5 009004-09	<50	74
Method Blank	<50	75

Note: The samples were extracted past normal holding time. Results should be considered estimates.

APPENDIX D

Historic Analytical Laboratory Data

TABLE D-1

HISTORIC SOIL ANALYTICAL RESULTS
Santa Rosa Station/Third Street Property - Southern Section
4 West Third Street
Santa Rosa, California

Concentrations in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Location	Approximate Sample Depth (feet bgs[1])	Date Sampled	Lead
SRB1A-C[2,3]	Boring SRB1	2.0, 6.5	2/28/95	<5
SRB1B-C	Boring SRB1	12.5, 17.0	2/28/95	6
SRB2A-C	Boring SRB2	2.0, 5.0	2/28/95	65
SRB2B-C	Boring SRB2	9.0, 12.5	2/28/95	6
SRB3A-C	Boring SRB3	1.5, 5.5	2/28/95	<5
SRB3B-C	Boring SRB3	10.5, 14.0	2/28/95	<5
SRB4A-C	Boring SRB4	2.0, 5.5	2/28/95	15
SRB4B-C	Boring SRB4	9.5, 12.5	2/28/95	<5
SRB13-1.5	Boring SRB13	1.5	12/7/95	590
SRB13-3.0	Boring SRB13	3.0	12/7/95	8
SRB14-1.5	Boring SRB14	1.5	12/7/95	170
SRB14-2.5	Boring SRB14	2.5	12/7/95	40
SRB14-5.5	Boring SRB14	5.5	12/7/95	5
SRB15-1.0	Boring SRB15	1.0	12/7/95	22
SRB15-3.0	Boring SRB15	3.0	12/7/95	32
SRB15-5.5	Boring SRB15	5.5	12/7/95	6
SRB14-N[4]	North Sidewall SRB14	1	9/21/99	110
SRB14-E	East Sidewall SRB14	1	9/21/99	180
SRB14-S	South Sidewall SRB14	1	9/21/99	53
SRB14-W	West Sidewall SRB14	1	9/21/99	48
SRB14-B1	North Bottom SRB14	2.5	9/21/99	24
SRB14-B2	South Bottom SRB14	2.5	9/21/99	30
SRB13-N	North Sidewall SRB13	1	9/21/99	48
SRB13-E	East Sidewall SRB13	1	9/21/99	100
SRB13-S	South Sidewall SRB13	1	9/21/99	15
SRB13-W	West Sidewall SRB13	1	9/21/99	150
SRB13-B1	West Bottom SRB13	2.5	9/21/99	170
SRB13-B2	East Bottom SRB13	2.5	9/21/99	17
SRB14-N2	North Sidewall SRB14	1.5	10/14/99	64

TABLE D-1

HISTORIC SOIL ANALYTICAL RESULTS
Santa Rosa Station/Third Street Property - Southern Section
4 West Third Street
Santa Rosa, California

Concentrations in milligrams per kilogram (mg/kg)

Sample I.D.	Sample Location	Approximate Sample Depth (feet bgs[1])	Date Sampled	Lead
SRB14-E2	East Sidewall SRB14	1.5	10/14/99	74
SRB13-W2	West Sidewall SRB13	1.5	10/14/99	130
SRB13-E2	East Sidewall SRB13	1.5	10/14/99	4.6
SRB13-B3	Bottom SRB13	4	10/14/99	71

Notes:

Shaded rows indicate sampling locations that have been excavated during soil remediation activities.[4]

[1] bgs = below ground surface
[2] Taken from referenced report, Geomatrix, 1999a.
[3] C = laboratory composite sample (i.e., laboratory composited and analyzed sample composed of discrete samples from locations indicated in sample depth column).
[4] Taken from referenced report, Geomatrix, 1999b.

STATE WATER RESOURCES CONTROL BOARD
SITE CLEANUP PROGRAM (SCP)
BILLING COST EXPLANATION
Fiscal Year 2013-2014

Employee Salary and Benefits by Classification [1]	**ABR**	**SALARY/ BENEFITS RANGE**
7500 - AEO CEA	CEA	8,840 – 19,738
4558 - Admin Officer II	ADMNOffII	6,619 – 8,225
5871 - Assistant Chief Counsel	ACC	12,789 – 14,814
5393 - Associate Governmental Program Analyst (Statewide)	AGPA	6,301 – 7,889
4707 - Business Serv Asst (Spec)	BSA	3,573 – 5,470
3756 - Engineering Geologist (SWRCB)	EG	6,599 – 12,423
0760 - Environmental Program Manager I (Managerial) (SWRCB)	EPMIM	9,937 – 11,284
0756 - Environmental Program Manager I (Supervisory) (SWRCB)	EPMIS	8,986 – 11,174
0769 - Environmental Program Manager II (SWRCB)	EPMII	11,465 – 13,025
0762 - Environmental Scientist (SWRCB)	ES	4,407 – 8,424
3843 - Exec Officer I	EO	14,043 – 15,640
3842 - Exec Officer II	EO II	14,345 – 15,996
5601 - Information Officer I (Spec)	IO	6,301 – 7,889
1419 - Key Data Operator	KDO	3,083 – 4,388
1282 - Legal Secretary	LS	4,351 – 5,720
1441 - Office Assistant (General) (Statewide)	OA	2,970 – 4,086
1379 - Office Assistant (Typing) (Statewide)	OA	3,069 – 4,169
1138 - Office Technician (General) (Statewide)	OT	3,778 – 4,733
1139 - Office Technician (Typing) (Statewide)	OT	3,847 – 4,815
3851 - Principal Water Resources Control Engineer (SWRCB)	PWRCE	14,095 – 16,009
5373 - Public Participation Specialist	PPS	6,301 – 7,889
3826 - Sanitary Engineering Associate (Statewide)	SEA	7,103 – 8,890
3782 - Sanitary Engineering Technician (Statewide)	SET	4,892 – 7,030
3751 - Senior Engineering Geologist (Statewide)	SEG	10,565 – 14,559
0764 - Senior Environmental Scientist (SWRCB)	SRES	7,805 – 9,703
3224 - Senior Legal Typist	SLT	3,708 – 5,186
3844 - Senior Water Resources Control Engineer (SWRCB)	SWRCE	10,565 – 14,559
5778 - Staff Counsel (Statewide)	STCOUN	6,694 – 11,659
5795 - Staff Counsel III (Statewide)	STCOUNIII	11,001 – 14,116
5815 - Staff Counsel III (Sup)	STCOUNIII	11,007 – 14,125
5780 - Staff Counsel IV (Statewide)	STCOUNIV	12,153 – 15,604
0765 - Staff Environmental Scientist (SWRCB)	SES	7,798 – 9,699
5157 - Staff Services Analyst (General)	SSA	4,034 – 6,558
4800 - Staff Services Manager I	SSM I	7,274 – 9,038
3748 - Supervising Engineering Geologist (Statewide)	SUEG	11,596 – 14,518
3849 - Supervising Water Resources Control Engineer (SWRCB)	SUWRCE	11,596 – 14,518
3850 - Supervising Water Resources Control Engineer (MGR)	SUEG	12,824 – 14,571
3846 - Water Resources Control Engineer (SWRCB)	WRCE	6,599 – 12,360

Note: The State is currently negotiating with the unions so the upper limits of the above ranges may be subject to change.

Intermittent Employees:		
1120 - Seasonal Clerk	SC	8.18/hr. – 9.35/hr.
1931 - Scientific Aid	SAID	11.58/hr. – 13.34/hr.
4871 - Student Assistant - Engineering (Statewide)	SAE	11.55/hr. – 17.28/hr.

[1] The name and classification of employees performing oversight work will be listed on the invoice you receive.

Operating Expenses and Equipment [2] (both Headquarters and Regional Board offices)
Indirect Costs (Overhead = cost of doing business) 120%

Billing Example

Water Resources Control Engineer Salary:	$ 11,647
Overhead (indirect costs):	$ 13,976
Total Cost per month	$ 25,623

Divided by 176 hours per month equals per hour: $ 145.59
(Due to the various classifications that expend SCP resources, an average of $150 per hour can be used for projection purposes.)

[2] The examples are estimates based on recent billings. Actual charges may be slightly higher or lower.

Revised 05-29-13

STATE WATER RESOURCES CONTROL BOARD
SITE CLEANUP PROGRAM (SCP)
BILLING COST EXPLANATION
Fiscal Year 2013-2014

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Billing Example

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(Due to the various classifications that expend SCP resources, an average of $150 per hour can be used for projection purposes.)

[2] The examples are estimates based on recent billings. Actual charges may be slightly higher or lower.

Revised 05-29-13

2101 Webster Street
12th Floor
Oakland, CA 94612
(510) 663-4100 • FAX (510) 663-4141

GEOMATRIX

January 15, 2003
Project 2770.005

Ms. Joan Fleck
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Subject: Environmental Site Conditions and Proposed Action Plan
Santa Rosa Station Phased Closing Property
Santa Rosa, California

Dear Ms. Fleck:

On behalf of the Union Pacific Railroad Company (UPRR), Geomatrix Consultants, Inc. (Geomatrix) is submitting this summary report of environmental conditions at the Santa Rosa Phased Closing Property (the site) based on data generated from investigations conducted at the site during the period of 1987 through 2002. This report also proposes a mitigation plan for the site.

Please call John Moe or UPRR at (415) 541-7020, or the undersigned if you have any questions.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Charles Rome
Project Geologist

Susan M. Gallardo, P.E.
Principal Engineer

CFR/SMG:ldu
I:\Doc_Safe\2000s\2770.05\June_July_2002_Investigation\Cover_ltr.doc

Enclosure

cc: John Moe, Union Pacific Railroad Company
Norma Jellison, Golden Gate Bridge & Transportation District
Leah Goldberg, Hanson, Bridgett, Marcos, Vlahos, and Rudy
Peter Krasnoff, West Environmental Services & Technology

GEOMATRIX

Environmental Site Conditions and Proposed Action Plan

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Prepared for:

Union Pacific Railroad Company
49 Stevenson Street, 15th Floor
San Francisco, California 94105

Prepared by:

Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, California 94612
(510) 663-4100

January 2003

Project No. 2770.005

GEOMATRIX

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GEOMATRIX

ENVIRONMENTAL SITE CONDITIONS AND PROPOSED ACTION PLAN

Santa Rosa Station Phased Closing Property
Santa Rosa, California

1.0 INTRODUCTION

Geomatrix Consultants, Inc. (Geomatrix), has prepared this report on behalf of Union Pacific Railroad (UPRR), to 1) report recent investigative actions conducted at the Santa Rosa Station Phased Closing Property (the site; Figure 1); 2) summarize environmental conditions based on data obtained during the recent and previous site characterization efforts; and 3) present recommendations to address soil and groundwater containing constituents of concern. The overall objective of the recently conducted investigative activities and comprehensive evaluation discussed herein is to complete activities required by the California Regional Water Quality Control Board – North Coast Region (RWQCB) to achieve regulatory closure. This report is divided into the following sections:

- **Section 2.0 – Site Background:** describes the land use surrounding the site, subsurface utilities at the site, regional and site geology and hydrogeology, water-producing wells located near the site, and nearby known environmental sites.

- **Section 3.0 – Summary of Investigative Activities – 1987 through 2001:** summarizes site activities performed during the period of 1987 through 2001 including the removal of underground storage tanks (USTs), soil and grab groundwater sampling, monitoring well installation and sampling, and a geophysical survey. The results of these activities have been documented previously and submitted to the RWQCB.

- **Section 4.0 – Investigative Activities – 2002:** summarizes the additional activities conducted at the site in 2002, which included drilling borings for visual observation, soil and grab groundwater sampling, removal of a subsurface pipeline, and collection of additional soil samples for leachability testing. These activities are presented separately from the pre-2001 activities because they have not previously been reported to the RWQCB. Field and analytical methods applied during these activities are presented in Appendix A.

- **Section 5.0 – Results of Soil and Groundwater Investigations:** presents a summary of data collected at the site since investigations began in 1987. The data includes visual observations of soil and soil sampling; grab groundwater sampling; and monitoring well sampling analytical results. As applicable, the results are compared to published screening criteria that consider risk to human health and the environment to provide a

context for initially evaluating the results, and selecting constituents of concern (COCs) at the site.

- **Section 6.0 – Discussion of Site Conditions:** presents a conceptual site model and discussion of environmental site conditions at various areas of the site including the fenced enclosure and the area of visually impacted soil in the northwestern area of the site. The discussion of site conditions considers the COCs identified in Section 5 and the conceptual site model.

- **Section 7.0 – Site-Specific Remedial Action Objectives:** presents remedial goals for the site, considering applicable regulations and policies.

- **Section 8.0 – Development and Evaluation of Remedial Alternatives:** evaluates and presents a remedial alternative for site mitigation.

- **Section 9.0 – Implementation of Recommended Alternative:** proposes a recommended schedule to achieve site closure.

- **Section 10.0 – References:** lists references used in development of this report.

2.0 SITE BACKGROUND AND STATUS

Based on previous work conducted at the site by Geomatrix and others, this section describes the land use surrounding the site, subsurface utilities at the site, regional and site geology and hydrogeology, water producing wells located near the site, and nearby known environmental sites. For purposes of this report, site north and south are toward 6th and 3rd Streets, respectively; west is toward Santa Rosa Creek, and east is toward the Northwestern Pacific Railroad Authority (NWPRA) right-of-way.

2.1 SITE DESCRIPTION

The site is located along the NWPRA right-of-way in a commercial area of central Santa Rosa, California (Figure 1). The site, shown on Figure 2, occupies assessor parcel number (APN) 010-171-004. Currently the site is owned by UPRR and is designated for sale to the NWPRA.

The site is vacant with the exception of a chain-link fenced enclosure ("fenced enclosure") in the eastern portion of the site, which until recently was used by Northwestern Pacific Railway Company, LLC (Railways) as a maintenance and storage yard. Within the fenced enclosure are a permanent, wooden structure that appears to be an office building, a small shed that was used for storage of waste oils, and an empty octagonal structure. Potential site use under consideration includes a commuter rail station and commercial and/or mixed-use redevelopment.

2.2 HISTORICAL SITE USE AND FEATURES

The site was formerly used as a water and fuel station for the Northwestern Pacific Railroad (NWPRR; the NWPRR was acquired by the Southern Pacific Railroad Company [SPTCo] in late 1906). Within the southeastern portion of the site was a turntable that was dismantled in 1925. Also in this portion of the site was a pump house. A 3000-bbl (126,000 gallons) aboveground oil storage tank (3000-bbl AST), two oil traps, and an oil column also were located along the western boundary of the site (Figure 2). According to records maintained by the SPTCo[1], these facilities were constructed between 1939 and 1945 and were removed in 1960. A pump house was located approximately southeast of the 3000-bbl tank. An office and fuel storage house were located in the north-central portion of the site. Also in this area were three USTs (10,000-gallon diesel, 10,000-gallon gasoline and 230-gallon fuel oil). These three USTs were removed in 1987.

Information identified on historical Sanborn Fire Insurance maps (Sanborn maps) from the years 1893, 1904, 1908, and 1950 indicated the presence of an additional former oil UST in the northwestern portion of the site that may have been associated with either a fruit canning facility that was located adjacent to and west of the site or a wool mill that was partially located in the northeastern area of the site (as shown on Sanborn maps dated 1893, 1904, and 1908.

The approximate locations of these historical features are based on information from SPTCo railroad valuation maps, Sanborn maps, and figures prepared by others to report earlier investigative activities, and are shown on Figure 2.

2.3 SITE SETTING

2.3.1 Surrounding Land Use

The site is located in a primarily commercial area of Santa Rosa. It is bordered by the NWPRA property to the east and 3rd and 6th Streets to the south and north, respectively. Warehouse facilities exist to the west. Based on information from the historical Sanborn maps, petroleum USTs formerly existed off site, within the warehouse located adjacent to the central portion of the site's western boundary (Figure 2). An oil pump or tank(s) has been identified at the off-site warehouse by the RWQCB (personal communication; J. Fleck). It is not known whether the RWQCB-identified feature corresponds to the historical USTs that were depicted on the Sanborn maps and shown on Figure 2.

[1] SPTCo was purchased by UPRR in 1996.

West of the warehouse facilities and approximately 150 to 200 feet from the site is Santa Rosa Creek (Figure 2). A residential area is located west of the Creek.

2.3.2 Subsurface Utilities

Subsurface utilities located within the site boundary are presented on Figure 2. As shown on Figure 2, utilities include two City of Santa Rosa storm water lines, and two City of Santa Rosa sewer lines. The storm water lines traverse the site in an east/west direction, extending along the trends of 4th and 5th Streets, and discharge into Santa Rosa Creek. The sewer lines intersect a sewer main on the western side of the site that runs the length of the site in a north/south direction and extends to both 3rd and 6th Streets. Based on utility maps obtained from the City of Santa Rosa, the sanitary sewer is located approximately 4 to 6 feet below ground surface (bgs) at elevations ranging across the site from about 146 to 144 feet above mean sea level (msl). The utility maps do not show the depths of the storm water lines.

2.3.3 Geology and Hydrogeology

The site is located on the edge of the Santa Rosa Plain, the distal portion of a broad alluvial fan that slopes from the west from the Sonoma Mountains to Laguna de Santa Rosa. Santa Rosa Creek flows westward across the plain, draining the Sonoma Mountains and discharging into Laguna de Santa Rosa, which in turn drains northward into the Russian River. Shallow unconsolidated sediments beneath the plain consist of alluvial fan deposits dominated by lenticular beds of poorly graded gravel, sand, silt, and clay that are characterized by widely varying thicknesses and lateral grainsize gradations over short distances.

Locally the site geology is generally composed of fill, aggregate baserock, and silty sand from ground surface to approximately one foot bgs. This fill is primarily underlain by interbedded clay, sandy clay, and clay with sand to depths of up to approximately 20 feet bgs. A coarser-grained unit generally consisting of clayey sand and clayey sand with gravel was encountered at depths between 19 and 28 feet bgs (the total depth of borings at the site). Depths to saturated deposits in most project borings, as observed during drilling and documented on boring logs have ranged generally between 7 and 14 feet bgs in borings drilled between November and June; saturated deposits typically were observed at depths of 11 to 20 feet bgs in borings drilled in September.

Water levels measured over four quarters in the monitoring wells (December 2001 through September 2002) at the site show seasonal fluctuations of up to 6 feet (Table 1). Depth to groundwater in the monitoring wells has been measured between 7.55 to 18.49 feet below the

top of casing (btc), which correspond to water level elevations ranging from144.74 to 131.22 feet msl. The measured depth to groundwater was deeper in each of the five monitoring wells in September 2002; the shallowest depths to groundwater were recorded in December 2001 (Table 1). Groundwater flow is to the west-southwest, toward Santa Rosa Creek. The horizontal hydraulic gradient, based on June 2002 water level measurements, is calculated to be approximately 0.02 foot per foot (ft/ft) (that is, the depth to groundwater, based on water-level measurement data, increases 2 ft for every 100 ft across the site in the direction of groundwater flow). A potentiometric surface map produced from groundwater levels measured in June 2002 is shown on Figure 3.

2.3.4 Nearby Water-Producing Wells

Domestic and industrial water supply for the site vicinity is provided through the City of Santa Rosa, which purchases water from the Sonoma County Water Agency (SCWA). The SCWA delivers water to the City via the Sonoma County aqueduct. The source of the water is the Russian River, which in turn is fed by three main upstream reservoirs. The City of Santa Rosa also has eight standby wells to pump groundwater for emergency purposes; these wells currently are not in use.

Information provided by the City of Santa Rosa Utilities Department (SRUD) indicates that 50 groundwater wells are located within a half mile of the site (Figure 4). Of these wells, 21 are located within a half mile generally to the north (hydraulically up- and cross-gradient of the site) and 29 are located within a half mile generally to the south (hydraulically downgradient of the site). Of the 50 wells, only four are located within a one-quarter mile radius, with two wells located approximately upgradient and two approximately downgradient.

Based on conversations with SRUD personnel, only two of the residences located within one-half mile from the site are not connected to the City of Santa Rosa water supply. These residences are located at 654 and 658 Dutton Avenue. Uses for the wells are not tracked by SRUD in all cases, but records indicate that the wells within one-quarter mile of the site are used for irrigation and external use.

Information about the possible presence of an additional water producing well located near the site was provided by the RWQCB (personal communication with J. Fleck, August 2002). This well was not included in the SRUD database. The well is located to the west of the site between the site and Santa Rosa Creek (Figure 4); its actual location has not been field-verified. At this time the well is not in use, and based on a conversation with the site redeveloper, the

well will not be used in the future and will be appropriately destroyed (personal communication between N. Jellison, representing NWPRA and John Stewart of John Stewart Company).

2.3.5 Nearby Environmental Sites

Nearby properties with documented impacted groundwater were identified during a preliminary environmental assessment of the site performed by Geomatrix in the early 1990s (since that time, it is likely that some of these sites have been closed). These properties include the La Rose Hotel site at 101 5th Street (impacted by total petroleum hydrocarbons [TPH] as gasoline [TPHg] and as diesel [TPHd]), the Grace Brothers Hotel site at 200 2nd Street (impacted by metals, TPHd, and TPH as motor oil [TPHmo]), and the Mead Clark Lumber Company (Mead Clark) site (impacted by TPHg, TPHd, and related fuel constituents). The La Rose and Grace Brothers properties are assumed to be hydraulically upgradient of the site, assuming a southwesterly to westerly groundwater flow direction (toward Santa Rosa Creek). The Mead Clark site appears to be hydraulically cross-gradient. An active fuel leak case, the Ochipinti Gas Station, located at 210 5th Street, is located hydraulically upgradient of the site. Constituents detected at the gas station and downgradient towards the site include TPHg, benzene and other aromatic constituents, and methyl tertiary butyl ether (MTBE). We understand that the distribution and downgradient extent of these constituents in groundwater from the Ochipinti Gas Station have not been fully defined (as of August 2002) and that groundwater mitigation efforts have not been initiated. Based on its location upgradient of the site, it is likely that constituents in groundwater from the Ochipinti Gas Station will impact, or already have impacted the site.

3.0 SUMMARY OF INVESTIGATIVE ACTIVITIES – 1987 THROUGH 2001

Subsurface investigations have been performed at the site since 1987. These investigations have included:

- soil sampling by others related to the removal of three USTs;
- installation of monitoring wells by others as part of the nearby Mead Clark facility groundwater investigation;
- soil sampling and groundwater sampling from monitoring wells by the RWQCB to evaluate whether the site was a possible source of petroleum hydrocarbons and related constituents that were detected at Santa Rosa Creek; these wells subsequently were destroyed by the RWQCB; and,

- soil and grab groundwater sampling, and monitoring well installation and sampling to meet the RWQCB requirements for site closure.

The following sections provide a summary of the subsurface investigations performed by Geomatrix and others at the site from 1987 through 2001. A summary of the borings and types of samples collected are presented on Table 2. Soil and groundwater sampling locations are shown on Figure 5 (this figure also shows sampling locations from the recent field activities, which are discussed in Section 4.0). The results of the subsurface investigations described below have been reported to the RWQCB; the respective reports that document these activities and results are referenced in each section.

The recent investigative activities performed at the site are reported in Section 4.0. Results of the former and recent site characterization activities are discussed in aggregate in Section 5.0.

3.1 REMOVAL OF UNDERGROUND STORAGE TANKS

In December 1987, Canonie Environmental Services Corporation (Canonie) removed three USTs from the site (Industrial Compliance [IC], 1992). These included a 230-gallon fuel oil UST, a 10,000-gallon diesel UST, and a 10,000-gallon gasoline UST, which were located within and northwest of the existing fenced enclosure. During UST removal activities, no holes or signs of leakage or overfilling were noted for any of the tanks. TPH were not detected above laboratory reporting limits in the soil samples collected from beneath the USTs.

3.2 MONITORING WELL INSTALLATION AND SAMPLING

Monitoring wells were installed at the site as part of the investigation of off-site groundwater impacts from the Mead-Clark facility, which is located southeast and hydraulically cross-gradient to the site. In April 1988, on behalf of Mead Clark, Harding Lawson Associates, Inc. (HLA), installed two monitoring wells, GW-24 and GW-27, on the site (Environet, 1997 and 1998). These wells are located generally in the south-central portion of the site (Figure 5). Groundwater samples were analyzed for chlorinated volatile organic compounds (CVOCs) and TPH and related constituents over at least six monitoring events (HLA, 1991). Analytical results for samples collected from wells GW-24 and GW-27 are included in Table 3. Well construction details are presented in Appendix B.

In April 1990, the RWQCB installed two groundwater monitoring wells on site (RBMW-2 and RBMW-3; Figure 5) to evaluate the potential source of TPH and related constituents in Santa Rosa Creek (RWQCB, 1993). These wells were located in the central portion of the site. Soil

samples collected from borings RBMW-2 and RBMW-3 were analyzed for TPHg, TPHd, TPH as oil and grease (TPHog), benzene, toluene, ethylbenzene, total xylenes (BTEX, respectively), and polynuclear aromatic hydrocarbons (PAHs). Well construction details are presented in Appendix B. In addition to the analytes listed above, groundwater samples also were analyzed for chlorinated volatile organic compounds (CVOCs). Soil and groundwater analytical results are presented in Table 3. The RWQCB destroyed monitoring wells RBMW-2 and RBMW-3 in June 1995 (personal communication with J. Fleck, October 30, 1996).

At the request of the RWQCB, Geomatrix installed five monitoring wells at on- and off-site locations in September 2001 (Geomatrix, 2001). The purpose of these wells was to: 1) obtain groundwater flow information; 2) identify the possible presence of separate-phase petroleum hydrocarbons (SPPH)[2] at specific locations; 3) characterize the presence of dissolved-phase petroleum constituents in groundwater; and 4) investigate whether dissolved-phase petroleum constituents are migrating onto the site. The locations of the monitoring wells, designated as SRMW-05 through SRMW-08 and SRMW-10 are shown on Figure 5. Groundwater samples initially were collected from these wells in December 2001, and have been collected quarterly since that time (a total of four monitoring events to date). Groundwater samples have been analyzed for TPHg, TPHd, TPHmo, BTEX, MTBE, and PAHs. Groundwater analytical results from monitoring wells SRMW-05 through SRMW-08 and SRMW-10 are summarized in Table 4.

3.3 SOIL SAMPLING

Soil samples were collected in the central portion of the site (Figure 5) for chemical analysis from two borings, RBB-1 and RBB-2, drilled by the RWQCB in April 1990. Samples collected from these two borings were analyzed for TPHg, TPHd, TPHog, BTEX, and PAHs. Soil analytical results are included in Table 3.

In 1992, Industrial Compliance (IC) collected soil samples at five locations (IC-B1 through IC-B4 and IC-B6) in the vicinity of the former 10,000-gallon gasoline UST, 10,000-gallon diesel UST, and 230-gallon fuel oil UST to further evaluate potential environmental impacts from the former USTs (Figure 5). Soil samples were analyzed for TPHg, TPHd, TPHmo, TPH as kerosene (TPHk), BTEX, and PAHs (Industrial Compliance, 1992). Analytical results for these samples are included in Table 3.

[2] For purposes of this report, the terminology separate phase petroleum hydrocarbons (SPPH) describes product in the subsurface that can readily flow into monitoring wells.

Soil samples were collected from 33 borings during various phases of sampling by Geomatrix during the period of 1996 and 2001 (Geomatrix 1997, 2000, 2001, and 2002a). Samples for chemical analyses and leachability testing have been collected primarily at targeted locations to evaluate potential environmental impacts from historical railroad operations and at specific locations requested by the RWQCB. The locations and purposes of the soil borings are presented on Table 2. Selected soil samples have been analyzed for:

- Metals, including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc;
- Total petroleum hydrocarbons characterized as gas, diesel, and motor oil (TPHg, TPHd, and TPHmo, respectively);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX);
- Chlorinated volatile organic compounds (CVOCs);
- Methyl teriary butyl ether (MTBE); and
- Polynuclear aromatic compounds (PAHs).

Analytical results and testing methods for soil samples collected by Geomatrix are tabulated in Tables 5 through 8.

Leachability testing on selected samples was conducted in January 2000 using the Waste Extraction Test (WET) procedure modified using deionized water as the extract. The WET is a dynamic procedure in which a fixed weight of soil and volume of extract are combined, and then placed on a shaking table for 48 hours. Following this procedure, the extract is decanted and analyzed. This procedure is aggressive relative to in-ground conditions as the procedure disrupts the soil structure such that equilibrium partitioning will be achieved among the aqueous and non-aqueous phases present. Whereas, in situ, groundwater migrates past the constituents in the soil without disrupting the soil structure and without achieving equilibrium conditions in the bulk of the water. Nevertheless, the WET test is a method generally accepted by the regulatory agencies to provide a preliminary estimate of the potential for constituents detected in on-site soil (in this case, TPH and PAHs), to leach out of the soil matrix. The results of these analyses are presented in Table 9.

3.4 GRAB GROUNDWATER SAMPLING

Grab groundwater sampling is used as a screening tool to provide a one-time groundwater sample for chemical analysis; this methodology provides an initial screening of environmental conditions at a site. Grab groundwater sampling has been used extensively at the site, and was recently supplemented by samples from site monitoring wells to confirm selected grab groundwater analytical results and provide longer term, replicable data (Section 3.2).

Grab groundwater samples were collected at five locations (IC-B1 through IC-B4 and IC-B6) at the site by IC in 1992 to evaluate potential environmental impacts from the two 10,000-gallon USTs and the 230-gallon UST that were removed in 1987 (Canonie, 1987). These samples were analyzed for TPHg, TPHd, and BTEX. Analytical results are presented in Table 3.

Grab groundwater samples were collected by Geomatrix from 36 on- and off-site borings prior to the recent characterization activities (Section 4.0). These samples were collected during various phases of investigation to evaluate potential environmental impacts from historical features, features identified during the various investigations, and to respond to requests by the RWQCB for additional characterization. The grab groundwater boring designations and their purposes are summarized on Table 2. Selected grab groundwater samples have been analyzed for:

- Total petroleum hydrocarbons characterized as gas, diesel, and motor oil (TPHg, TPHd, and TPHmo, respectively);
- Benzene, toluene, ethylbenzene, and xylenes (BTEX);
- Chlorinated volatile organic compounds (CVOCs);
- Methyl tertiary butyl ether (MTBE); and,
- Polynuclear aromatic compounds (PAHs).

The analytical results and testing methods for these samples are presented in Table 10.

3.5 GEOPHYSICAL SURVEY

To evaluate the presence of an oil UST in the northwestern portion of the site that was identified on a historical Sanborn map, a geophysical survey was conducted in September 2001 (Appendix C). The findings of the geophysical survey indicated shallow, subsurface anomalies in three primary areas; the geophysical surveyor concluded that an UST could be present in one

of the three areas, and the anomalies detected at the other two areas likely represented metallic debris.

To confirm these conclusions, excavations were conducted in October 2001 to reveal the subsurface anomalies. Excavation was conducted to depths of approximately 7.5 feet bgs in each of the identified areas. Observations made during the excavations confirmed the presence of some miscellaneous metallic debris in the two areas where these materials were suspected. No UST was found in the area where an UST was suspected; however, two parallel subsurface pipes were observed, and an apparent subsurface manifold with three vertical pipes that previously extended to ground surface were uncovered. These pipelines were removed in June 2002; details of the pipeline removal are presented in Section 4.3.

4.0 INVESTIGATIVE ACTIVITIES AND ACTIONS – 2002

Additional activities were performed in June, July, August and November 2002 to 1) evaluate the extent of soil that appeared to contain petroleum (visually impacted soil) in the northwestern area of the site; 2) further investigate the presence of petroleum constituents in groundwater in the vicinity of the former 3000-bbl AST; 3) further address whether historical and recent maintenance activities within the fenced enclosure may have impacted shallow soil and contributed to the presence of MTBE that had been detected in groundwater in this area; 4) remove the pipeline that was identified in the northwestern portion of the site from the geophysical survey performed in 2001; and, 5) further evaluate the potential long-term leachability of petroleum in soil to groundwater. These activities, which have not previously been formally documented, are reported below; the findings from this work are discussed in aggregate with the results of previous soil and groundwater investigations in Section 5.0.

Investigative activities included soil and grab groundwater sampling. The sampling activities were performed according to work plans prepared by Geomatrix (Geomatrix 2002b, 2002c, 2002d and 2002e) and were field-modified as appropriate and with concurrence from the RWQCB. The specific activities performed by Geomatrix are described below. Field and analytical methods are described in Appendix A. A summary of the borings and their respective purposes is presented in Table 2.

4.1 SOIL BORINGS IN NORTHWESTERN AREA

Borings SRB-63 through SRB-69, SRB-75 through SRB-95, and SRB-97 through SRB-103 were advanced in the northwestern portion of the site (Figure 6) during the recent investigation to evaluate the lateral and vertical extent of visually impacted soil that previously had been

observed in borings in this area. Boring logs documenting lithology, photo-ionization detector (PID) measurements, and visual observations during drilling are included in Appendix D. Soil samples from 13 borings were collected from above, within, and below the locations of visually impacted soil and submitted for chemical analysis for TPHd, TPHmo, and PAHs. Additionally, selected soil samples were analyzed for TPH characterized as Bunker C. Soil samples from eight borings also were analyzed for BTEX and MTBE. Analytical testing methods and results for the soil samples are presented in Tables 6 through 8, and are discussed in Section 5.0.

To further characterize groundwater near the former 3000-bbl AST, grab groundwater samples were collected from boring locations SRB-75, SRB-76, and SRB-77. These grab groundwater samples were analyzed for TPHg, TPHd, TPHmo, BTEX, and MTBE. Grab groundwater analytical testing methods and results are presented in Table 10, and are discussed in Section 5.0

To further evaluate the potential long-term leachability of TPH from soil to groundwater, additional soil samples were collected at selected locations and depths where the presence of TPH in soil was identified from borings PL-03L, PL-05L, and PL-12L along the pipeline alignment, SRB-100L (near the former 3000-bbl aboveground storage tank), and SRB-53L, SRB-79L, and SRB-88L (in the general northwestern site area). Soil samples were analyzed for total TPHd and TPHmo using EPA Method 8015. The potential leachability of TPH from the soil was evaluated using the WET, modified using deionized water as the extract. Analytical testing methods and results are presented in Table 9.

Chain of custody records and laboratory analytical results for the soil and grab groundwater samples are contained in Appendix E; leachability analytical results are contained in Appendix F.

4.2 SAMPLING WITHIN THE FENCED ENCLOSURE

Five shallow borings and one deeper boring were advanced within the fenced enclosure to evaluate potential impacts from certain recent and historical features. Specifically, shallow soil samples were collected from borings SRB-70 and SRB-71, located beneath the former storage trailer, to investigate potential chemical spillage; from boring SRB-72, located adjacent to SRB-56, to further characterize the presence of chemical constituents in soil at this location; and from borings SRB-73 and SRB-96, located to investigate potential spillage from the former AST. A deeper boring, SRB-74, was advanced near the former 230-gallon fuel oil UST and borings IC-B6 and SRB-39 to collect soil and grab groundwater samples to confirm the absence

of soil and groundwater impacts from the former UST. Boring SRB-74 served a dual purpose as it was drilled at a location selected with the RWQCB to also characterize potential impacts from a vertical corrugated metal pipe of unknown use that is present east of the former UST location. Sample locations are shown on Figure 7. Logs for these borings that document lithology, PID measurements, and visual observations are included in Appendix D. Analytical testing methods and results for the soil and grab groundwater samples are presented in Tables 6 through 8 and Table 10, and are discussed in Section 5.0. Chain of custody records and laboratory analytical results are contained in Appendix E.

4.3 REMOVAL OF SUBSURFACE PIPELINE

The subsurface pipeline identified in the northwestern area of the site was removed under the direction of Geomatrix by Clearwater Environmental Management, Inc., of Fremont, California in June 2002. A description of pipeline removal activities is presented in Appendix A. Following pipeline removal, soil samples were collected from immediately below the bottom of the pipeline in the excavation at approximately 20-foot intervals, or at locations of pipeline joints. This work was performed in accordance with the work plan approved by the Santa Rosa Fire Department (Geomatrix, 2002b). These sample locations were designated PL-01 through PL-12 (Figure 6). Additional sampling was conducted in July 2002 to collect deeper soil samples at previous shallow sample locations where elevated TPHd and TPHmo concentrations were detected.

Soil samples were analyzed for TPHd, TPHmo, and BTEX. Selected samples also were analyzed for PAHs. The analytical testing methods and results are presented in Tables 6, 7 and 8, and are discussed in Section 5.0. Chain of custody records and laboratory analytical results are contained in Appendix E.

5.0 RESULTS OF SOIL AND GROUNDWATER INVESTIGATIONS

The following subsections discuss, in aggregate, the results of soil and groundwater investigations conducted by Geomatrix and others from 1987 through the recent investigation performed in 2002. Where applicable, the results are discussed by area of the site, which include:

- the northwestern area (including the location of the former subsurface pipeline; Figures 5 and 6);
- the fenced enclosure (Figures 5 and 7); and

- the remainder of the site presented as "site-wide" results (Figure 5).

For clarification, the borings where analytical testing was performed within each area are shown in the table below.

Borings Included in Each Area

Northwestern Area (44 borings)	Fenced Enclosure (10 borings)	Site-Wide (24 borings)
SRB-22, 23, 33-35, 44, 46, 48, 51, 52, 53L, 54, 75-77, 79L, 79-81, 83, 88, 88L, 90, 91, 93, 99-101, 100L, 103, PL-01 - PL-12, PL-06L, PL-12L	SRB-27, 28, 39, 56, 62, 70-74, 96	SRB-20, 21, 24-26, 29-32, 36-38, 40-43, 45, 47, 49, 50, 55, 58-61

5.1 VISUAL OBSERVATIONS OF SOIL

Limited surface soil staining due to petroleum hydrocarbons has been observed at various locations at the site; where present, samples of this surface soil have been collected for chemical testing and the analytical results are presented in Section 5.2. Additionally, soil that contains thread-like petroleum ganglia (visually impacted soil) was observed in the subsurface in borings in the northwestern area of the site (Figure 6) during investigations performed in 2000 and 2002. The source of the petroleum ganglia is not specifically known; however, potential sources likely include the subsurface pipeline and possibly other oil handling and containment features in the northwestern portion of the site (such as the 3000-bbl AST). The distribution of the visually impacted soil is discussed in this section, and analytical results for selected soil samples collected within the visually impacted area are presented in Section 5.2.

A total of 34 borings were advanced in the northwestern area to assess the presence of visually impacted soil (Figure 6 and Table 11). Of these, no visual impacts were observed in 16 of the borings, which serve to bound the areas of visually impacted soil. There appear to be two distinct distributions of visually impacted soil (Figure 8): one distribution occurs north to northeast (assuming north is towards 6th Street) of the approximate former location of the 3000-bbl AST. This area covers approximately 1600 square feet, based on observations of visually impacted soil in four borings that occurred at varying thicknesses and depths. In boring SRB-99, visually impacted soil extends from 16 to 22 feet bgs (the bottom of the

boring); in contrast, visually impacted soil was observed in boring SRB-75 over a 3-inch interval that extends from 18.75 to 19 feet bgs (Table 11).

The second area is west of the former pipeline and is estimated to cover an area of about 7,800 square feet; the presence of visually impacted soil in this area was observed in 20 borings. Specifically, visually impacted soil was observed in boring SRB-53 starting at a depth of about 1 foot bgs; visually impacted soil was observed in nearby borings SRB-68, SRB-69, SRB-78, and SRB-79 starting at depths of 3 feet and 4 feet bgs (Table 11). In other borings, no visually impacted soil was observed until at least 10 feet bgs.

5.2 SOIL ANALYTICAL RESULTS

The analytical results for soil are compared relative to published criteria, where applicable. These criteria described below, are general, and serve as a benchmark to initially evaluate analytical data and identify potential constituents of concern (COCs).

Metals in soil are naturally-occurring, and their presence is not necessarily the result of anthropogenic impacts. To initially evaluate the presence of metals, concentrations were compared to the following criteria:

- Waste Classification Criteria: Total threshold limit concentrations (TTLC) and soluble threshold limit concentrations (STLCs) are used to classify material as hazardous or non-hazardous for disposal purposes. TTLCs and STLCs are codified in the California Code of Regulations (CCR), Title 22, Section 66216.24. These criteria are not strictly applicable to in-place soil; however, they are used as a tool to evaluate whether additional evaluation is warranted. For screening purposes, a value 10 times the metal's respective STLC is used to provide an initial evaluation of whether a soil could be classified as a hazardous waste (analytical testing is required to ascertain the actual soil classification for disposal). TTLCs and STLCs are listed in Table 5.

- Preliminary Remediation Goals: Preliminary remediation goals (PRGs) are health-based criteria that have been established by the U.S. Environmental Protection Agency, Region 9 (U.S. EPA, 2000). These criteria are used to initially screen metals (and other constituents, such as PAHs) in environmental media, and can be used to trigger further evaluation. For screening purposes, metals concentrations are compared to residential PRGs. However, as stated in Section 2.1, a potential future site use under consideration includes a commuter rail station and commercial and/or mixed use redevelopment. Therefore, PRGs for industrial/commercial site use also are used in evaluating the metals data. PRGs for metals are listed in Table 5.

- Background Concentrations: Where site data for metals do not appear consistent with PRGs, additional scrutiny of the data was performed to evaluate whether detected metal

concentrations likely represent background or should be identified as COCs. For this evaluation, a metal was considered to be present at a background concentration if sufficient data were available to demonstrate that the lateral and vertical distribution of metals concentrations across the site were similar.

Similarly, concentrations of PAHs, BTEX, and MTBE in soil were compared to residential and commercial/industrial PRGs; these PRGs are presented on Table 7 for PAHs and Table 8 for BTEX and MTBE. As an initial assessment of the potential for these organic constituents to migrate to groundwater, their concentrations also were compared to the generic soil screening levels (SSLs) in the U.S. EPA PRG table. The SSLs were developed by the U.S. EPA using default values in standardized equations, and are presented for two cases: 1) a dilution attenuation factor (DAF) of 20 is used to account for natural processes in the subsurface that would reduce soluble constituent concentrations between the source (soil) and the receptor (groundwater); and, 2) no dilution or attenuation of the constituents would occur between the soil and groundwater (DAF of 1). It is reasonable to assume that some dilution and attenuation of constituents detected in soil at the site would occur; however, to be conservative, site data is compared to the range of SSLs using both DAF assumptions. In this report, the SSL using a DAF of 20 is referred to as SSL_{20} and the SSL using a DAF of 1 is referred to as SSL_1.

In addition to the quantitative criteria discussed above, concentrations of metals, PAHs, BTEX, and MTBE in soil are discussed based on the frequency of detections and their vertical distribution.

There is no specific screening criteria for petroleum hydrocarbons. Therefore, petroleum hydrocarbon data also are discussed based on relative concentrations, location, frequency, and vertical distribution.

5.2.1 Metals

The analytical results for metals in soil samples are summarized in Table 5. Where detected, metals concentrations in soil were less than their respective TTLC and generally less than 10 times the STLC in all of the soil samples, with the exception of lead in shallow soil samples (at 1.0 feet bgs) from SRB-32 (57 mg/kg), SRB-39 (77 mg/kg), and SRB-40 (110 mg/kg); 10 times the STLC concentration for lead is 50 mg/kg. Lead was not detected above laboratory reporting limits or at low concentrations in deeper soil samples at each of these boring locations. On a site-wide basis, the 95% upper confidence limit of the arithmetic mean concentration (95% UCL) for lead is 22, which is below 10 times the STLC.

Concentrations of all metals detected in soil samples also were below both residential and industrial PRGs, with the exception of arsenic, which was consistently detected above its residential and industrial PRG of 0.39 and 2.7 mg/kg, respectively, and thallium, which was consistently detected at a concentration above its residential PRG of 5.2 mg/kg (but well below its industrial PRG of 130 mg/kg). These two metals are discussed below.

Arsenic was consistently detected at concentrations comparable to background concentrations for the site (concentrations ranged from less than 0.5 to 7.6 mg/kg)[3], except at boring locations SRB-40 and SRB-41. At these locations, arsenic detections ranged between not detected (detection limit of 5 mg/kg) and 27 mg/kg. Higher arsenic concentrations in these borings were detected in samples collected at depths of 4.5 and 7.5 feet bgs in boring SRB-40, and at depths of 1, 4, 5, and 7.5 feet bgs from boring SRB-41. These borings are located near the western site boundary in the central portion of the site and approximately at the location of a former oil trap and area where discolored soil was observed during site reconnaissance in 1992.

The arsenic carcinogenic residential PRG (0.39 mg/kg), which corresponds to a theoretical excess lifetime cancer risk of one-in-one million ($1x10^{-6}$), is often lower than naturally-occurring background concentrations in soil. Since U.S. EPA does not require remediation to reduce concentrations to values below natural background levels, U.S. EPA Region 9 has, at times, used the non-cancer residential PRG (22 mg/kg) to evaluate sites, recognizing that this value may be above background, yet still falls within the range of soil concentrations (0.39 to 39 mg/kg for residential land use) that equate to U.S. EPA's acceptable cancer risk range of $1x10^{-6}$ to $1x10^{-4}$. U.S. EPA has indicated that risk values in the range of 10^{-6} to 10^{-4} may be acceptable, depending on factors that include the size and nature of the exposed population, with 10^{-6} as a nominal threshold of concern for exposures to the general public. Although the concentrations of arsenic detected at SRB-40 and SRB-41 are below or near the non-cancer PRG and fall within the acceptable cancer risk range, these borings are near a former oil trap and discolored soil, and concentrations of arsenic in soil at these locations are above background and likely represent a localized environmental impact from historical site operations.

[3] The range in concentrations of arsenic at the site is consistent with studies conducted in California to assess naturally-occurring arsenic concentrations. The Kearny Foundation of Soil Science (Kearney, 1996) reports naturally-occurring arsenic at concentrations ranging between 0.6 and 11 mg/kg. A study conducted by the Lawrence Berkeley National Laboratory in the East Bay Hills showed background concentrations in soil (using the 95% upper confidence limit) ranging between 9.3 and 31 mg/kg for different geologic formations.

Thallium concentrations across the site are consistent laterally and vertically. These consistent concentrations indicate that this metal is present at its background concentration for this area.

Based on these data, there is no environmental impact from metals at the site, with the exception of arsenic at borings SRB-40 and SRB-41.

5.2.2 Petroleum Hydrocarbons

The analytical results for petroleum hydrocarbons in soil samples are summarized in Table 6 and presented on Figure 9; the results are discussed herein by petroleum characterization.

Total petroleum hydrocarbons characterized as gasoline

Twenty-two soil samples collected from within the fenced enclosure (including a sample from IC-B6 collected by Industrial Compliance in 1992; Figure 7) were analyzed for TPHg. Of these, TPHg was detected only in one sample from each of two borings (SRB-73 and SRB-96) at concentrations of 2.5 mg/kg in the sample from 3 feet bgs and 13 mg/kg from the surface sample at 0.5 feet bgs, respectively (Figure 9). At each sample location, no TPHg was detected above the laboratory detection limit in the next deeper sample.

Total petroleum hydrocarbons characterized as diesel

Soil samples were collected throughout the site for analysis of TPHd from depths up to 27.5 feet bgs (Figure 9 and Table 6). TPHd detected at the site are degraded, based on its chromatographic fingerprint; these results are consistent with the fact that the primary facilities and operations at the site were decommissioned/discontinued more than 40 years ago. Site-wide detections are primarily limited to shallow soil.

Site-Wide

Site-wide (that is, not including samples collected in the northwestern and fenced enclosure areas – see Figure 5 for designation of these two areas), TPHd concentrations ranged from less than laboratory reporting limits to 1,600 mg/kg. The highest TPHd concentrations were detected in samples from borings SRB-21 (1,600 mg/kg), SRB-36 (430 mg/kg), and SRB-40 (990 mg/kg). Borings SRB-21 and SRB-36 are located near a former oil trap near the western site boundary; boring SRB-40 is located south of the oil trap and near the location where discolored surface soil was observed by Geomatrix in 1992. The highest TPHd concentrations in SRB-36 and SRB-40 were detected only in shallow soil (within 1 foot bgs). The highest TPHd concentration in boring SRB-21 was detected in the sample collected at 7 feet bgs

(Figure 9). At this location, TPHd concentrations decreased with depth and were not detected above the laboratory reporting limit in the sample from 13.5 feet bgs.

Northwestern Area

In the northwestern area of the site, the highest concentrations of TPHd were detected in soil samples from the pipeline excavation and near the former 3000-bbl AST. Along the pipeline alignment (Figure 9), TPHd was detected in the uppermost samples (that is, within 0.5 foot bgs) at concentrations ranging between non-detect (PL-09) and 4,400 mg/kg (PL-12). In the 1-foot sample from PL-12L, TPHd was detected at a concentration of 16,000 mg/kg. Deeper samples collected along the alignment indicated that concentrations generally decreased with depth, except at boring location PL-12, where TPHd was detected in the 3-foot sample at a concentration of 1,100 mg/kg; the 5-foot sample from PL-12L contained TPHd at a concentration of 3,700 mg/kg.

Also in the northwestern area, selected soil samples were collected from borings where visually impacted soil was observed; the borings and sample depths are presented on Table 6. Boring locations and analytical results are shown on Figure 9. The analytical results indicated that samples collected above and below the visually impacted soil generally contained relatively lower concentrations of TPHd, where detected. Within the area of visual impact, TPHd concentrations ranged up to 16,000 mg/kg (SRB-100L located near the former 3000-bbl AST). Other elevated concentration samples (that is, above 1,000 mg/kg for the purpose of this discussion) were SRB-51 at 19.5 feet bgs (8,500 mg/kg), SRB-75 at 18.5 feet bgs (1,200 mg/kg), SRB-88L at 8 feet bgs (1,400 mg/kg), SRB-99 at 19.5 feet bgs (1,300 mg/kg), and SRB-100 at 7 feet bgs (1,800 mg/kg). However, in other borings located in the northwestern area of the site, TPHd concentrations generally were lower; TPHd concentrations in samples collected from other borings within visually impacted soil (SRB-53L, SRB-79L, SRB-80, SRB-81, SRB-83, SRB-88, SRB-90, SRB-91, and SRB-93) ranged between non-detectable to 350 mg/kg.

The analytical results suggest that the areas of the pipeline and the former 3000-bbl AST may have been potential source areas for petroleum in soil.

Fenced Enclosure

Within the fenced enclosure, the highest concentration of TPHd was detected in shallow soil samples collected from beneath the former storage trailer (SRB-70 at 1200 mg/kg in the sample collected at 0.5 foot bgs; Figure 9) and AST (SRB-96 at 2,700 mg/kg in the sample collected

from 0.5 foot bgs and SRB-73 at 440 mg/kg in the sample collected from 3 feet bgs). In SRB-70 and SRB-73, concentrations of TPHd decreased by an order of magnitude or more in the next deeper sample; no TPHd was detected above the laboratory detection limits of 1 mg/kg in the two deeper soil samples from SRB-96.

Total petroleum hydrocarbons characterized as motor oil

Site-Wide

Site-wide, TPHmo concentrations ranged from less than the laboratory reporting limit to 1,700 mg/kg (boring location SRB-40). Similar to TPHd, TPHmo is generally degraded, as shown by laboratory chromatograms, and is present in shallow soil. The highest TPHmo concentrations were detected in the shallow soil samples (within approximately 1 foot bgs) near the former oil trap from borings SRB-21 (510 mg/kg) and SRB-36 (780 mg/kg), and near the location of discolored soil at SRB-40 (1,700 mg/kg). Additionally, an elevated concentration of TPHmo was detected in a composite sample from SRB-20, which is in the southwestern area of the site near a former rail spur; however, the magnitude of this concentration could not be replicated in discrete samples from this location.

Northwestern Area

The distribution of TPHmo in the northwestern area of the site is similar to that of TPHd. The maximum concentrations of TPHmo detected in visually impacted soil sample were 7,600 mg/kg from SRB-51 at 19.5 feet bgs, 5,100 mg/kg from SRB-100 at 7 feet bgs, and 15,000 mg/kg from SRB-100L at 8 feet bgs. TPHmo generally was absent or present at low concentrations in soil samples collected from above and below the visually impacted areas. Along the pipeline, elevated concentrations of TPHmo generally were present in the shallowest samples (0.5 and 1 foot bgs), except at PL-01, PL-06, PL-12, and PL-12L.

Fenced Enclosure

Within the fenced enclosure, the distribution of TPHmo also is similar to that of TPHd. The highest concentrations of TPHmo (5,600 mg/kg and 3,300 mg/kg) were detected in shallow soil beneath the former storage trailer (boring SRB-70 in the sample collected from 0.5 foot bgs) and AST (boring SRB-96 in the sample collected from 0.5 foot bgs), respectively. At boring location SRB-70, the concentration of TPHmo decreased to 500 mg/kg in the sample collected at 3 feet bgs and was not detected above the laboratory detection limit of 50 mg/kg in the 5-foot sample at this location. At SRB-96, no TPHmo was detected in the 3- ad 5-foot samples. TPHmo also was detected at a concentration of 700 mg/kg in the 1-foot soil sample from

SRB-39. The concentration of TPHmo decreased in the 4.5-foot soil sample from SRB-39 to 51 mg/kg.

5.2.3 Polynuclear Aromatic Hydrocarbons

The analytical results for PAHs are summarized on Table 7.

Site-Wide

Site-wide PAHs have been detected only in samples from boring SRB-21 and SRB-32. At these locations, the detected PAH concentrations are well below their respective residential and industrial PRGs, except for benzo(a)pyrene, benzo(b)flouranthene, and indeno(1,2,3-cd)pyrene in the 1-foot sample from SRB-32 (Table 7). Benzo(a)pyrene was detected in the SRB-32 soil sample at a concentration of 0.526 mg/kg; this sample also contained 0.582 mg/kg benzo(b)fluoranthene and 0.455 mg/kg indeno(1,2,3-cd)pyrene. These detections are above the residential PRGs for these constituents. However, only the concentration of benzo(a)pyrene in this sample was above its industrial PRG of 0.13 mg/kg. No PAHs were detected in the soil sample from 4.5 feet bgs in boring SRB-32.

Site-wide no PAHs were detected above their respective SSL_{20}. The concentrations of certain PAHs in some samples collected in the upper foot are above the SSL_1; however, deeper samples collected at these locations do not contain PAHs at concentrations above this more conservative SSL, indicating that PAHs are relatively insoluble and immobile at the site.

Northwestern Area

Within the northwestern area of the site, PAHs, where detected, were at concentrations well below their respective PRGs, with the exception of several samples along and near the pipeline alignment. Specifically, certain PAHs were detected in samples from SRB-51, PL-03, PL-12 and PL-12L above their residential PRGs (Table 7). However, no PAHs were detected above their industrial PRGs except for benzo(a)pyrene and benzo(a)anthracene in the 0.5 foot sample from PL-12 and benzo(a)pyrene in the 3 foot sample at this same location. Benzo(a)pyrene was detected at a concentration of 4 mg/kg and benzo(a)anthracene was detected at a concentration of 4.8 mg/kg in the shallow soil sample from PL-12; the industrial PRGs for these PAHs are 0.13 and 1.3 mg/kg, respectively. The concentration of benzo(a)pyrene in the 3-foot sample from PL-12 was 0.29 mg/kg.

Within the northwestern area of the site, no PAHs were detected above their respective SSL_{20}, with the exception of benzo(a)anthracene in the sample collected from PL-12 at 0.5 foot bgs.

In this sample, benzo(a)anthracene was detected at a concentration of 4.8 mg/kg (the SSL_{20} is 2 mg/kg); however, no benzo(a)anthracene was detected in the samples collected at 1.5 and 3 feet at this location. These results indicate that PAHs are not mobilized in the subsurface. Additionally, although some shallow samples (within 1 foot bgs) contained PAHs above their respective SSLs, assuming a DAF of 1, no samples from below 1 foot bgs contained PAHs above the more conservative SSL_1. These results reinforce that PAHs are relatively insoluble and immobile.

Fenced Enclosure

Within the fenced enclosure, PAHs were detected only in the 1.5-foot sample from boring SRB-27. In this sample, none of the detected PAHs were present at concentrations greater than their respective residential PRGs. Additionally, none of the detected PAH concentrations exceeded the SSLs. No PAHs were present in the deeper sample (4.5 feet bgs) at boring SRB-27.

5.2.4 Volatile Organic Compounds

Soil samples have been primarily analyzed for BTEX and MTBE; selected soil samples also have been analyzed for CVOCs. No benzene, MTBE, or CVOCs have been detected in any of the soil samples analyzed. Ethylbenzene was detected in one sample only, in the surface soil sample from depths of 1 and 2 feet bgs at boring SRB-75 (in the northwestern area) at a concentration of 0.011 mg/kg. No ethylbenzene was detected in the deeper sample from this location. Xylenes also were detected in two soil samples from SRB-75 at a maximum concentration of 0.051 mg/kg (from the sample collected at 1 foot bgs). No xylenes were detected in the 5-foot sample from this location. Toluene, where detected, is present at low concentrations; specifically, detections of toluene range up to 0.042 mg/kg (SRB-100). The concentrations of detected constituents are well below their respective screening criteria (Table 8).

5.2.5 Results of Leachability Testing

The results of leachability testing are presented in Table 9. These tests were performed using the WET procedure (Sections 3.3 and 4.1) modified to use deionized water as the extract. As indicated by the results, no TPHmo, or PAHs leached from the soil matrix using the WET procedure for samples analyzed using silica gel cleanup[4]; silica gel cleanup removes non-

[4] The leachability tests for TPH and PAHs from samples SRB-36 and SRB-32, respectively, were performed one day beyond their hold times.

hydrocarbons that would otherwise interfere with measurement of petroleum hydrocarbons. TPHd results indicated that this constituent leached from soil under the conditions of the WET procedure at concentrations up to 690 µg/l (for the 1-foot sample PL-12L with a TPHd concentration of 16,000 mg/kg). As previously discussed, the WET procedure is aggressive compared to in situ conditions, as it involves shaking a sample within the extract for 48 hours. The WET results for TPHd, TPHmo, and PAHs suggest that these constituents have limited, if any, solubility under in situ conditions.

5.3 GROUNDWATER ANALYTICAL RESULTS

5.3.1 Grab Groundwater Analytical Results

As discussed in Section 3.4, grab groundwater sampling was used at the site to provide initial information on the possible presence of chemical constituents in groundwater. Samples that are collected using this methodology (described in Appendix A) generally provide conservative data that are used for screening purposes; these results can be further evaluated using monitoring wells, which provide longer-term, replicable data. Analytical results from monitoring wells that were installed at the site in 2001 are presented in Section 5.3.2. Results from grab groundwater sampling are discussed below by class of constituents.

Petroleum Hydrocarbons

Analytical results for petroleum hydrocarbons analyses for grab groundwater samples collected by Geomatrix are summarized in Table 10. Analytical results from the grab groundwater samples collected by IC are presented in Table 3. Grab groundwater samples collected upgradient of the property boundary (SRB-58 through SRB-61), within the fenced enclosure (SRB-62) and in the vicinity of the former 10,000-gallon gasoline UST (SRB-55) were analyzed for TPHg. No TPHg was detected in any of these samples.

Analysis for TPHd and TPHmo was conducted on both filtered and unfiltered samples for selected samples. Studies have shown that non-dissolved petroleum that adheres to sediment entrained in grab groundwater samples may be a source of bias with TPHd, TPHmo, and other extractable petroleum hydrocarbon analyses (MADEP, 2001). Such sediment commonly is present in grab groundwater samples collected from borings located in areas where petroleum hydrocarbons may be present in soil (Foote, et al, 1998). Although the results for both filtered

and unfiltered samples are discussed herein, analytical results from filtered grab groundwater samples may be more representative of the actual presence of dissolved-phase constituents in groundwater. The results for both unfiltered and filtered samples are presented in Table 10.

Site-Wide

Site-wide, petroleum hydrocarbons have only been detected in the grab groundwater sample from boring SRB-36. This boring is located near a former oil trap on the west-central site boundary. At this location, TPHd was detected in the unfiltered sample at a concentration of 67 µg/l; however, TPHd was not detected in the duplicate sample from this location or in the filtered sample. No TPHmo was detected in the grab groundwater sample from this location.

Northwestern Area

Within the northwestern area of the site, grab groundwater samples were collected from 10 borings. Of these, TPHd was detected in grab groundwater samples from five borings: SRB-34, SRB-44, SRB-48, SRB-75, and SRB-77. These samples were collected in areas where visually impacted soil is present; analytical results indicate that petroleum hydrocarbons are present at varying concentrations within the visually impacted soil. The highest concentrations of TPHd in unfiltered samples were detected in borings SRB-44, SRB-48, SRB-75, and SRB-77 at concentrations of 13,000 µg/l, 46,000 µg/l, 4,100 µg/l, and 950 µg/l, respectively. The concentrations of TPHd detected in the unfiltered samples from borings SRB-44 and SRB-48 are greater than the solubility of fresh diesel in groundwater, which ranges approximately between 2,000 µg/l and 6,000 µg/l (CMDEP, 1996). Significantly lower concentrations of TPHd were reported for filtered samples, with a maximum concentration of 1,500 µg/l in SRB-48. The results from the filtered samples suggest groundwater impact from TPHd within the area where visually impacted soil is present.

Analytical results for TPHmo are similar to those for TPHd in that maximum concentrations were detected in samples from borings SRB-44 (12,000 µg/l), SRB-48 (38,000 µg/l), SRB-75 (3,900 µg/l), and SRB-77 (1,100 µg/l). Again, the reported results for the unfiltered samples indicated the presence of TPHmo above its solubility in water, which is approximately 1,000 µg/l (CMDEP, 1996), suggesting non-dissolved petroleum that adheres to sediment was present in the grab groundwater samples. Filtered samples contained significantly lower TPHmo concentrations (360 µg/l in SRB-44, 950 µg/l in SRB-48 and non-detect in both SRB-75 and

SRB-77) that likely are more representative of groundwater conditions within the area of impacted soil.[6]

Fenced Enclosure

Within the fenced enclosure, TPHd was detected near the former 230-gallon UST in the grab groundwater sample from boring IC-B6 at a concentration of 31,000 µg/l. Again, this concentration exceeds the solubility of diesel in water. Analysis of subsequent grab groundwater samples collected within the fenced enclosure from SRB-39 and SRB-74 did not replicate this result; no TPHd was detected in these samples.

Polynuclear Aromatic Hydrocarbons

No PAHs were detected in the grab groundwater samples.

Volatile Organic Compounds

Site-Wide

Site-wide, VOCs were not detected in the grab groundwater samples, except for acetone (known to be a common laboratory contaminant), which was detected in the grab groundwater sample from SRB-30, which is located immediately northwest of the fenced enclosure (Table 10 and Figure 5). No benzene or toluene were detected in any of the site-wide borings, and ethylbenzene and xylenes only were detected at low concentrations from grab groundwater samples collected from borings SRB-59 and SRB-60, located near the upgradient site boundary. MTBE was detected near the upgradient site boundary in borings SRB-58 (120 µg/l), SRB-59 (34 µg/l), SRB-60 (9.6 µg/l), and SRB-61 (6.5 µg/l). MTBE also was detected in boring SRB-55, which is located near the former 10,000-gallon gasoline and diesel USTs (at a concentration of 2.8 µg/l).

Northwestern Area

BTEX was not detected in any of the 10 grab groundwater samples collected in the northwestern area of the site. MTBE was detected in this area at a maximum concentration of 3.3 µg/l in the grab groundwater sample from boring SRB-75.

[6] It should be noted that silica gel cleanup was conducted on both filtered and unfiltered samples from SRB-75, SRB-76 (unfiltered samples only), and SRB-77. Silica gel cleanup removes polar biogenic material, which otherwise is quantified in the petroleum hydrocarbon analysis. No TPHd or TPHmo were quantified in samples from these borings once the non-petroleum material was removed.

Fenced Enclosure

Only MTBE was detected above the laboratory detection limit in grab groundwater samples collected within the fenced enclosure. Concentrations of MTBE ranged between 9.8 µg/l in the grab groundwater sample from boring SRB-39 to 77 µg/l in SRB-42. SRB-42 is located at the eastern boundary of the fenced enclosure, and is relatively downgradient from the MTBE impact to groundwater previously identified along the eastern, upgradient site perimeter.

5.3.2 Monitoring Well Analytical Results

Monitoring well analytical results are presented on Tables 3 and 4. Historically, TPHd was detected at a concentration of 400 µg/l in the sample from well RBMW-2 in a sampling event by the RWQCB in 1990. Additionally, tetrachloroethene (PCE) was detected in this well at a concentration of 2.5 µg/l. PCE was not detected in the grab groundwater sample from boring SRB-31; this boring is adjacent to and downgradient of monitoring well RBMW-2 (Figure 5). No other detections of CVOCs, petroleum hydrocarbons, and petroleum-related constituents were reported in the samples from the RWQCB wells. Additionally, no petroleum hydrocarbons or related constituents were detected in groundwater samples from wells GW-24 and GW-27 during multiple monitoring events, except for one detection of benzene in a sample from monitoring well GW-27 in July 1989 (7 µg/l), and ethylbenzene in the sample from GW-24 in February 1990 (0.3 µg/l). PCE was detected at concentrations of 7.6 µg/l and 0.8 µg/l in groundwater samples from GW-24 and GW-27, respectively, in April 1988. No PCE was detected in a grab groundwater sample from borings SRB-20 and SRB-37, located near and approximately downgradient from wells GW-24 and GW-27 (Figure 5).

Four groundwater sampling events (December 2001; and March, June and September 2002) have been conducted from five monitoring wells installed by Geomatrix in September 2001. These wells are installed upgradient of the site (SRMW-07 and SRMW-08), downgradient of the northwestern area of the site (SRMW-05 and SRMW-06), and within the northwestern area of the site (SRMW-10). Overall, the groundwater monitoring data has been consistent over the monitoring events conducted to date. Analytical results indicate that only MTBE has been detected in the upgradient monitoring wells, at a maximum concentration of 11 µg/l. A one-time detection of TPHd also was reported in a groundwater sample from upgradient well SRMW-07 in June 2002; however, this detection is considered non-detect given the detection

of TPHd in an equipment blank during that particular sampling event,[7] and the result was not replicated in the subsequent sampling event.

6.0 DISCUSSION OF SITE CONDITIONS

The investigative results for constituents detected at the site have been compared to published criteria, where applicable; these criteria serve as a benchmark to initially evaluate the data and identify potential constituents of concern. Based on the initial evaluation of data, we have drawn the conclusions discussed below.

Within the site, chemical constituents primarily have been detected at discrete locations. Metals, where detected, are present generally at low concentrations that do not pose a risk to human health based on comparison to PRGs and expected background concentrations (discussed in Section 5.1), with the exception of arsenic, as discussed below. Similarly, PAHs, where detected, generally are present at concentrations that do not pose a risk to human health or a long-term risk of impact to groundwater (as supported by their general absence in deeper soil and groundwater), with the exception of PAHs along the former pipeline alignment. Varying concentrations of petroleum hydrocarbons in soil have been detected across the site; impact to groundwater from petroleum hydrocarbons is limited. Based on the investigative results, the following COCs and environmental conditions at the site have been identified:

- MTBE in groundwater;
- Arsenic in soil in the west-central area;
- Petroleum hydrocarbons in soil within the fenced enclosure; and,
- Petroleum hydrocarbons and PAHs in soil, and petroleum hydrocarbons in groundwater in the northwestern area.

A site conceptual model is presented and each of these conditions is discussed below.

6.1 CONCEPTUAL SITE MODEL

A conceptual site model (model) has been developed to assist with evaluating the identified environmental conditions at the site. This model is illustrated on Figure 10. The model illustrates the various potential sources of environmental impact that have been investigated at the site, our understanding of subsurface utilities, and the generalized geology and

[7] Based on the U.S. EPA Contract Laboratory National Data Validation Guidelines for Organic Data Review (U.S. EPA, 1994).

hydrogeology at the site. A detailed cross-section that illustrates subsurface conditions and the locations of grab groundwater and monitoring well sampling locations is presented as Figure 11. The conceptual site model in conjunction with the detailed site cross-section illustrates the following items that are pertinent to the discussion of the identified COCs and environmental conditions:

- Groundwater flow direction is to the west and southwest.
- Depth to groundwater fluctuates between approximately 8 and 17 feet btc within the northwestern area, as measured in monitoring wells, SRMW-05, SRMW-06, and SRMW-10 (approximate elevations of 141 to 132 feet msl; Table 1).
- Visually impacted soil that contains petroleum hydrocarbons is present within the zone of groundwater fluctuation (Table 11 and Figure 11).
- A City of Santa Rosa sanitary sewer line traverses the site north-south. Within the northwestern area of the site, the approximate invert elevation of the pipe is 144 feet msl, above the highest water level elevation, as measured in the monitoring wells, in the northwestern area.
- A City of Santa Rosa storm sewer line traverses east-west in the northwestern area and discharges into Santa Rosa Creek. The depth of the line is not known, and likely is below the groundwater surface during some times of the year.
- An inactive water-producing well is located on the property to the west of the site. The depth of the well and the interval from which it pumps, when operating, is not known; however, this well will be destroyed during the upcoming property redevelopment (Section 2.3.4).

6.2 MTBE IN GROUNDWATER

The results of sampling to evaluate the presence of MTBE in groundwater indicate that concentrations of MTBE are highest in borings located to the east of the site boundary (upgradient) and decrease across the site. Additionally, MTBE has not been detected in soil samples collected within the fenced enclosure (a potential source area based on the apparent handling of gasoline in this area) or at significant concentration in the grab groundwater samples collected near the former 10,000-gallon gasoline UST. These results indicate that a source of MTBE does not exist on site and that MTBE is migrating onto the site from an upgradient, off-site source. As discussed in Section 2.3.5, a fuel release has occurred at a location upgradient of the site (Ochipinti Gas Station located at 210 5th Street). We understand that the distribution of fuel-related constituents in groundwater from this release, including

MTBE is not fully defined. It is likely that this fuel release is the source of MTBE in groundwater beneath the site.

6.3 ARSENIC IN SOIL

Concentrations of arsenic detected in soil at the site are consistent and appear to be background (Section 5.2.1), with the exception of arsenic concentrations detected in soil samples from borings SRB-40 and SRB-41. As discussed in Section 5.2.1, concentrations of arsenic at the site, including the detections at borings SRB-40 and SRB-41, are primarily below the non-cancer residential PRG, and within the U.S. EPA's acceptable cancer risk range. However, the elevated concentrations of arsenic specific to SRB-40 and SRB-41 likely represent a localized impact from historical operations at the nearby oil trap at these locations.

6.4 PETROLEUM HYDROCARBONS IN SOIL IN THE FENCED ENCLOSURE

TPHd and TPHmo have been detected within the fenced enclosure in shallow soil (upper 3 feet) primarily near the former storage trailer, and within the upper 1 foot near the former AST. Only low to non-detectable concentrations of TPHd and TPHmo are present in deeper samples. No aromatic constituents (e.g., benzene) were detected. PAHs, where detected, were present at concentrations below their respective PRGs, except for the PAH detections in the 1-foot sample at SRB-32; no PAHs were detected in the deeper sample at this location. The presence of TPHd and TPHmo in shallow soil appears to be due to incidental surface spillage and is limited in vertical extent. TPHd and TPHmo were not detected in grab groundwater samples collected from within the fenced enclosure, except for the detection of TPHd reported in the sample from IC-B6; this detection was not replicated in additional grab groundwater samples collected near IC-B6. Based on the results, discrete impacts to shallow soil have occurred as a result of operations within the fenced enclosure.

6.5 PETROLEUM HYDROCARBONS AND PAHS IN SOIL, AND PETROLEUM HYDROCARBONS IN GROUNDWATER IN THE NORTHWESTERN AREA

6.5.1 Soil

Field observations and analytical results indicate that soil that contains petroleum hydrocarbons is present at depth and below the water table within the northwestern area of the site (Figures 8, 9 and 11; Tables 6 and 11). The detections of petroleum hydrocarbons within visually

impacted soil[8] are variable; concentrations detected near the former location of the 3000-bbl AST ranged between 120 mg/kg to 16,000 mg/kg for TPHd and 130 mg/kg to 15,000 mg/kg for TPHmo. Near the former oil pipeline, concentrations of TPHd and TPHmo in soil samples ranged up to 16,000 mg/kg and 22,000 mg/kg, respectively. The depth of the petroleum-containing soil is defined at only some locations in the pipeline alignment.

The former pipeline appears to be a source area based on the concentrations and distribution of petroleum hydrocarbons and PAHs along its alignment. An additional potential source area appears to be near and north of the former 3000-bbl AST, based on results from SRB-100 and SRB-100L. The absence of aromatic constituents (e.g., benzene) in the soil samples, low concentrations of PAHs, where detected, and the generally degraded nature of the detected TPHd and TPHmo, as demonstrated by the laboratory chromatograms, is consistent with a release of diesel- and/or oil-range petroleum product to the site many years ago.

6.5.2 Groundwater

The results of grab groundwater samples indicate that only localized impact to groundwater has occurred (based on the results of filtered grab groundwater samples, which provide a better representation of actual groundwater impacts relative to unfiltered grab groundwater samples [Section 5.3]). Specifically, localized areas of impact identified within the northwestern area include: 1) near the western site boundary, as defined by SRB-48; and, 2) near the former 3000 bbl AST, as defined primarily by SRB-44.[9] The localized nature of the groundwater impacts is supported by data from other grab groundwater samples and monitoring well samples. Approximately downgradient and within 40 feet of SRB-44, no TPHd or TPHmo were detected in the grab groundwater sample from SRB-47. *No TPHd or TPHmo has been detected in SRMW-05, located within 20 feet downgradient of petroleum-impacted soil, or in SRMW-10, which is located near, but possibly not directly downgradient, of impacted soil.*

The potential long-term leachability of petroleum to soil was evaluated using the WET procedure. The results indicated that low concentrations of TPHd could leach from soil with high concentrations of TPHd under the aggressive conditions imposed by the test. No TPHmo was detected in the WET extracts.

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[8] Visually impacted soil is present at two locations over a total area of approximately 9,400 square feet, and is present below the water table, which has been measured at depths ranging from approximately 8 to 17 feet bgs in monitoring wells in the northwestern. At most boring location, visually impacted soil was not encountered until at least 10 feet bgs.

[9] TPHd also was detected in samples from SRB-75 and SRB-77; however, no TPHd was detected in filtered samples that were prepared with a silica gel cleanup prior to analysis.

No active water-producing wells that likely would hydraulically influence the site are present in the nearby vicinity (that is, within 1000 feet of the site; Figure 4). As shown on the site conceptual model, an inactive well reportedly exists west (and downgradient) of the site; construction details of this well are not known. However, this well will be destroyed during redevelopment of the property (personal communication between N. Jellison, NWPRA and John Stewart of John Stewart Company).

Also downgradient of the site, Santa Rosa Creek is identified as a potential receptor. It appears unlikely that site utilities would serve as preferential pathways for dissolved constituents in groundwater to the Creek or other off-site locations. The sanitary sewer line that traverses the site north-south is located east (upgradient) of the area of impacted soil and is buried at a depth above the seasonal groundwater table. The storm sewer line traverses east-west near some boring locations where impacted soil was observed and near monitoring well SRMW-05. The depth of the storm sewer in this area is not specifically known and likely is below the groundwater surface, at least at some times of the year. As such, the storm sewer line could be a conduit for dissolved constituents in groundwater. However, data from well SRMW-05 suggest that dissolved-phase petroleum is not present at detectable concentrations near the storm drain. Data from this well over a year of monitoring indicate that groundwater is not impacted. Given the absence of dissolved constituents, it is reasonable to conclude that the storm drain does not act as a preferential pathway, even if it is below the groundwater surface during times of the year.

6.6 SUMMARY AND CONCLUSIONS

In summary, MTBE has been detected at low concentrations beneath the site and appears to originate from an off-site source. Therefore, MTBE is not a COC for the site. The soil and groundwater data indicate that impacts to soil and localized impact to groundwater have been detected on site. These impacts are from arsenic, TPHd, TPHmo, and PAHs, which are identified as COCs for the site. Specifically,

- arsenic has been detected at concentrations exceeding background in a localized area (borings SRB-40 and SRB-41);
- discrete TPHd and TPHmo impacts have occurred to shallow soil within the fenced enclosure;
- elevated concentrations of TPHd and TPHmo have been detected in shallow soil beneath the former pipeline alignment and some PAHs are present above their respective PRGs;

- TPHd and TPHmo are present in soil in the northwestern area; and
- TPHd and TPHmo have been detected in grab groundwater samples collected in the area where soil containing petroleum hydrocarbons is present. These constituents are not present in groundwater within 20 feet of the petroleum-impacted soil.

Degraded TPHd and TPHmo, such as that found at the site, are relatively immobile in the environment as demonstrated by the localized impact of TPHd and TPHmo to groundwater within the area of impacted soil, and leachability testing results. Therefore, it is not expected Santa Rosa Creek (located approximately 150 to 200 feet downgradient of the site), would be affected by TPHd and TPHmo detected on site.

7.0 SITE-SPECIFIC REMEDIAL ACTION OBJECTIVES

This section provides a basis for establishing a remedial action for the site based on the development and application of appropriate site-specific remedial action objectives for the identified COCs, which include arsenic, TPHd, TPHmo, and PAHs. In general, the goals for the remedial action are to provide long-term protection of human health, the environment, and beneficial uses of waters of the State in a cost-effective manner. The protection of human health, the environment, and the beneficial uses of waters of the State at the site can best be achieved by:

- Maintaining beneficial uses of groundwater;
- Maintaining site conditions that prevent migration of constituents from soil to groundwater at concentrations exceeding appropriate water quality objectives; and,
- Preventing exposure to constituents in soil above health-based criteria.

These criteria are discussed below relative to applicable regulations and development of remedial action objectives.

7.1 MAINTAINING BENEFICIAL USES OF GROUNDWATER

The highest potential beneficial use of groundwater at the site, as established in the Water Quality Control Plan for the North Coast Region (referred to as the Basin Plan, RWQCB, 2001), is domestic and municipal water supply. As required by State law, the RWQCB has established water quality objectives "which, in the Regional Water Board's judgment, are necessary for the reasonable protection of the beneficial uses and for the prevention of nuisance." (RWQCB, 2001). Based on conversations with the RWQCB, the water quality

objectives for TPHd and TPHmo in groundwater are 100 µg/l and 175 µg/l, respectively. These water quality objectives are achieved within 20 feet of the petroleum-impacted soil. However, the RWQCB has requested that these objectives be achieved on site. Therefore, remedial action at the site will be conducted with the goal of achieving these water quality objectives.

7.2 MAINTAINING SITE CONDITIONS THAT PREVENT MIGRATION OF CONSTITUENTS FROM SOIL TO GROUNDWATER AT CONCENTRATIONS EXCEEDING APPROPRIATE WATER QUALITY OBJECTIVES

As discussed in Sections 5.0 and 6.0, TPHd and TPHmo are present in surface and deeper soil at the site; PAHs have been detected at some locations where petroleum hydrocarbons are present. Based on the results of the investigations and known chemical properties, the degraded TPHd and TPHmo, which are primarily depleted of aromatic and PAH constituents, are not considered to be highly mobile, and no widespread impact to groundwater beneath the site exists as demonstrated by groundwater monitoring data, or is reasonably anticipated from petroleum hydrocarbons in soil at the site. However, as stated by the RWQCB in its April 16, 2001 letter to UPRR, the Basin Plan (RWQCB, 2001) calls for "The elimination of pollutant sources through...removal of contaminated soil to the extent practicable is the Regional Water Board's highest priority." This policy is articulated in the RWQCB's Resolution 93-59,[10] which is incorporated into the Basin Plan and was referenced in the April 2001 letter. This resolution further states that removal of contaminated soil to the extent practicable "will be based on impacts on the beneficial uses of affected waters as determined by reasonable monitoring or other investigation" and that, as practicable, the RWQCB will recognize the use of alternative cleanup techniques, such as in-situ bioremediation and passive remediation.

Monitoring over four quarters at the site suggests no impacts to groundwater from petroleum hydrocarbons above the water quality objectives established by the RWQCB. However, filtered grab groundwater samples suggest that localized impacts by TPHd and TPHmo may have occurred; no PAHs have been detected in grab groundwater samples. To mitigate these localized impacts, a remedial action could be designed for soil containing petroleum hydrocarbons (TPHd and TPHmo) that considers the results of the leachability testing (Section 5.2.5 and Table 9).

[10] Resolution 93-59 amending the Water Quality Control Plan for the North Coast Region to Include *an Interim Policy on the Regulation of Waste Discharges from Underground Petroleum Tank Systems.*

Results of the leachability testing are presented in Table 9. The post-extraction solutions were analyzed for TPHd and TPHmo. No TPHmo were detected (2000 and 2002 samples). Three of fourteen samples from 2002 had detections of TPHd in the post-extraction solution; there were no detections of TPHd in the 2000 extracts.[11] Two of the three detections exceeded the water quality objective of 100 µg/l for TPHd.

The results of this leachability testing can be used to make a conservative estimate of the threshold total TPHd concentrations that might produce exceedance of the water quality objective. This threshold would represent a cleanup standard for soil. The estimate by this method is conservative because the results of the modified WET tend to overestimate the concentration of TPHd that would occur in water that contacts the TPHd. As previously discussed in Section 3.3, the WET uses a fixed volume of water and disrupts the soil structure such that equilibrium partitioning will be achieved among the aqueous and non-aqueous phases present. Whereas, insitu, water migrates past the TPHd without disrupting the soil structure and without achieving equilibrium partitioning in the bulk of the water.

Using the results of leachability testing in 2002, we have estimated the threshold TPHd concentration by linear regression (Anderson, 1927). We performed a least-squares linear regression of total TPHd on WET TPHd with the regression line passing through the origin (Figure 12). For values reported as less than the detection limit, we substituted the detection limit (50 µg/l). We calculated upper and lower 95 percent confidence limits for the regression line. For the threshold concentration we used the lower confidence limit for total TPHd at a WET TPHd concentration of 100 µg/l, which was 1060 mg/kg.

As stated above, there were no detections of TPHmo in the WET extract. The maximum TPHmo concentration detected in the soil samples that underwent the WET procedure was 22,000 mg/kg. As indicated by the analytical results, higher concentrations of TPHmo generally were detected in the same samples that the higher TPHd concentrations were detected. Therefore, it is reasonable to assign the same threshold concentration for TPHd and TPHmo.

[11] For samples tested in 2002, these results are for post-extraction solutions prepared using EPA Method 3630, a silica gel cleanup. The Method 3630 removes non-hydrocarbons that would otherwise interfere with measurement of petroleum hydrocarbons using EPA Method 8015M.

Based on the above discussion, a remedial action at the site will be conducted to comply with the Basin Plan and Resolution 93-59 considering the threshold TPHd concentration calculated above, and assigning the same threshold TPHd concentration to TPHmo.

7.3 LONG-TERM PROTECTION OF HUMAN HEALTH

A comparison of specific constituents to residential and industrial PRGs was conducted as a screening-level health risk evaluation. Without a site-specific human health risk assessment, these screening criteria can be used as a remedial action objective, except for arsenic. As discussed in Section 5.2, metals in soil are naturally-occurring, and typical background concentrations for arsenic, an identified COC, are greater than their residential and industrial PRGs. Concentrations of arsenic at the site generally range up to approximately 8 mg/kg, which are consistent with published background concentrations (Section 5.2.1). Therefore, long-term protection of human health will be achieved at the site when constituent concentrations are less than residential PRGs and for arsenic, are less than background.

7.4 REMEDIAL ACTION OBJECTIVES

Based on the discussion presented above, the remedial action at the site will be designed to: 1) achieve water quality objectives on site, as set forth by the RWQCB; 2) comply with the Basin Plan and Resolution 93-59 considering the threshold TPHd and TPHmo concentration of 1060 mg/kg (Section 7.2); and long-term protection of human health using residential PRGs or background concentrations, as appropriate.

8.0 PROPOSED REMEDIAL ALTERNATIVE

The proposed remedial alternative was designed to address soil in the vadose (unsaturated) zone that contains TPHd and TPHmo above the threshold concentration of 1060 mg/kg, PAHs above residential PRGs, and arsenic above background concentrations.

The thickness of the vadose zone was assumed based on the depths at which saturated deposits typically were encountered during drilling and the depths at which grab groundwater samples were collected. As discussed in Section 2.3.3, saturated deposits typically were encountered at depths between 7 and 14 feet bgs in borings drilled between November and June; in September 2000, saturated deposits were observed between 11 and 20 feet bgs. Grab groundwater samples in September 2002 generally were collected with the top of the temporary well screen at 17 feet bgs. Based on this information, it is assumed that the vadose zone could extend to 17 feet bgs at this drier time of year.

Based on the above and the remedial action objectives (Section 7.4) the proposed program consists of:

1. removing shallow soil (to a depth of 1-foot bgs) at the locations where TPHd and TPHmo were detected in the fenced enclosure above 1060 mg/kg (SRB-70, SRB-71, and SRB-96);

2. excavating soil to a depth of approximately 10 feet bgs at SRB-21 over an area of 25 square feet to remove TPHd;

3. excavating soil to a depth of approximately 2 feet bgs at boring location SRB-36 over an area of approximately 25 square feet;

4. excavating soil to a depth of approximately 8 feet bgs at borings SRB-40 and SRB-41 over an area of approximately 25 square feet each to remove arsenic at concentrations greater that background;

5. excavating soil to a depth of approximately 1 foot below groundwater surface (not to exceed a maximum depth of 17 feet bgs) over an area of approximately 100 square feet at SRB-51 and pumping groundwater out of the excavated area;

6. excavating soil to a depth of approximately 10 feet bgs at SRB-88L and SRB-100 over an area of approximately 100 square feet each to remove TPHd and TPHmo at concentrations over 1060 mg/kg;

7. excavating soil along the pipeline to a depth of at least 4 feet below the bottom of the pipeline trench (and a depth of 5 feet near PL-12) or until the threshold concentrations for TPHd and TPHmo are achieved (to a maximum depth of 1 foot below groundwater surface);

8. installing an additional groundwater monitoring well along the site's western boundary at a location approximately downgradient of grab groundwater sampling location SRB-44 and borings SRB-99 and SRB-100; and,

9. conducting quarterly groundwater monitoring for one year from the newly-installed and existing wells, and semi-annually groundwater monitoring for an additional two years.

The locations of the proposed actions are shown on Figure 13. Approximately 300 cubic yards of in- place soil would be excavated. Assuming that the density of the soil is about 130 pounds per cubic foot, this in-place volume represents more than 500 tons of soil requiring disposal at a Class II disposal facility.

Soil excavation will be conducted using a backhoe, as possible, excavation sidewalls will be vertical, either shoring or staggered excavation techniques will be used to assure the integrity of the excavations.

It is anticipated that groundwater will enter the excavation at boring SRB-51. Groundwater would be pumped into a polyethylene tank. Sediments in the water will be allowed to settle, and the groundwater will be sampled to evaluate appropriate disposal. Given the low concentrations of dissolved TPHd and TPHmo in groundwater, where detected, it is assumed that the extracted groundwater can be disposed in the City of Santa Rosa sanitary sewer line, which traverses the site, with no treatment other than filtering.

Backfilling would be accomplished using control density fill (CDF) up to 10 feet bgs; imported select fill would be placed and nominally compacted from 10 feet bgs to ground surface. Other, shallower excavations will be backfilled with imported, select fill.

Prior to backfilling, confirmation soil samples will be collected as follows:

- One soil sample will be collected at the bottom of the discrete, shallow excavations at SRB-70, SRB-71, and SRB-96 and analyzed for TPHd and TPHmo.
- One soil sample will be collected from the bottom of the shallow excavation at SRB-36 and analyzed for PAHs.
- A total of five soil samples will be collected at the excavation at boring SRB-21; one sample will be collected at the bottom of the excavation and one sample will be collected at each of the sidewalls at a depth of about 7 feet bgs (where the highest TPHd concentration was detected). These samples will be analyzed for TPHd.
- A total of five soil samples will be collected from each of the excavations at SRB-40 and SRB-41; one sample will be collected from the bottom of the excavation and a sample will be collected on each sidewall at a depth of about 7.5 feet bgs, where the highest arsenic concentrations were detected.
- A total of six soil samples will be collected from each of the excavations at borings SRB-51, SRB-88L, and SRB-100; two of these samples will be collected along the excavation bottom and one sample along each of the sidewalls at a depth of approximately 8 feet bgs in SRB-88L, 10 feet bgs in the SRB-51 excavation and 8 feet bgs in the SRB-100 excavation (where the highest TPHd and TPHmo concentrations were detected samples from these excavations will be analyzed for TPHd and TPHmo.

9.0 IMPLEMENTATION OF THE RECOMMENDED ALTERNATIVE

Following regulatory approval of the proposed remedial alternative, UPRR will proceed with its implementation, including excavation contractor selection, coordination of drillers, and permitting. It is anticipated that it will require approximately 12 weeks to plan and implement the work. A remedial action implementation report could be submitted to the RWQCB six weeks following completion of the program.

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TABLE 1

SUMMARY OF WATER LEVEL ELEVATIONS

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Well ID[1]	Date	TOC[2] Elevation (feet msl)[3]	Depth-to-Water Measurement (feet TOC)[4]	Groundwater Elevation (feet msl)
SRMW-05	11/26/01[5]	149.05	11.38	137.67
	12/20/2001	149.05	8.30	140.75
	3/19/2002	149.05	9.92	139.13
	6/5/2001	149.05	14.76	134.29
	9/17/2002	149.05	16.74	132.31
SRMW-06	11/26/01[5]	149.71	14.64	135.07
	12/20/2001	149.71	11.17	138.54
	3/19/2002	149.71	11.94	137.77
	6/5/2002	149.71	16.89	132.82
	9/17/2002	149.71	18.49	131.22
SRMW-07	11/26/01[5]	151.25	11.93	139.32
	12/20/2001	151.25	8.66	142.59
	3/19/2002	151.25	10.03	141.22
	6/5/2002	151.25	14.07	137.18
	9/17/2002	151.25	16.70	134.55
SRMW-08	11/26/01[5]	152.29	9.40	142.89
	12/20/2001	152.29	7.55	144.74
	3/19/2002	152.29	9.15	143.14
	6/5/2002	152.29	11.13	141.16
	9/17/2002	152.29	12.47	139.82
SRMW-10	11/26/01[5]	150.26	12.06	138.20
	12/20/2001	150.26	8.13	142.13
	3/19/2002	150.26	9.43	140.83
	6/5/2002	150.26	14.11	136.15
	9/17/2002	150.26	16.65	133.61

Notes:

[1] Monitoring wells SRMW-05 and SRMW-06 are located west of the site on the Salvador Trust property, SRMW-07 and SRMW-08 are located east of the site on property owned by the NWPRA, and well MW-10 is located on the site.

[2] TOC = Top of well casing.

[3] Feet MSL = feet above mean sea level (NAD 83', Zone 2, State of California).

[4] Feet TOC = measured in feet below TOC.

[5] Water level measured prior to well development on December 18, 2001.

TABLE 2

BORING SUMMARY TABLE

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Feature or Issue	Boring Identification	Soil Sample	Grab Groundwater	Other
Sitewide				
Southern Oil Trap	21	X	X	
	36	X	X	Leachability testing
	40	X	X	Leachability testing
	41	X	X	
	49		X	
Northern Oil Trap	22	X	X	
	35	X	X	
Turntable	24	X		
	25	X		
	38		X	
Oil Column	26	X	X	
Former 230-gallon Fuel Oil Underground Storage Tank (UST)	29[a]		X	
	30[a]		X	
USTs (10,000-gallon diesel, 10,000-gallon gasoline)	55		X	
	ICB-1[b]	X	X	
	ICB-2[b]	X	X	
	ICB-3[b]	X	X	
	ICB-4[b]	X	X	
Southern Pump House	32	X	X	Leachability testing
Northern Track and Downgradient Property Boundary	20	X	X	
Adjacent to former RWQCB well RBMW-2 and Downgradient of fenced enclosure	31		X	
Downgradient Property Boundary (southwest)	37		X	
Downgradient Property Boundary (northwest)	48		X	
Upgradient Property Boundary (off site on NWPRA property)	58-61		X	
General Site Groundwater Quality	Geomatrix wells on site: MW-10 on NWPRA property: MW-07 and MW-08 on Salvador Trust property: MW-05 and MW-06			Groundwater samples, groundwater flow direction
	RWQCB wells RBMW-1 and RBMW-2	X		Groundwater samples
	Mead-Clark wells GW-24 and GW-27			Groundwater samples

TABLE 2

BORING SUMMARY TABLE

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Feature or Issue	Boring Identification	Soil Sample	Grab Groundwater	Other
General Site Soil Quality	RWQCB borings RBB-1 and RBB-2	X		
Fenced Enclosure				
• Surface Staining	27	X		
• Fuel Storage House	28	X		
• Abandoned Gasoline Aboveground Storage Tank (AST)	39[a,c]	X	X	(See 230-gallon fuel UST)
	73, 96	X		
• Former Storage Trailer	70-72	X		
• Eastern Fence Line (upgradient)	42		X	
• Northern Fence Line	43		X	
• Western Fence Line	56	X		
	62	X	X	
• Former 230-gallon Fuel Oil UST	39[c]	X	X	
	ICB-6[b]	X	X	
	74[a,c]	X	X	
Northwestern Area				
3000-bbl oil AST	23	X	X	
	34	X	X	
	44 - 47		X	
	75	X	X	Visual Observation
	76-77		X	Visual Observation
	95, 97-98, 102			Visual Observation
	99-101, 103	X		Visual Observation; Leachability testing on 100
Northern Pump House	33	X		
Visually Impacted Soil Area	50		X	Visual Observation
	51	X		Visual Observation
	52	X		Visual Observation
	53			Visual Observation; Leachability testing
	54		X	Visual Observation
	63-69, 78, 82, 84-87, 89, 92, 94			Visual Observation
	79-81, 83, 88, 90-91, 93	X		Visual Observation; Leachability testing on 79 and 88
Former Pipeline Area	PL-01-PL-12	X		Leachability testing on PL-06 and PL-12

TABLE 2

BORING SUMMARY TABLE

Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX

Notes:

a. Geomatrix borings 29 and 30 (SRB-29 and SRB-30) were placed at locations that initially were thought to be directly at and southwest of former Industrial Compliance boring B-6 (ICB-6) and the 230-gallon UST. Upon further field review, it appeared that borings 29 and 30 were placed approximately northwest and downgradient of ICB-6. Geomatrix borings SRB-39 and SRB-74 subsequently was drilled adjacent to ICB-6.
b. Borings ICB-1 through ICB-4 and ICB-6 were drilled by Industrial Compliance in 1992 to evaluate the possible environmental impacts from former underground storage tanks.
c. Geomatrix borings SRB-39 and SRB-74 were drilled to replicate results from ICB-6 and were field-located with Ms. Joan Fleck of the RWQCB; these borings also are located immediately west of the abandoned aboveground tank within the fenced enclosure.

1. Borings SRB-20 through SRB-31 were advanced in November 1996 as part of the due diligence environmental characterization for the property transfer between Union Pacific Railroad Company (successor to Southern Pacific Railroad Company) and the Northwestern Pacific Railroad Authority.
2. Borings SRB-32 through SRB-41 were advanced in March 2000 in response to the August 1999 request from the Regional Water Quality Control Board, North Coast Region (RWQCB) for leachability testing, additional grab groundwater sampling, and evaluation of potential environmental impacts from the two on-site pump houses.
3. Borings SRB-42 through SRB-54 were advanced in August 2001 in response to the July 2000 request from the RWQCB to evaluate the source of MTBE, further characterize the area near the former 3000-barrel aboveground storage tank, and further evaluate the southern oil trap.
4. Monitoring wells SRMW-05 through SRMW-08 and SRMW-10 were installed in September 2001 in accordance with Geomatrix's January 2001 work plan, as amended in response to the RWQCB's April 2001 review comments.
5. Borings SRB-63 through SRB-103 and PL-01 through PL-12 were advanced in June through November 2002 in response to: 1) the April 2002 request from the RWQCB to evaluate the extent of visually-impacted soil in the vadose-zone in the northwestern portion of the site; 2) the June 2002 request from the RWQCB to evaluate the extent of visually-impacted soil in the vadose-zone in the vicinity of the former 3000-barrel aboveground storage tank; and 3) comply with requirements for the removal of underground pipelines.

GEOMATRIX

TABLE 3

ANALYTICAL RESULTS OF
SOIL AND GROUNDWATER SAMPLES COLLECTED BY OTHERS

Santa Rosa Station Phased Closing Property

Santa Rosa, California

ID	Owner	Date	Depth (feet bgs)	TPHg	TPHd	TPHmo	TPHog	TPHk	BTEX	PAHs	CVOCs
Soil Borings (milligrams per kilogram [mg/kg])											
RBB-1	RWQCB	4/90	**12**	ND	ND	NA	**200**	NA	NA	See Note 1	NA
RBB-2	RWQCB	4/90	NA	ND	ND	NA	ND	NA	NA	NA	NA
RBMW-2	RWQCB	4/90	**6**	ND	**20**	NA	NA	NA	NA	NA	NA
			11	ND	ND	NA	NA	NA	ND	NA	NA
			16	ND	ND	NA	NA	NA	ND	NA	NA
			21	ND	ND	NA	NA	NA	ND	NA	NA
			31	ND	ND	NA	NA	NA	ND	NA	NA
RBMW-3	RWQCB	4/90	**6**	ND	**30**	NA	NA	NA	ND	NA	NA
			11	ND	**14**	NA	NA	NA	X = **0.011**	NA	NA
			16	ND	**11**	NA	NA	NA	ND	NA	NA
			21	ND	ND	NA	NA	NA	ND	NA	NA
			27.5	ND	**12**	NA	NA	NA	ND	NA	NA
			31	ND	ND	NA	NA	NA	ND	NA	NA
IC-B1	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B2	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B3	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B4	Industrial Compliance	5/92	NA	ND	ND	ND	NA	ND	ND	ND	NA
IC-B6	Industrial Compliance	5/92	**11**	ND	**37**	ND	NA	ND	ND	ND	NA
Grab Groundwater (micrograms per liter [µg/l])											
IC-B1	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B2	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B3	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B4	Industrial Compliance	5/92	--	ND	ND	NA	NA	NA	ND	NA	NA
IC-B6	Industrial Compliance	5/92	--	ND	**31,000**	NA	NA	NA	ND	NA	NA

GEOMATRIX

TABLE 3

ANALYTICAL RESULTS OF SOIL AND GROUNDWATER SAMPLES COLLECTED BY OTHERS

Santa Rosa Station Phased Closing Property

Santa Rosa, California

ID	Owner	Date	Depth (feet bgs)	TPHg	TPHd	TPHmo	TPHog	TPHk	BTEX	PAHs	CVOCs
Monitoring Wells (micrograms per liter [µg/l])											
GW-24[2]	Mead Clark	4/6/88	--	ND	NA	NA	NA	NA	ND	NA	PCE = **7.6**
GW-24[2]	Mead Clark	7/19/89	--	ND	NA	NA	NA	NA	B = **0.7**	NA	NA
GW-24[2]	Mead Clark	2/19/90	--	ND	NA	NA	NA	NA	E = **0.3**	NA	NA
GW-27[2]	Mead Clark	4/14/88	--	ND	NA	NA	NA	NA	ND	NA	PCE = **0.8**
GW-27[2]	Mead Clark	7/19/89	--	NA	NA	NA	NA	NA	ND	NA	NA
RBMW-2	RWQCB	6/20/90	--	ND	ND	NA	ND	NA	ND	NA	NA
RBMW-2	RWQCB	6/25/91	--	ND	ND	NA	ND	NA	ND	NA	NA
RBMW-3	RWQCB	6/20/90	--	ND	**400**	NA	ND	NA	ND	NA	NA
RBMW-3	RWQCB	6/25/91	--	ND	ND	NA	ND	NA	ND	NA	PCE = **2.5**

Notes:

[1] PNAs detected in boring RBB-1 include naphthalene (2.08 mg/kg); 2-methylnaphthalene (1.15 mg/kg); acenaphthalene (1.45 mg/kg); dibenzofuran (1.13 mg/kg); fluorene (1.38 mg/kg); phenanthrene (3.86 mg/kg); anthracene (0.557 mg/kg), and benzo(a)anthracene (0.324 mg/kg).

[2] GW-24 and GW-27 were installed on behalf of Mead Clark. The analytical results for GW-24 and GW-27 show only the monitoring events in which constituents were detected. Six monitoring events have been performed (4/88, 6/88, 10/88, 1/89, 4/89, 7/89). Chlorinated volatile organic compounds (CVOCs) were tested for only in 4/88. Additional groundwater sampling was conducted at monitoring well GW-24 for TPHg and BTEX (2/90, 6/90, and 10/90).

Abbreviations:

TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
TPHmo = total petroleum hydrocarbons quantified as motor oil
TPHog = total petroleum hydrocarbons quantified as oil & grease
TPHk = total petroleum hydrocarbons quantified as kerosene
RWQCB = Regional Water Quality Control Board - North Coast Region
BTEX = benzene, toluene, ethylbenzene, and xylenes
PAHs = polynuclear aromatic hydrocarbons
CVOCs = chlorinated volatile organic compounds
feet bgs = feet below ground surface
NA = not available
ND = not detected above the laboratory detection limit
PCE = tetrachloroethene

GEOMATRIX

TABLE 4

ANALYTICAL RESULTS FOR QUARTERLY GROUNDWATER MONITORING[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Concentrations in micrograms per liter (µg/l)

Well ID[2]	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TPHg	TPHd	TPHmo	PAHs
SRMW-05	12/20/2001	NA[3]	NA	NA	NA	NA	NA	<50[4]	<300	<0.94
	3/19/2002	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	6/5/2002	NA	NA	NA	NA	NA	NA	<61	<610	<0.10
	9/17/2002	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
SRMW-06	12/20/2001	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	3/19/2002	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	6/5/2002	NA	NA	NA	NA	NA	NA	<60	<600	<0.11
	9/17/2002	NA	NA	NA	NA	NA	NA	<50	<500	<0.10
SRMW-07	12/20/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<50	<300	<0.94
	3/19/2002	<0.5	<0.5	<0.5	<0.5	**0.6**	<50	<50	<300	<0.94
	6/5/2002	<1	<1	<1	<1	**5.3**	<50	**130U**[5]	<500	<0.10
	9/17/2002	<0.5	<0.5	<0.5	<1	**12**	<50	<50	<500	<0.10
SRMW-08	12/20/2001	<0.5	<0.5	<0.5	<0.5	**4.4**	<50	NA	NA	NA
	3/19/2002	<0.5/<0.5[6]	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	**5.3/5.2**	<50/<50	NA	NA	NA
	6/5/2002	<1/<1	<1/<1	<1/<1	<1/<1	**11/11**	<50/<50	NA	NA	NA
	9/17/2002	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<1/<1	**14/16**	<50/<50	NA	NA	NA
SRMW-10	12/20/2001	NA	NA	NA	NA	NA	NA	<50/<50	<300/<300	<0.94/<0.94
	3/19/2002	NA	NA	NA	NA	NA	NA	<50	<300	<0.94
	6/5/2002	NA	NA	NA	NA	NA	NA	<62	<620	<0.10
	9/17/2002	NA	NA	NA	NA	NA	NA	<50	<500	<0.10

Notes:

[1] Monitoring well groundwater samples collected by Geomatrix Consultants, Inc., and analyzed by Severn Trent Laboratories (STL) San Francisco of Pleasanton, California for benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by U.S. EPA Method 8260; total petroleum hydrocarbons quantified as gas (TPHg), diesel (TPHd), and motor oil (TPHmo) by U.S. EPA Method 8015M; and polynuclear aromatic hydrocarbons (PAHs) by U.S. EPA Method 8270 SIM.

[2] Monitoring wells SRMW-05 and SRMW-06 are located west of the site on the Salvador Trust property, SRMW-07 and SRMW-08 are located east of the site on property owned by the NWPRA, and well MW-10 is located on the site.

[3] NA = not analyzed.

[4] "<" = not detected above the laboratory detection limit shown.

[5] "U" indicates compound was positively identified; the associated numerical value is less than five times the concentration detected in the field equipment blank and the result is considered non-detect.

[6] "<0.5/<0.5" = primary sample/duplicate sample

TABLE 5

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
Sitewide																				
SRB-20	c[3]-1.0, 4.0, 6.5	11/15/1996	<1	2.6	150	0.4	<0.2	75	--[4]	17	25	14	<0.06	<0.2	130	<1	0.3	4	40	53
	c-9.0, 11.5, 14.0	11/15/1996	<1	1.4	150	0.4	<0.2	49	--	14	21	7	<0.06	<0.2	80	<1	0.2	11	27	34
SRB-21	c-1.5, 4.0	11/14/1996	<1	2.3	180	0.6	<0.2	82	--	18	31	9	<0.06	<0.2	110	<1	0.3	24	46	47
	7.0	11/14/1996	<1	1.4	180	0.5	<0.2	81	--	17	31	8	<0.06	<0.2	120	<1	0.2	22	39	44
	9.0	11/14/1996	<1	0.9	220	0.6	<0.2	92	--	18	32	9	<0.06	<0.2	130	<1	0.3	26	40	50
	11.0	11/14/1996	<1	<0.5	160	0.4	<0.2	72	--	8.6	23	7	<0.06	<0.2	83	<1	0.2	17	25	40
	13.5	11/14/1996	<1	<0.5	160	0.6	<0.2	56	--	14	23	8	<0.06	<0.2	92	<1	0.2	18	20	37
SRB-24	c-1.0, 4.0, 6.5	11/15/1996	<1	1.6	180	0.5	<0.2	69	--	18	29	18	<0.06	<0.2	100	<1	0.3	17	39	49
	c-9.0, 11.5, 14.0	11/15/1996	<1	<0.5	180	0.5	<0.2	62	--	17	23	8	<0.06	<0.2	98	<1	0.2	16	29	36
SRB-25	c-1.5, 4.0, 6.5	11/15/1996	<1	0.8	210	0.6	<0.2	76	--	21	29	8	<0.06	<0.2	130	<1	0.3	19	42	47
	c-9.0, 11.5, 14.0	11/15/1996	<1	0.7	170	0.5	<0.2	64	--	11	23	7	<0.06	<0.2	97	<1	0.3	18	30	38
SRB-26	c-1.5, 4.0, 6.5	11/14/1996	<1	2.8	180	0.5	<0.2	81	--	19	32	8	<0.06	<0.2	130	<1	0.3	23	47	47
	c-10.5, 12.0, 14.5	11/14/1996	<1	1.5	190	0.6	<0.2	88	--	16	31	9	<0.06	<0.2	120	<1	0.2	26	41	49
SRB-32	1.0	3/6/2000	<25	<5	110	<5	<5	170	--	<5	21	57	0.59	<5	80	<25	<5	<25	47	83
	4.5	3/7/2000	<25	<5	150	<5	<5	53	--	17	17	<5	<0.05	<5	96	<25	<5	<25	45	55
SRB-36	1.0	3/6/2000	<25	<5	95	<5	<5	43	--	15	20	48	0.059	<5	97	<25	<5	<25	57	61
	4.5	3/6/2000	<25	<5	200	<5	<5	85	--	30	22	<5	<0.05	<5	160	<25	<5	<25	66	67
	7.5	3/6/2000	--	--	--	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--
SRB-40	1.0	3/7/2000	<25	<5	56	<5	<5	22	--	8.9	56	110	0.093	<5	66	<25	<5	<25	24	44
	4.5	3/7/2000	<25	14	160	<5	<5	110	--	22	30	7.4	0.058	<5	180	<25	<5	<25	67	60
	7.5	3/7/2000	--	27	--	--	--	82	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/7/2000	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB-41	1.0	3/7/2000	<25	11	82	<5	<5	53	--	14	31	18	<0.05	<5	76	<25	<5	<25	43	43
	4.5	3/7/2000	<25	20	150	<5	<5	86	--	18	26	<5	<0.05	<5	140	<25	<5	<25	57	51
	7.5	3/7/2000	--	22	--	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/7/2000	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fenced Enclosure																				
SRB-27	1.5	11/14/1996	0.6	7.6	57	0.3	<0.2	29	--	10	32	23	0.13	<0.2	40	<1	0.2	12	38	48
	4.5	11/14/1996	<1	<0.5	180	0.6	<0.2	64	--	16	29	8	<0.06	<0.2	89	<1	0.2	20	43	46
SRB-28	c-1.5, 4.5, 7.0	11/14/1996	<1	5	160	0.5	<0.2	73	--	16	32	11	0.12	<0.2	110	<1	0.2	22	47	49
	c-9.0, 11.5, 14.0	11/14/1996	<1	2.2	180	0.5	<0.2	79	--	21	24	6	<0.06	<0.2	120	<1	0.2	21	36	41
SRB-39	1.0	3/6/2000	<25	<5	57	<5	<5	31	--	<5	<5	77	0.17	<5	43	<25	<5	<25	33	55
	4.5	3/6/2000	<25	<5	150	<5	<5	58	--	<5	<5	<5	0.1	<5	78	<25	<5	<25	39	48
	7.5	3/6/2000	--	--	140	--	--	76	--	--	--	--	--	--	100	--	--	--	--	--

TABLE 5

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
Northwestern Area																				
SRB-22	c-1.5, 4.0, 7.0	11/14/1996	<1	1.9	150	0.4	<0.2	70	--	19	26	10	<0.06	<0.2	130	<1	0.3	8	43	48
	10.5	11/14/1996	<1	4.6	180	0.4	<0.2	65	--	17	28	7	<0.06	<0.2	120	<1	0.2	20	37	44
	12.5	11/14/1996	<1	2.1	180	0.5	<0.2	70	--	13	25	7	<0.06	<0.2	110	<1	0.2	22	33	42
	14.5	11/14/1996	<1	<0.5	190	0.7	<0.2	63	--	18	28	9	<0.06	<0.2	100	<1	0.2	23	30	46
SRB-23	c-1.5, 4.5, 7.5	11/14/1996	<1	3.1	130	0.4	<0.2	62	--	15	28	10	<0.06	<0.2	93	<1	0.2	22	52	46
	c-10, 13.0, 14.5	11/14/1996	<1	3.2	73	0.3	<0.2	39	--	12	23	4	<0.06	<0.2	69	<1	0.2	15	35	34
SRB-33	1.0	3/7/2000	<25	<5	160	<5	<5	470	--	29	20	13	0.083	<5	190	<25	<5	<25	56	54
	4.5	3/7/2000	<25	<5	140	<5	<5	630	--	21	17	13	<0.05	<5	160	<25	<5	<25	62	55
SRB-33A	1.0	5/9/2000	--	--	--	--	--	87	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/2000	--	--	--	--	--	80	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB-33B	1.0	5/9/2000	--	--	--	--	--	85	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/2000	--	--	--	--	--	140	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB-34	1.0	3/7/2000	<25	<5	150	<5	<5	320	--	16	18	23	<0.05	<5	92	<25	<5	<25	46	53
	4.5	3/7/2000	<25	<5	160	<5	<5	440	--	20	19	10	<0.05	<5	140	<25	<5	<25	61	55
	7.5	3/7/2000	--	--	--	--	--	68	--	--	--	--	--	--	130	--	--	--	--	--
SRB-34A	1.0	5/9/2000	--	--	--	--	--	43	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/2000	--	--	--	--	--	80	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB-34B	1.0	5/9/2000	--	--	--	--	--	35	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/2000	--	--	--	--	--	75	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB-35	1.0	3/7/2000	<25	<5	190	<5	<5	61	--	21	22	15	<0.05	<5	97	<25	<5	<25	68	68
	4.5	3/7/2000	<25	<5	170	<5	<5	93	--	21	20	8.7	0.056	<5	150	<25	<5	<25	68	71
	7.0	3/7/2000	--	--	--	--	--	--	--	--	--	--	--	--	110	--	--	--	--	--
Residential PRG[5] (mg/kg)			310	0.39	5,400	150	37	100,000	30	4,700	2,900	400	6.1	390	1,600	390	390	5.2	550	23,000
Industrial PRGs[5] (mg/kg)			820	2.7[6]	100,000	2200	810	100,000[7]	64	100,000	76,000	750	88	10,000	41,000	10,000	10,000	130	14,000	100,000
STLC (mg/l)[8]			15	5.0	100	0.75	1.0	560		80	25	5.0	0.2	350	20	1.0	5	7.0	24	250
TTLC (mg/kg)[9]			500	500	10,000	75	100	2500	500	8000	2500	1000	20	3500	2000	100	500	700	2400	5000

Notes:

[1] Samples collected by Geomatrix Consultants, Inc. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California. Samples collected in 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California. Metals analyzed in accordance with U.S. EPA Methods 6000/7000 series.

[2] Sampling depth measured in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).

[3] "c" denotes composite sample.

[4] -- = Sample not analyzed for this metal.

[5] Residential and Industrial Preliminary Remediation Goals (PRGs) from U.S. EPA Region 9 (U.S. EPA 2000).

[6] The residential and industrial PRGs for arsenic at cancer risk levels of $1x10^{-6}$ to $1x10^{-4}$ range between 0.39 mg/kg and 39 mg/kg (residential), and 2.7 and 270 mg/kg (industrial), respectively. At $1x10^{-6}$ cancer risk, the PRG is less than background and therefore is not applicable.

[7] The industrial PRG for chromium (III) is used, as speciation of chromium in borings SRB 33-A, SRB 33-B, SRB-34A, and SRB 34-B did not indicate the presence of chromium (VI).

[8] STLC = Soluble Threshold Limit Concentration, California Code of Regulations, Title 22, Section 66216.24

[9] TTLC = Total Threshold Limit Concentration, California Code of Regulations, Title 22, Section 66216.24

GEOMATRIX

TABLE 6

ANALYTICAL RESULTS
FOR TOTAL PETROLEUM HYDROCARBONS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Sampling Depth[2]	Date Collected	TPHg	TPHd	TPHmo	TPH Bunker-C Fuel Oil
Sitewide						
SRB-20	c[3]-1.0, 4.0, 6.5	11/15/1996	--[4]	<20[5]	**900**	--
	4	11/15/1996	--	--	**69**	--
	6.5	11/15/1996	--	--	<5	--
	c-9.0, 11.5, 14.0	11/15/1996	--	<1	**56**	--
SRB-21	c-1.5, 4.0	11/14/1996	--	**130**	**510**	--
	7	11/14/1996	--	**1600**	<100	--
	9	11/14/1996	--	**960**	<50	--
	11	11/14/1996	--	**150**	<5	--
	13.5	11/14/1996	--	<1	<5	--
SRB-24	c-1.0, 4.0, 6.5	11/15/1996	--	<1	<5	--
	c-9.0, 11.5, 14.5	11/15/1996	--	<1	<5	--
SRB-25	c-1.5, 4.0, 6.5	11/15/1996	--	<1	<5	--
	c-9.0, 11.5, 14.0	11/15/1996	--	<1	<5	--
SRB-26	c-1.5, 4.0, 6.5	11/14/1996	--	<1	**12**	--
	c-10.5, 12.0, 14.5	11/14/1996	--	<1	<5	--
SRB-32	1	3/6/2000	--	**160**	<65	--
	4.5	3/7/2000	--	**2.8**[5]	<13	--
SRB-36	1	3/6/2000	--	**430**[5]	**780**	--
	4.5	3/6/2000	--	<1	<13	--
SRB-40	1	3/7/2000	--	**990**[5]	**1700**	--
	4.5	3/7/2000	--	**130**[5]	**240**	--
	7.5	3/7/2000	--	**210**[5]	**370**	--
	14	3/7/2000	--	<1	<13	--
SRB-41	1	3/7/2000	--	<1	**40**	--
	4.5	3/7/2000	--	<1	<13	--
Fenced Enclosure						
SRB-27	1.5	11/14/1996	--	<1	**72**	--
	4.5	11/14/1996	--	<1	<5	--
SRB-28	c-1.5, 4.5, 7.0	11/14/1996	--	<1	**130**	--
	c-9.0, 11.5, 14.0	11/14/1996	--	<1	<5	--
SRB-39	1	3/6/2000	--	<20	**720**	--
	4.5	3/6/2000	--	<1	**51**	--
SRB-56	1.0[6]	9/25/2001	<26	<52	<260	--
	1.5[6]	9/25/2001	<1.1	<1.1	<5.3	--
	6.0[6]	9/25/2001	<1.2	<1.2	<6.1	--
SRB-70	0.5	8/2/2002	<1.0	**1200**	**5600**	--
	3	8/2/2002	<1.0	**120**	**500**	--
	5	8/2/2002	<1.0	<1.0	<50	--
SRB-71	0.5	8/2/2002	<1.0	**270**	**1300**	--
	3	8/2/2002	<1.0	<1.0	<5.0	--
	5	8/2/2002	<1.0	<1.0	<5.0	--
SRB-72	0.5	6/20/2002	<1	**10/6.8**[7]	<50/<50[7]	--
	3	6/20/2002	<1.3	**130/170**[7]	**350/260**[7]	--
	5	6/20/2002	<1	<1/1[7]	<50/<50[7]	--

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TABLE 6

ANALYTICAL RESULTS
FOR TOTAL PETROLEUM HYDROCARBONS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Sampling Depth[2]	Date Collected	TPHg	TPHd	TPHmo	TPH Bunker-C Fuel Oil
SRB-73	0.5	6/20/2002	<1	**180/120**[7]	**360/260**[7]	--
	3	6/20/2002	**2.5**	**440/410**[7]	**610/570**[7]	--
	5	6/20/2002	<1.9	**11/8.8**[7]	<50/<50[7]	--
SRB-74	1	6/25/2002	<1	**8/7.2**[7]	**87/84**[7]	--
	5	6/25/2002	<1.6	<1/<1[7]	<50/<50[7]	--
	9	6/25/2002	<1	--	--	--
	11		--	<1/<1[7]	<50/<50[7]	--
	15	6/25/2002	<1	<1/<1[7]	<50/<50[7]	--
SRB-96	0.5	6/20/2002	**13**	**2400/2700**[7]	**3300/2800**[7]	--
	3	6/20/2002	<1	<1/<1[7]	<50/<50[7]	--
	5	6/20/2002	<1	<1/<1[7]	<50/<50[7]	--
Northwestern Area						
SRB-22	c-1.5, 4.0, 7.0	11/14/1996	--	<1	**43**	--
	10.5	11/14/1996	--	<1	**120**	--
	12.5	11/14/1996	--	**67**	**210**	--
	14.5	11/14/1996	--	<1	<5	--
SRB-23	c-1.5, 4.5, 7.5	11/14/1996	--	**5**	**28**	--
	c-10.0, 13.0, 14.5	11/14/1996	--	<1	<5	--
SRB-33	1	3/7/2000	--	**2.3**[5]	<13	--
	4.5	3/7/2000	--	<1	<13	--
SRB-34	1	3/7/2000	--	**2.1**[5]	<13	--
	4.5	3/7/2000	--	**2.2**[5]	<13	--
SRB-35	1	3/7/2000	--	<1	<13	--
	4.5	3/7/2000	--	<1	<13	--
SRB-51	19.5	9/27/2000	--	**8500**	**7600**	--
SRB-52	19.5	9/27/2000	--	**830**	**970**	--
SRB-53L	5	11/14/2002	--	**350**	**810**	--
	11	11/14/2002	--	**20**	**61**	--
SRB-75	1	6/24/2002	<1	**6.3/4.9**[7]	**57/<50**[7]	--
	2	6/24/2002	<1	**6.7/6.7**[7]	**54/60**[7]	--
	5	6/24/2002	<1	<1/<1[7]	<50/<50[7]	--
	17	6/24/2002	--	<1	<50	--
	19	6/24/2002	<1	**1200/990**[7]	**1200/840**[7]	--
	20	6/24/2002	--	**310**	**340**	--
SRB-79L	5	11/14/2002		**310**	**950**	--
	11	11/14/2002	--	<10	<50	--
SRB-80	16	6/18/2002	--	<1	<50	--
	21.5	6/18/2002	--	<1	<50	--
SRB-81	8.5	6/18/2002	--	<1	<50	<50
	15.5	6/18/2002	--	**160**	**230**	<100
	22	6/18/2002	--	<1	<50	<50
SRB-83	9	6/18/2002	--	<1	<50	--
	21	6/18/2002	--	**4.9**	<50	--
SRB-88	21	6/19/2002	--	**4**	<50	<50

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TABLE 6

ANALYTICAL RESULTS
FOR TOTAL PETROLEUM HYDROCARBONS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Sampling Depth[2]	Date Collected	TPHg	TPHd	TPHmo	TPH Bunker-C Fuel Oil
SRB-88L	8	11/14/2002	--	**1400**	**1800**	--
	11	11/14/2002	--	**610**	**780**	--
SRB-90	14	6/19/2002	--	**21**	<50	--
	17	6/19/2002	--	**150**	**210**	--
SRB-91	11	6/19/2002	--	**8.8**	<50	<50
	14	6/19/2002	--	**73**	**91**	<50
SRB-93	14	6/20/2002	--	**87**	**130**	--
	18	6/20/2002	--	<1	<50	--
SRB-99	14	6/25/2002	--	**10/8.4**[7]	<50/<50[7]	<50
	17	6/25/2002	--	**120**	**130**	--
	20	6/25/2002	--	**1300/1100**[7]	**1300/940**[7]	<500
	23	6/25/2002	--	<1	<50	--
SRB-100	5	6/25/2002	--	**130/120**[7]	**1200/930**[7]	<500
	7.5	6/25/2002	--	**1800/2300**[7]	**5100/6600**[7]	<2500
	11	6/25/2002	--	**96**	**520**	--
	20	6/25/2002	--	**51**	**59**	--
SRB-100L	4.75	11/14/2002	--	**430**	**2100**	--
	8	11/14/2002	--	**16,000**	**15,000**	--
SRB-101	5	7/10/2002	--	**1.1**	<50	--
	8	7/10/2002	--	<1	<50	--
	11	7/10/2002	--	<1	<50	--
	17	7/10/2002	--	<1	<50	--
SRB-103	5	7/10/2002	--	<1	<50	--
	8	7/10/2002	--	<1	<50	--
	11	7/10/2002	--	<1	<50	--
	17	7/10/2002	--	<1	<50	--
Pipeline Area						
PL-01	0.5	6/19/2002	--	**780**	**5700**	--
	0.5	7/23/2002	--	**1400**	**900**	--
	1.5	7/23/2002	--	**650**	**4500**	--
	3	7/23/2002	--	**470**	**2800**	--
PL-02	0.5	6/19/2002	--	**16**	**290**	--
PL-03	0.5	6/19/2002	--	**3900**	**10,000**	--
	0.5	7/23/2002	--	**490**	**1900**	--
	1.5	7/23/2002	--	**1.4**	<50	--
	3	7/23/2002	--	<1	<50	--
PL-04	0.5	6/19/2002	--	**11**	**78**	--
PL-05	0.5	6/19/2002	--	**120**	**1200**	--
PL-06	0.5	6/19/2002	--	**2400**	**4500**	--
	0.5	7/23/2002	--	**250**	**1200**	--
	1.5	7/23/2002	--	**380**	**1800**	--
	3	7/23/2002	--	**280**	**1500**	--
PL-06L	1	11/14/2002	--	**1400**	**4400**	
	5	11/14/2002	--	**670**	**920**	
PL-07	0.5	6/19/2002	--	**150**	<1000	--

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TABLE 6

ANALYTICAL RESULTS
FOR TOTAL PETROLEUM HYDROCARBONS IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Sampling Depth[2]	Date Collected	TPHg	TPHd	TPHmo	TPH Bunker-C Fuel Oil
PL-08	0.5	6/19/2002	--	**2000**	**6700**	--
	0.5	7/23/2002	--	**6.8**	<50	--
	1.5	7/23/2002	--	**1.4**	<50	--
	3	7/23/2002	--	**1.1**	<50	--
PL-09	0.5	6/19/2002	--	<1.0	<50	--
PL-10	0.5	6/19/2002	--	**51**	**440**	--
PL-11	0.5	6/19/2002	--	<1.0	<50	--
PL-12	0.5	6/19/2002	--	**4400**	**12,000**	--
	0.5	7/23/2002	--	**630**	**4100**	--
	1.5	7/23/2002	--	**610**	**2900**	--
	3	7/23/2002	--	**1100**	**2900**	--
PL-12L	1	11/14/2002	--	**16,000**	**22,000**	--
	5	11/14/2002	--	**3700**	**14,000**	--

Notes:

[1] Samples were collected by Geomatrix Consultants, Inc. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California for, TPHd and TPHmo using EPA Method 8015. Samples collected in March 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California, for TPHd and TPHmo using EPA Method 8015M following silica gel cleanup procedure by EPA Method 3630C. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd. of Berkeley, California for, TPHd and TPHmo using EPA Method 8015M following silica gel cleanup procedure by EPA Method 3630C. Samples collected in September 2001 were analyzed by Severn Trent Laboratories (STL) of Sacramento, California for TPHg, TPHd, and TPHmo using EPA Method 8015M. Samples collected in 2002 were analyzed by STL San Francisco of Pleasanton, California, for TPHg, TPHd, TPHmo, and Bunker-C fuel oil using EPA Method 8015M following silica gel cleanup procedures by EPA Method 3630C. Samples collected in November 2002 analyzed by Friedman and Bruya, Inc. of Seattle, Washington for TPHd and TPHmo using EPA Method 8015M following silica gel cleanup procedures by EPA Method 3630C.

[2] Sampling depth measured in feet below ground surface. Depth listed represents the bottom depth of the sample (i.e., 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).

[3] "c" denotes composite sample.

[4] -- = not analyzed.

[5] Lab sheet indicates that result is quantified as diesel; chromatographic pattern not typical of fuel.

[6] Additional analyses, total purgeable/total extractable petroleum hydrocarbons, performed for SRB-56-1.0, SRB-62-1.5, SRB-62-6.0. Results were SRB-62-1.0 = 330/8200; SRB-62-1.5 = <1.1/25, and SRB-62-6.0 = <1.2/97, respectively.

[7] 10/6.8 = Result without silica gel cleanup/result with silica gel cleanup.

Abbreviations:
TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
TPHmo = total petroleum hydrocarbons quantified as motor oil

TABLE 7

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Acenaph-thylene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h) anthra-cene	Benzo-(ghi) perylene
Sitewide																	
SRB-20	c[3]-1.0, 4.0, 6.5	11/15/1996	<0.083	<0.017	<0.0083	<0.0083	--[4]	<0.017	<0.017	<0.017	**0.028**	<0.017	<0.017	<0.017	**0.025**	**0.049**	<0.017
	c-9.0, 11.5, 14.0	11/15/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-21	c-1.5, 4.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	**0.027**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.075**	<0.034	**0.029**
	7.0	11/14/1996	<0.083	**0.87**	**0.19**	**0.081**	--	**0.33**	**0.20**	**0.021**	**0.10**	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	9.0	11/14/1996	<0.083	**0.63**	**0.18**	**0.078**	--	**0.088**	**0.18**	**0.038**	**0.33**	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	11.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	13.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-24	c-1.0, 4.0, 6.5	11/15/1996	<0.083	<0.017	**0.019**	<0.0083	--	<0.017	**0.04**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-25	c-1.5, 4.0, 6.5	11/15/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.034**	<0.034	<0.017
	c-9.0, 11.0, 14.0	11/15/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-26	c-1.5, 4.0, 6.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-32	1.0	3/6/2000	**0.609**	**0.739**	**1.98**	**0.106**	--	**0.739**	**0.797**	**0.329**	**0.424**	**0.582**	**0.158**	**0.526**	**0.455**	**0.073**	**0.706**
	4.5	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-36	1.0	3/6/2000	<2	<2	<2	<2	--	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
	4.5	3/6/2000	<0.02	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
SRB-40	1.0	3/7/2000	<3	<3	<3	<3	--	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
	4.5	3/7/2000	<0.05	<0.05	<0.05	<0.05	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	7.5	3/7/2000	<0.05	<0.05	<0.05	<0.05	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	14.0	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-41	1.0	3/7/2000	<0.05	<0.05	<0.05	<0.05	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	4.5	3/7/2000	<0.02	<0.02	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fenced Enclosure																	
SRB-27	1.5	11/14/1996	<0.083	<0.017	**0.046**	<0.0083	--	<0.017	**0.032**	<0.017	**0.046**	**0.021**	<0.017	<0.017	<0.017	<0.034	**0.02**
	4.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-28	c-1.5, 4.5, 7.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	c-9.0, 11.5, 14.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
SRB-39	1.0	3/6/2000	<2.5	<2.5	<2.5	<2.5	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
	4.5	3/6/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Northwestern Area																	
SRB-22	c-1.5, 4.0, 7.0	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	10.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	12.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	**0.052**	<0.017	<0.017	**0.026**	<0.017	<0.034	0.045
	14.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.020**	<0.034	<0.017
SRB-23	c-1.5, 4.5, 7.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	**0.025**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017
	c-10.0, 13.0, 14.5	11/14/1996	<0.083	<0.017	<0.0083	<0.0083	--	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017

TABLE 7

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Acenaph-thylene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h) anthra-cene	Benzo-(ghi) perylene
SRB-33	1.0	3/7/2000	<0.01	<0.01	**0.011**	<0.01	--	**0.027**	**0.028**	**0.019**	**0.019**	**0.024**	<0.01	**0.018**	<0.01	<0.01	**0.01**
	4.5	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-34	1.0	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	4.5	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-35	1.0	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
	4.5	3/7/2000	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
SRB-51	19.5	9/27/2000	<2.9	<2.9	**13**	**5.2**	**2.9**	<2.9	**5**	<2.9	**3.9**	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9
SRB-52	19.5	9/27/2000	<0.73	<0.73	<0.73	**7.4**	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73	<0.73
SRB-75	17	6/24/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	20	6/24/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0065**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-79	12.5	6/18/2002	<0.01	**0.016**	**0.22**	**0.15**	**0.024**	**0.019**	**0.23**	**0.033**	**0.097**	**0.02**	<0.01	**0.025**	<0.01	<0.01	**0.011**
SRB-80	16	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	21.5	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-81	8.5	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	15.5	6/18/2002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	**0.11**	<0.025	**0.055**	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	22	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-83	9	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	11	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	14	6/18/2002	<0.025	<0.025	<0.025	**0.33**	**0.039**	**0.074**	**0.46**	**0.089**	**0.22**	**0.041**	<0.025	**0.052**	<0.025	<0.025	**0.025**
	21	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-88	21	6/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0054**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-90	14	6/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.025**	<0.005	**0.0094**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	17	6/19/2002	<0.005	<0.005	<0.005	**0.062**	<0.005	**0.018**	**0.076**	**0.035**	**0.048**	**0.0091**	<0.005	**0.014**	<0.005	<0.005	**0.0073**
SRB-91	11	6/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	14	6/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0067**	**0.042**	**0.0069**	**0.02**	<0.005	<0.005	**0.005**	<0.005	<0.005	<0.005
SRB-93	14	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	**0.01**	<0.005	**0.01**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	18	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-99	14	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	17	6/25/2002	<0.005	<0.005	<0.005	**0.0082**	<0.005	<0.005	<0.005	<0.005	**0.011**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	20	6/25/2002	<0.01	<0.01	<0.01	**0.022**	<0.01	**0.011**	**0.053**	<0.01	**0.059**	**0.011**	<0.01	<0.01	<0.01	<0.01	<0.01
	23	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-100	5	6/25/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	7.5	6/25/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	**0.11**	<0.05	<0.05	<0.05	<0.05	<0.05	**0.06**
	11	6/25/2002	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025
	20	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

TABLE 7

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Acenaph-thylene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h) anthra-cene	Benzo-(ghi) perylene
SRB-101	5	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	8	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	11	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	17	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-103	5	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	8	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	11	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	17	7/10/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Pipeline Area																	
PL-01	0.5	7/19/2002	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	**1.2**
	0.5	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.13**
	1.5	7/23/2002	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	**0.55**
	3.0	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.25**
PL-03	0.5	7/23/2002	<0.025	**0.047**	**0.24**	**0.056**	<0.025	**0.087**	**0.19**	**0.06**	**0.16**	**0.084**	**0.026**	**0.082**	**0.058**	<0.025	**0.13**
	1.5	7/23/2002	<0.005	<0.005	**11**	<0.005	<0.005	**0.03**	**0.032**	**0.021**	**0.023**	**0.02**	**0.018**	**0.025**	**0.013**	<0.005	**0.014**
	3.0	7/23/2002	<0.005	<0.005	<0.005	<0.005	<0.005	**0.0072**	**0.0074**	**0.0056**	**0.0070**	**0.0067**	<0.005	**0.0068**	<0.005	<0.005	**0.0069**
PL-04	0.5	7/19/2002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
PL-06	0.5	7/23/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	1.5	7/23/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	3.0	7/23/2002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
PL-08	0.5	7/19/2002	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63	**0.063**	<0.63	**1**	<0.63	<0.63	<0.63	<0.63	<0.63	<0.63
	0.5	7/23/2002	<0.005	<0.005	**0.012**	<0.005	<0.005	<0.005	**0.0052**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	1.5	37460.0	<0.005	<0.005	**0.022**	<0.005	<0.005	<0.005	**0.011**	**0.0071**	**0.0087**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
	3.0	7/23/2002	<0.005	<0.005	**0.012**	<0.005	<0.005	**0.0083**	**0.012**	**0.0064**	**0.0095**	**0.011**	<0.005	**0.005**	<0.005	<0.005	**0.0051**
PL-12	0.5	7/19/2002	<1.3	<1.3	**11**	**1.3**	<1.3	**2.7**	**8.6**	**4.8**	**7.3**	**1.3**	<1.3	**4**	<1.3	<1.3	**1.3**
	0.5	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.17**
	1.5	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.16**
	3.0	7/23/2002	<0.13	<0.13	<0.13	<0.13	<0.13	<0.13	**0.48**	<0.13	**0.47**	**0.18**	<0.13	**0.29**	<0.13	<0.13	**0.2**
PL-12L	5.0	11/14/2002	<0.5	**1.9**	**0.96**	**1.2**	<0.5	<0.5	**1.7**	**0.51**	**1.1**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Residential PRGs (mg/kg)[5]			56	2,700	22,000	22,000	3,700	2,300	2,300	0.38	3.8	0.38	0.38	0.038	0.38	0.11	2,300
Industrial PRGs (mg/kg)[5]			190	26,000	100,000	100,000	29,000	22,000	29,000	1.3	13	1.3	1.3	0.13	1.3	0.38	22,000[6]
Soil Screening Level (DAF=1)[7]			4	28	28	590	29	210	210	0.08	8	0.2	2	0.4	0.7	0.8	210
Soil Screen Level (DAF=20)			84	560	560	12,000	570	4300	4200	2	160	5	49	8	14	2	4300

TABLE 7

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS (PAHs) IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Notes:

[1] All samples collected by Geomatrix Consultants, Inc. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California using EPA Method 8310. Samples collected in March 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California using EPA Method 8270SIM. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd., of Berkeley, California, using EPA Method 8270. Samples collected in 2002 analyzed by Severn Trent Laboratories (STL) San Francisco of Pleasanton, California using EPA Method 8270C SIM.

[2] Sample depth measured in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).

[3] "c" denotes composite sample.

[4] -- = not analyzed.

[5] For carcinogenic PAHs (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(a)pyrene, indeno-(1,2,3-cd)pyrene, and dibenzo(a,h)anthracene) California cancer slope factors were used to derive residential and industrial PRGs. For non-carcinogenic PAHs EPA Region 9 (EPA, 2002) PRGs are presented.

[6] Surrogate PRGs for a constituent with similar physical and chemical properties were used for the PRG comparison. Phenanthrene screening based screening based on fluorene as a surrogate, benzo(g,h,i) perylene screening based on fluoranthene as surrogate.

[7] Soil screening levels are from the EPA PRG document, and assume a dilution attenuation factor (DAF) of 1 and a DAF of 20.

Abbreviations:

PNAs = polynuclear aromatic hydrocarbons
PRGs = preliminary remediation goals
DAF = dilution attentuaion factor

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TABLE 8

ANALYTICAL RESULTS FOR BTEX AND MTBE IN SOIL[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
Fenced Enclosure							
SRB-56	0.5	9/25/2001	--[3]	--	--	--	<0.01
SRB-62	1.0	9/25/2001	--	--	--	--	<0.01
	5.0	9/25/2001	--	--	--	--	<0.01
SRB-70	0.5	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	3	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-71	0.5	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	3	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	8/5/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-72	0.5	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	3	6/20/2002	<0.0065	<0.0065	<0.0065	<0.0065	<0.0065
	5	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-73	0.5	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	3	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	6/20/2002	<0.0094	<0.0094	<0.0094	<0.0094	<0.0094
SRB-74	1	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	6/25/2002	<0.0081	<0.0081	<0.0081	<0.0081	<0.0081
	9	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	15	6/25/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-96	0.5	6/20/2002	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053
	3	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
	5	6/20/2002	<0.005	<0.005	<0.005	<0.005	<0.005
Northwestern Area							
SRB-51	19.5	9/27/2000	<5.3	<5.3	<5.3	<5.3	--
SRB-52	19.5	9/27/2000	<5.1	<5.1	<5.1	<5.1	--
SRB-75	1	6/24/2002	<0.005	<0.005	**0.011**	**0.051**	<0.005
	2	6/24/2002	<0.005	**0.031**	<0.005	**0.0076**	<0.005
	5	6/24/2002	<0.005	**0.029**	<0.005	<0.005	<0.005
	19	6/24/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-79	12.5	6/18/2002	<0.25	<0.25	<0.25	<0.5	--
SRB-81	8.5	6/18/2002	<0.005	**0.015**	<0.005	<0.005	<0.005
	15.5	6/18/2002	<0.005	**0.016**	<0.005	<0.005	<0.005
	22	6/18/2002	<0.005	<0.005	<0.005	<0.005	<0.005
SRB-83	11	6/18/2002	<0.005	<0.005	<0.005	<0.005	--
	14	6/18/2002	<0.005	**0.019**	<0.005	<0.005	--
SRB-88	21	6/19/2002	<0.005	**0.02**	<0.005	<0.005	<0.005
SRB-91	11	6/19/2002	<0.005	**0.021**	<0.005	<0.005	<0.005
	14	6/19/2002	<0.005	**0.025**	<0.005	<0.005	<0.005
SRB-99	14	6/25/2002	<0.005	**0.019**	<0.005	<0.005	<0.005
	20	6/25/2002	<0.5	<0.5	<0.5	<0.5	<0.5
SRB-100	5	6/25/2002	<0.005	**0.027**	<0.005	<0.005	<0.005
	7.5	6/25/2002	<0.005	**0.042**	<0.005	<0.005	<0.005

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TABLE 8

ANALYTICAL RESULTS FOR BTEX AND MTBE IN SOIL[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Sampling Depth[2]	Date Collected	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE
Pipeline Area[4]							
PL-01	0.5	6/19/2002	<0.0052	<0.0052	<0.0052	<0.0052	--
PL-02	0.5	6/19/2002	<0.0058	<0.0058	<0.0058	<0.0058	--
PL-03	0.5	6/19/2002	<0.0056	<0.0056	<0.0056	<0.0056	--
PL-04	0.5	6/19/2002	<0.0052	<0.0052	<0.0052	<0.0052	--
PL-05	0.5	6/19/2002	<0.0059	<0.0059	<0.0059	<0.0059	--
PL-06	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
PL-07	0.5	6/19/2002	<0.0058	<0.0058	<0.0058	<0.0058	--
PL-08	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
PL-09	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
PL-10	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
PL-11	0.5	6/19/2002	<0.0055	<0.0055	<0.0055	<0.0055	--
PL-12	0.5	6/19/2002	<0.0050	<0.0050	<0.0050	<0.0050	--
Residential PRGs			0.6	520	8.9	270	17
Industrial PRGs			1.3	520	20	420	36
Soil Screening Level (DAF=1)			0.002	0.6	0.7	10	36
Soil Screening Level (DAF=20)			0.03	12	13	210	NA

Notes:

[1] All samples were collected by Geomatrix Consultants, Inc. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd. of Berkeley, California for benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Method 8260B. Samples collected in September 2001 were analyzed by Severn Trent Laboratories (STL) of Sacramento, California, for MTBE using EPA Method 8260B. Samples analyzed for MTBE were collected in Encore Samplers and prepared for analysis by the laboratory in accordance with EPA Method 5035. Samples collected in 2002 were analyzed by STL San Francisco of Pleasanton, California using EPA MEthod 8260B. Samples analyzed for BTEX and MTBE were collected in Encore Samplers and prepared for analysis by the laboratory in accordance with EPA Method 5035.

[2] Sampling depth in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).

[3] -- = not analyzed

[4] Sample intervals for samples collected in the pipeline area represent depth below pipeline.

Abbreviations:
MTBE = methyl tertiary butyl ether
PRGs = preliminary remediation goals
DAF = dilution attenuation factor
NA = not available

GEOMATRIX

TABLE 9

LEACHABILITY TEST RESULTS[1]

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Borehole	Date Collected	Sampling Interval[2]	TPHd[3] (mg/kg)	TPHd[2] (WET)[4] (µg/l)	TPHmo[3] (mg/kg)	TPHmo[3] (WET)[4] (µg/l)	Total PNAs[5] (mg/kg)	PNAs[5] (WET)[4] (µg/l)
SRB-32	3/6/00	1.0	--	--	--	--	8.223	<0.2[6]
SRB-36	3/6/00	1.0	430[7]	<50[6]	780	<250[6]	--	--
SRB-40	3/7/00	7.5	210[7]	<50	370	<250	<0.05	<0.2
SRB-51	9/27/00	19.5	8,500	--	7600	--	30	<2.9
SRB-52	9/27/00	19.5	830	--	970	--	7.4	<0.73
SRB-53L	11/14/02	5.0	350	1,300/50[8]	810	630/<100[8]	--	--
	11/14/02	11.0	20	710/<50[8]	61	<100/<100[8]	--	--
SRB-79L	11/14/02	5.0	310	420/<50[8]	950	350/<100[8]	--	--
	11/14/02	11.0	<10	640/<50[8]	<50	<100/<100[8]	--	--
SRB-88L	11/14/02	8.0	1,400	1,100/<50[8]	1,800	190/<!00[8]	--	--
	11/14/02	11.0	610	910/<50[8]	780	140/<100[8]	--	--
SRB-100L	11/14/02	4.75	430	350/<50[8]	2,100	320/<100[8]	--	--
	11/14/02	8.0	16,000	2,400/61[8]	15,000	810/<100[8]	--	--
PL-06L	11/14/02	1.0	1,400	880/<50[8]	4,400	770/<100[8]	--	--
	11/14/02	5.0	670	1,200/<50[8]	920	320/<100[8]	--	--
PL-12L	11/14/02	1.0	16,000	14,000/690[8]	22,000	1000/<100[8]	--	--
	11/14/02	5.0	3,700	2,400/180[8]	4,100	520/<100[8]	8.35	--

Notes:

1 Samples collected by Geomatrix Consultants, Inc. Samples collected in March 2000 were analyzed by Entech Analytical, Inc. of Sunnyvale, California. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd., of Berkeley, California.

2 Sampling depth in feet below ground surface. Depth listed represents the bottom depth of the sample interval (i.e. 1.0 equals a six inch sample collected from 0.5 – 1.0 feet below ground surface).

3 TPHd = total petroleum hydrocarbons as diesel; TPHmo = total petroleum hydrocarbons as motor oil. Samples analyzed by EPA Method 8015M followed by a silica gel cleanup by EPA Method 3630C.

4 WET = waste extraction test, waste extraction test was performed using simulated rainwater. Results are presented in micrograms per liter.

5 PNAs = polynuclear aromatic compounds. In March 2000, samples were analyzed by EPA Method 8270 SIM. In September 2000, samples were analyzed by EPA Method 8270.

6 The leachability tests for TPH and PNAs from samples SRB-36 and SRB-32, respectively, were performed one day beyond their hold times.

7 Lab sheet indicates that result is quantified as diesel but the chromatographic pattern is not typical of fuel.

8 1,300/<50 = result without silica gel cleanup / result with silica gel cleanup. The silica gel cleanup method removes non-hydrocarbons that would otherwise interfere with measurement of petroleum hydrocarbons. The data generated following silica gel cleanup is used for analysis of the leachability test results.

-- = not analyzed

TABLE 10

ANALYTICAL RESULTS FOR GRAB GROUNDWATER SAMPLES[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Results reported in micrograms per liter (µg/l)

Borehole	Sample Date	Sample Interval	TPHg	TPHd	TPHd with silica gel cleanup	TPHd(f)	TPHd(f) with silica gel cleanup	TPHmo	TPHmo with silica gel cleanup	TPHmo(f)	TPHmo(f) with silica gel cleanup	PAHs	PAHs(f)	BTEX	MTBE	Other VOCs
Sitewide																
SRB-20	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-21	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-26	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-29	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-30	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	Acetone = **300**
SRB-31	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-32	3/7/2000	10 - 13	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-36[2]	3/6/2000	17 - 22	--	**67**[3]/<50	--	<50/<50	--	<250/<250	--	<250/<250	--	<0.2/<0.2	<0.2/<0.2	--	<5/<5	ND/ND
SRB-37	3/7/2000	21 - 25	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-38	3/6/2000	12 - 16	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-39	3/7/2000	NS	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	**9.8**	ND
SRB-40	3/7/2000	16 - 21	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-41	3/7/2000	11 - 16	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-42	9/26/2000	16 - 21	--	--	--	--	--	--	--	--	--	--	--	--	**77**	--
SRB-42D[4]	9/26/2000	16 - 21	--	--	--	--	--	--	--	--	--	--	--	--	**75**	--
SRB-43	9/26/2000	23 - 28	--	--	--	--	--	--	--	--	--	--	--	--	**19**	--
SRB-45	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	--	--	--	--	--
SRB-47	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	--	--	--	--	--
SRB-49	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	<10	--	<0.5	--	--
SRB-49D	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	<9.4	--	<0.5	--	--
SRB-50	9/26/2000	23 - 28	--	--	--	--	--	--	--	--	--	--	--	--	**11**	--
SRB-55	9/25/2001	22 - 25	<50	--	--	--	--	--	--	--	--	--	--	<1.0	**2.8**	--
SRB-58	9/25/2001	17 - 19	<50	--	--	--	--	--	--	--	--	--	--	<5.0	**120**	--
SRB-59	9/25/2001	NS	<50	--	--	--	--	--	--	--	--	--	--	E = **1.7** X = **14.5**	**34**	--
SRB-60	9/25/2001	NS	<50	--	--	--	--	--	--	--	--	--	--	E = **1.0** X = **9.4**	**9.6**	--
SRB-61	9/24/2001	17 - 22	<50	--	--	--	--	--	--	--	--	--	--	<1.0	**6.5**	--
Fenced Enclosure																
SRB-62	9/26/2001	22 - 25	<50	--	--	--	--	--	--	--	--	--	--	T = **1.5**	**7.6**	--
SRB-74	6/25/2002	24 - 28	<50	<71	<71	<79	<79	<71	<71	<79	<79	--	--	<0.5[5]	**33**	--

TABLE 10

ANALYTICAL RESULTS FOR GRAB GROUNDWATER SAMPLES[1]

Santa Rosa Station Phased Closing Property

Santa Rosa, California

Results reported in micrograms per liter (µg/l)

Borehole	Sample Date	Sample Interval	TPHg	TPHd	TPHd with silica gel cleanup	TPHd(f)	TPHd(f) with silica gel cleanup	TPHmo	TPHmo with silica gel cleanup	TPHmo(f)	TPHmo(f) with silica gel cleanup	PAHs	PAHs(f)	BTEX	MTBE	Other VOCs
Northwestern Area																
SRB-22	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-23	11/15/1996	NS	--	<50	--	--	--	<200	--	--	--	--	--	--	--	ND
SRB-34	3/7/2000	NS	--	**160**[3]	--	<50	--	**420**	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-35	3/7/2000	9 - 13	--	<50	--	<50	--	<250	--	<250	--	<0.2	<0.2	--	<5	ND
SRB-44	9/25/2000	17 - 22	--	**13,000**	--	**400**[6]	--	**12,000**	--	**360**[6]	--	--	--	--	--	--
SRB-46	9/25/2000	16 - 21	--	<50	--	--	--	<300	--	--	--	--	--	--	--	--
SRB-48	9/25/2000	17 - 22	--	**46,000**	--	**1500**[6]	--	**38,000**	--	**950**[6]	--	<190	--	<0.5	--	--
SRB-54	9/25/2000	17 - 22	--	<50	--	--	--	<300	--	--	--	<9.4	--	<0.5	2.3	--
SRB-75	6/25/2002	18 - 22	**76**	**4,100**	**3,700**	**180**	<63	**3,900**	**3,800**	<63	<63	--	--	<0.5[5]	**3.3**	--
SRB-76	6/24/2002	15 - 19	<50	<58	<58	--	--	<58	<58	--	--	--	--	<1	<5	--
SRB-77	6/24/2002	18 - 22	<50	**950**	**960**	**180**	<67	**1,100**	**1,100**	<67	<67	--	--	<0.5[5]	**0.6**	--

Notes:

[1] Samples were collected by Geomatrix Consultants, Inc. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California; TPHd and TPHmo were analyzed using EPA Method 8015 following silica gel cleanup procedure EPA Method 3630C and VOCs were analyzed for using EPA Method 8240. Samples collected in March 2000 were analyzed by Entech Analytical, Inc. of Sunnyvale, California, and analyzed for TPHd and TPHmo using EPA Method 8015M following silica gel cleanup procedure per Method 3630C; PNAs using Method 8270SIM; and VOCs including MTBE and other fuel oxygenates using EPA Method 8260. Samples that were collected in March 2000 for TPHd, TPHmo, and PAHs were analyzed before and after passing through a 0.7 micron glass fiber filter. Samples collected in September 2000 were analyzed by Curtis and Tompkins, Ltd. of Berkeley, California, for TPHd and TPHm using EPA Method 8015M following silica gel cleanup procedure by EPA Method 3630M; for BTEX and MTBE using EPA Method 8260B; and for PAHs using EPA Method 8270C. Samples collected in September 2001 were analyzed by Severn Trent Laboratories (STL), of Sacramento, California, for TPHg, TPHd, TPHmo by EPA Method 8015M and for MTBE by EPA Method 8260B. Samples collected in 2002 analyzed by STL San Francisco of Pleasanton, California and analyzed for TPHg, TPHd, and TPHmo by EPA Method 8015M following a silica gel cleanup by EPA Method 3630 and for BTEX and MTBE by EPA Method 8260B.

[2] Results of sample/blind duplicate sample (labeled SRB46) are shown.

[3] Lab sheet indicates that result is quantified as diesel; chromatographic pattern not typical of fuel.

[4] A borehole identification number followed by "D" indicates that a blind duplicate sample was collected at this location.

[5] Detection limit for benzene, toluene, and ethylbenzene is 0.5 µg/l. Detection limit for xylenes is 1 µg/l.

[6] Samples were reanalyzed to quantify the dissolved concentrations of the chemicals listed. Analyses were performed by Friedman and Bruya, Inc., of Seattle, WA. Samples were passed through a 0.7 micron glass fiber filter and analyzed according to EPA method 8015M following silica gel cleanup procedure by EPA Method 3630. Extraction and reanalysis of samples SRB-44 and SRB-48 was performed on October 17, and 24, 2000, respectively.

Abbreviations:

TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
TPHmo = total petroleum hydrocarbons quantified as motor oil
f = filtered with 0.7 micron glass fiber filter
PAHs = polynuclear aromatic hydrocarbons
NS = not specified
MTBE = methyl tertiary butyl ether
BTEX = benzene, toluene, ethylbenzene, and xylenes
VOCs = volatile organic compounds
ND = not detected above laboratory reporting limits (for VOCs: 5 to 100 µg/l).
-- = not analyzed

TABLE 11

DATA SUMMARY - VISUALLY IMPACTED SOIL

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Borehole	Sample Date	Total Depth (feet bgs)	Soil Sample Depths (feet bgs)	Depth to Water[1] (feet bgs)	Intervals of Visually Impacted Soil[2] (feet bgs)
Northwestern Area					
SRB-48	9/25/2000	22	NS	19	16 - 22
SRB-51	9/27/2000	22	19.5	20	10 - 22
SRB-52	9/27/2000	22	19.5	19.5	16.5 - 22
SRB-53	9/27/2000	7	NS	--[3]	1 - 7
SRB-54	9/27/2000	22	NS	21	---[4]
SRB-63	6/17/2002	19	NS	7.5	16 - 19
SRB-64	6/17/2002	19	NS	7	16 - 19
SRB-65	6/17/2002	19	NS	10	---
SRB-66	6/24/2002	19	NS	10.3	---
SRB-67	6/17/2002	19	NS	7	13.5 - 19
SRB-68	6/17/2002	19	NS	11	4 - 19
SRB-69	6/17/2002	19	NS	4	4 - 19
SRB-75	6/24/2002	22	1, 2, 5, 17, 19, 20	18	18.75 - 19
SRB-76	6/24/2002	19	NS	7.5	--
SRB-77	6/24/2002	22	NS	11	20.75 - 21.5
SRB-78	6/18/2002	19	NS	12.5	4 - 19
SRB-79	6/18/2002	19	12.5	12.5	3 - 19
SRB-80	6/18/2002	22	16, 21.5	10.5	19 - 21
SRB-81	6/18/2002	22	8.5, 15.5, 22	12	12-22
SRB-82	6/18/2002	22	NS	9.75	---
SRB-83	6/18/2002	22	9, 11, 14, 21	9.5	12 - 20.5
SRB-84	6/18/2002	19	NS	9.5	---
SRB-85	6/18/2002	19	NS	9.5	---
SRB-86	6/19/2002	22	NS	7.5	11 - 19.5
SRB-87	6/19/2002	22	NS	7	10.5 - 19
SRB-88	6/19/2002	22	6, 21	7	7 - 19
SRB-89	6/19/2002	19	NS	10	---
SRB-90	6/19/2002	no recovery 19 - 22	14, 17	13.25	13 - 19
SRB-91	6/19/2002	no recovery 18.5 - 22	11, 14	7.75	12 - 18.5
SRB-92	6/19/2002	19	NS	12.5	---
SRB-93	6/20/2002	19	14, 18	13	13 - 16
SRB-94	6/20/2002	18	NS	16	---
SRB-95	6/24/2002	19	NS	7.25	---
SRB-97	6/25/2002	19	NS	11	---
SRB-98	6/25/2002	19	NS	10.75	---
SRB-99	6/25/2002	25	14, 17, 20, 23	14.5	16 - 22
SRB-100	6/25/2002	22	5, 7.5, 11, 19, 20	12	7 - 10, 18.5 - 19

TABLE 11

DATA SUMMARY - VISUALLY IMPACTED SOIL

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Borehole	Sample Date	Total Depth (feet bgs)	Soil Sample Depths (feet bgs)	Depth to Water[1] (feet bgs)	Intervals of Visually Impacted Soil[2] (feet bgs)
SRB-101	7/10/2002	19	5, 8, 11, 17	8.5	---
SRB-102	7/10/2002	19	NS	12	---
SRB-103	7/10/2002	19	5, 8, 11, 17	11.5	---

Notes:

feet bgs = feet below ground surface

[1] Depth to grounwater as observed in borings at the time of drilling.

[2] The visually-impacted soil consisted of thread-like petroleum ganglia within the soil matrix.

[3] -- = no visually impacted groundwater detected.

[4] --- = no visually impacted soil detected.



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GEOMATRIX

SITE LOCATION MAP
Santa Rosa Station Phased Closing Property
Santa Rosa, California

Project No.
2770.005

Figure
1

Santa Rosa Creek

Paved

6th Street

Jefferson Street

Former California Fruit Canners Assn.

Warehouse

Warehouse

Former oil house and gasoline tanks

Former oil underground storage tanks

Former sand piles and soil discoloration

Oil trap

6th Street Warehouse

Former underground storage tank

Former 3,000-bbl aboveground oil tank

Former oil column

Oil trap

Concrete pad

Former underground petroleum pipelines trench

Former pump house

"Northwestern Area" Detail shown on Figure 6

Former turntable

Former 230-gallon fuel oil tank

Concrete pad

Shed on concrete pad

Former 10,000-gallon underground diesel tank

Former fuel storage house

Former storage trailer

Former 10,000-gallon underground gasoline tank

Former Santa Rosa Woolen Mills

Former pump house

Storage house

Fenced Enclosure Detail shown on Figure 7

Office trailer

Corrugated metal pipe

Existing shed

Former aboveground storage tank

NWRPA

3rd Street

4th Street

5th Street

Adams Street

EXPLANATION

- Site property boundary
- Railroad track (current)
- Railroad track (former)
- Chain link fence
- City of Santa Rosa storm water line
- City of Santa Rosa sewer line
- Manhole

Project North

0 80

SCALE IN FEET

Note:

1. All locations of historical features are approximate based on information obtained from Sanborn Fire Insurance Maps, SPTCo Railroad Valuation Maps, and reports by others. Railroad tracks as depicted, indicate lines that were shown on the various historical maps; various spurs that were present only on some maps are not shown.

SITE PLAN
Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX	Project No. 2770.005	Figure 2

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Santa Rosa Creek

Paved

6th Street

Jefferson Street

SRMW-06
132.82

133

134

6th Street Warehouse

Warehouse

Warehouse

SRMW-05
134.29

135

SRMW-10
136.15

136

Concrete pad

Former underground petroleum pipelines trench

"Northwestern Area"

Shed on concrete pad

Concrete pad

137

Storage house

SRMW-07
137.18

138

139

Fenced Enclosure

Existing shed

140

NWRPA

SRMW-08
141.16

141

3rd Street

4th Street

5th Street

Adams Street

EXPLANATION

- SRMW-08 — Monitoring well location
- 140 — Estimated line of equal groundwater elevation (feet above mean sea level)
- 137.18 — Groundwater elevation (feet above mean sea level)
- Site property boundary
- Railroad track (current)
- Railroad track (former)
- Chain link fence
- City of Santa Rosa storm water line
- City of Santa Rosa sewer line
- Manhole

Project North

0 80

SCALE IN FEET

Notes:

1. Monitoring well locations surveyed by Adobe, Inc. of Santa Rosa, California.
2. Contours of equal elevation of potentiometric surface are shown as solid lines only for clarity and are not meant to imply certainty.

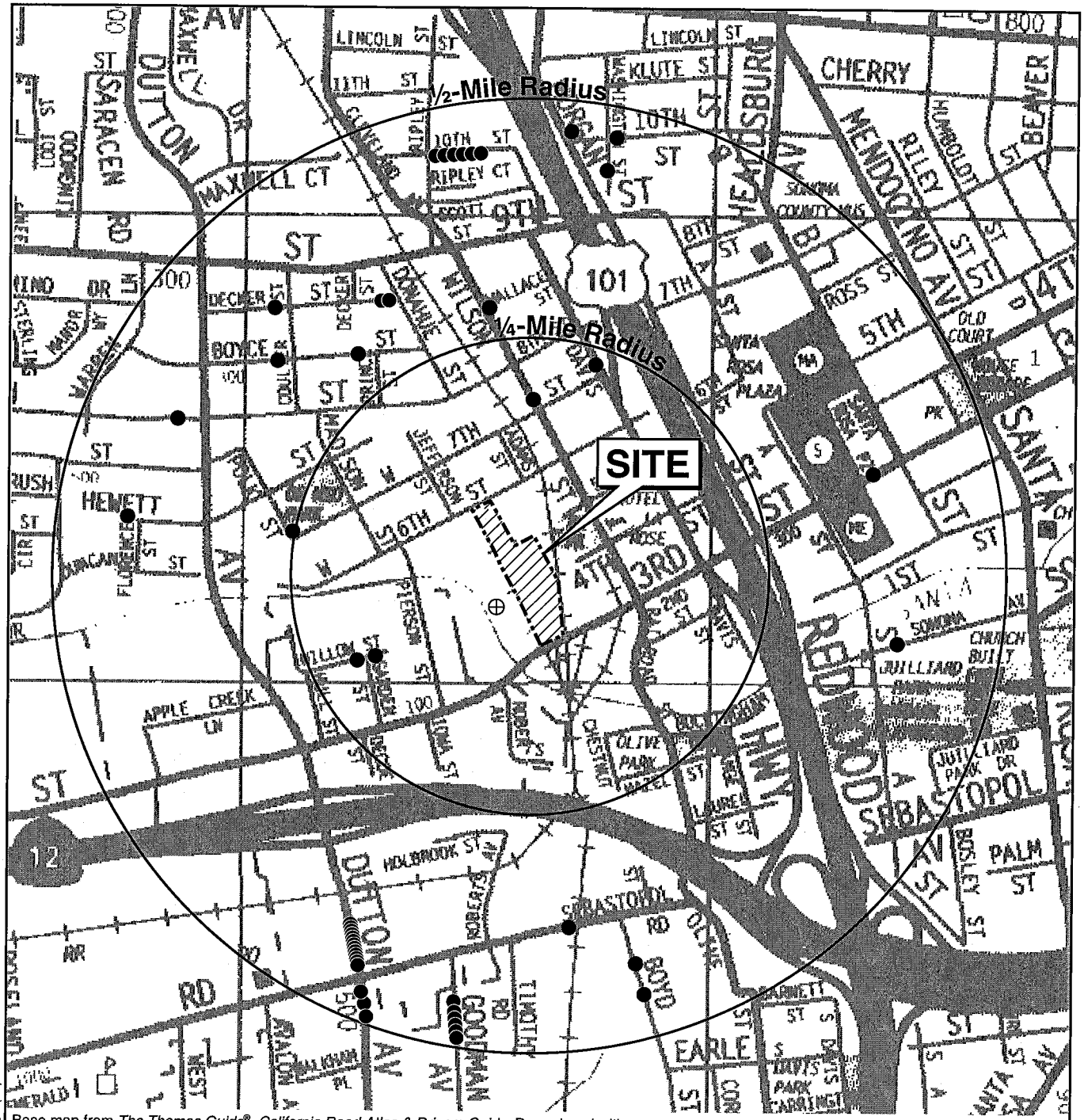
POTENTIOMETRIC SURFACE MAP
June 2002
Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX

Project No. 2770.005

Figure 3

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EXPLANATION

- ● Well location based on City of Santa Rosa Utilities Department Billing System-Accounts with wells
- ⊕ Well location based on information provided by the Regional Water Quality Control Board

NOTE:
Municipal water supply wells were not included in survey.

GEOMATRIX

WATER PRODUCING WELLS LOCATION MAP
Santa Rosa Station Phased Closing Property
Santa Rosa, California

Project No. 2770.005

Figure 4

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Santa Rosa Creek

Paved

6th Street

Jefferson Street

SRMW-06

Former California Fruit Canners Assn.

Warehouse

Warehouse

Former oil house and gasoline tanks

Former oil underground storage tanks

Former sand piles and soil discoloration

Oil trap

6th Street Warehouse

Former underground storage tank

Former 3,000-bbl aboveground oil tank

SRMW-05

Former oil column

Former underground petroleum pipelines trench

Concrete pad

Former pump house

"Northwestern Area"

Former turntable

Former 230-gallon fuel oil tank

Shed on concrete pad

Concrete pad

Former storage trailer

Former fuel storage house

Former 10,000-gallon underground gasoline tank

Former Santa Rosa Woolen Mills

Storage house

Fenced Enclosure

Office trailer

Corrugated metal pipe

Former aboveground storage tank

Existing shed

SRMW-07

SRMW-08

NWRPA

SRB60

SRB61

SRB59

3rd Street

4th Street

5th Street

Adams Street

EXPLANATION

- Monitoring well location
- Mead Clark monitoring well (Harding Lawson, April 1988)
- Location of former monitoring well (NCRWQCB, April 1990)
- Soil boring (NCRWQCB, April 1990)
- Soil and grab groundwater sampling location (Industrial Compliance, May 1992)
- Soil sampling location (Geomatrix)
- Soil and grab groundwater sampling location (Geomatrix)
- Grab groundwater sampling location (Geomatrix)
- Site property boundary
- Railroad track (current)
- Railroad track (former)
- Chain link fence
- City of Santa Rosa storm water line
- City of Santa Rosa sewer line
- Manhole

Project North

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SCALE IN FEET

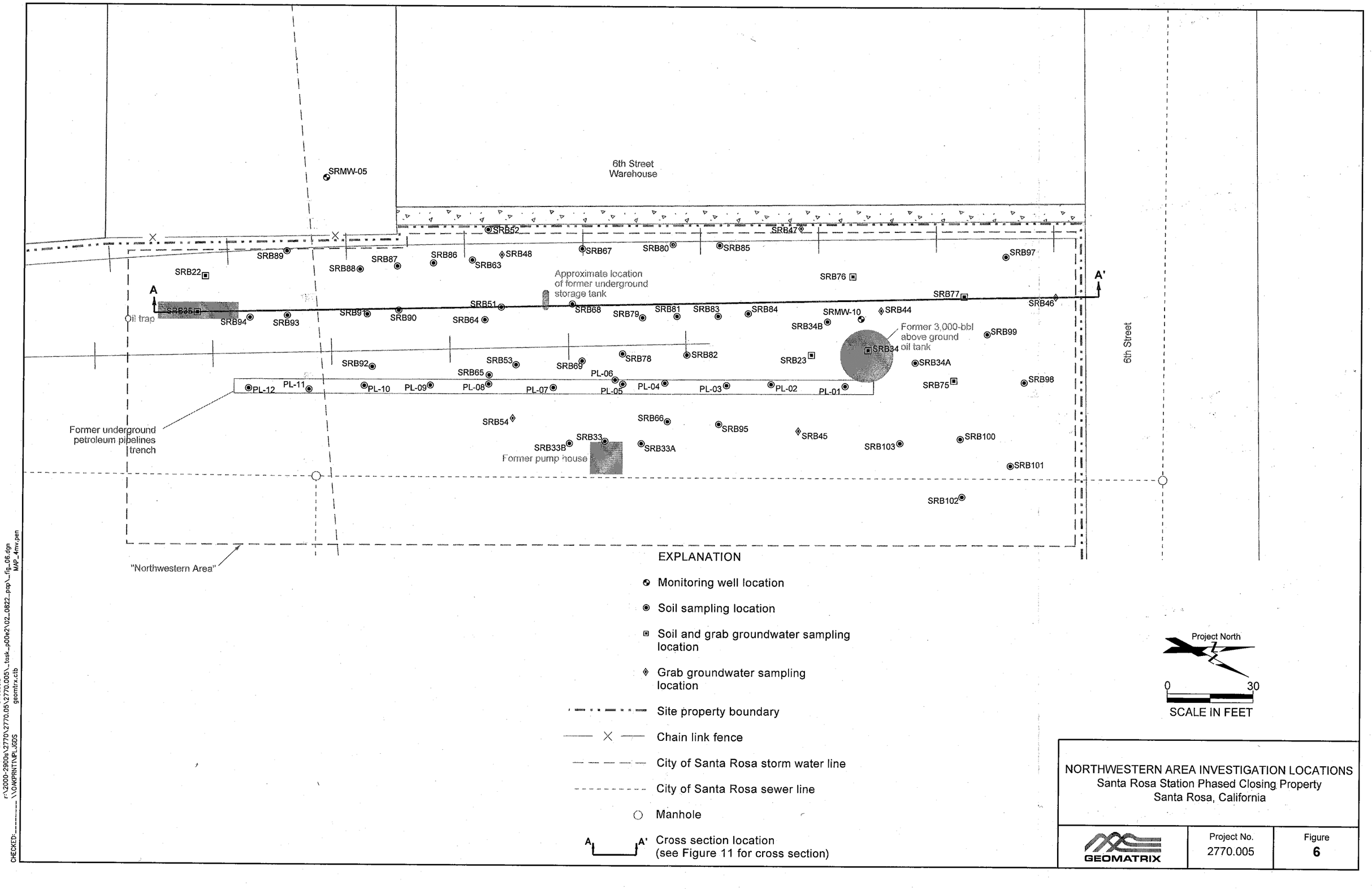
Note:

1. All locations of historical features are approximate based on information obtained from Sanborn Fire Insurance Maps, SPTCo Railroad Valuation Maps, and reports by others. Railroad tracks as depicted, indicate lines that were shown on the various historical maps; various spurs that were present only on some maps are not shown.

SAMPLING LOCATION MAP
Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX	Project No. 2770.005	Figure 5

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EXPLANATION

- Monitoring well location
- Soil sampling location
- Soil and grab groundwater sampling location
- Grab groundwater sampling location
- Site property boundary
- Chain link fence
- City of Santa Rosa storm water line
- City of Santa Rosa sewer line
- Manhole
- A — A' Cross section location (see Figure 11 for cross section)

Project North

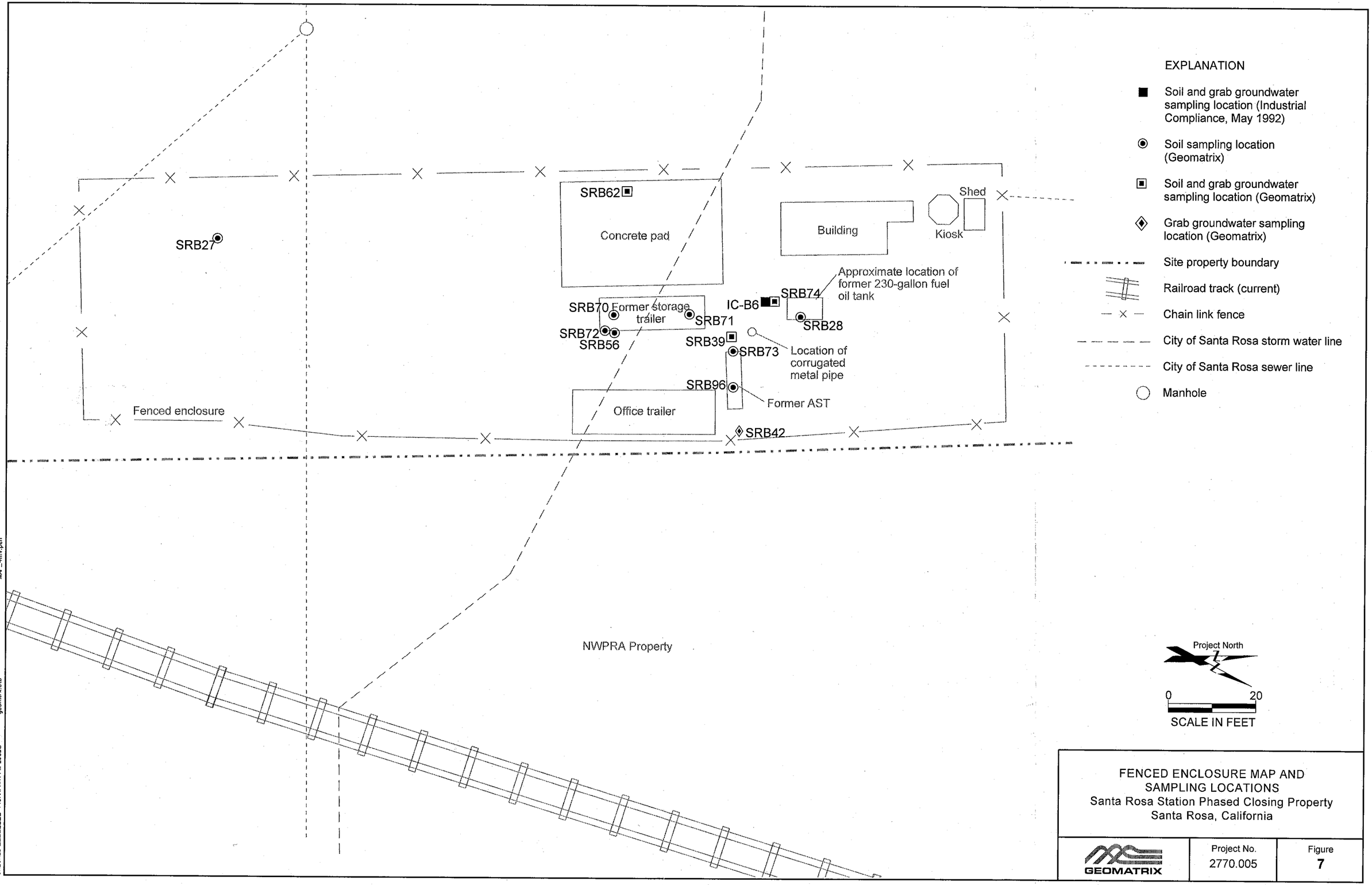
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NORTHWESTERN AREA INVESTIGATION LOCATIONS
Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX	Project No. 2770.005	Figure 6

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FENCED ENCLOSURE MAP AND
SAMPLING LOCATIONS
Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX	Project No. 2770.005	Figure 7

Santa Rosa Creek

Paved

SRMW-06

6th Street

Jefferson Street

Warehouse

Warehouse

6th Street Warehouse

SRMW-05

SRB63 SRB52 SRB86 SRB48 SRB87 SRB67 SRB80 SRB88 SRB91 SRB64 SRB68 SRB79 SRB81 SRB93 SRB90 SRB51 SRB83 SRB53 SRB69 SRB78 SRB75 SRB100 SRB99 SRB77

SRMW-10

Concrete pad

Former underground petroleum pipelines trench

"Northwestern Area"

Shed on concrete pad

Concrete pad

Storage house

SRMW-07

Fenced Enclosure

Existing shed

NWRPA

SRMW-08

3rd Street

4th Street

5th Street

Adams Street

EXPLANATION

- Existing monitoring well location
- Location of visuallly impacted soil
- Site property boundary
- Railroad track (current)
- Chain link fence
- City of Santa Rosa storm water line
- City of Santa Rosa sewer line
- Manhole

Project North

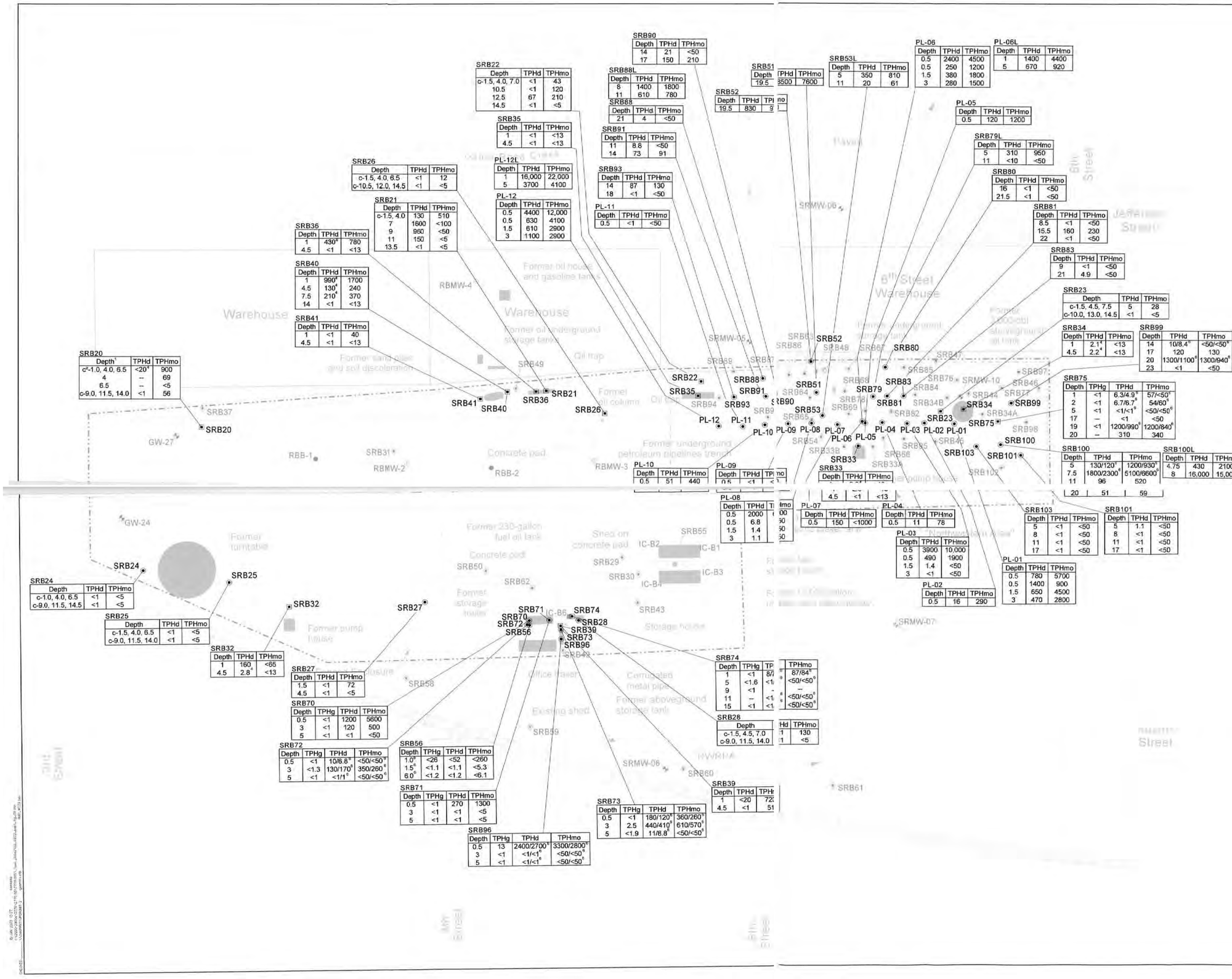
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SCALE IN FEET

DISTRIBUTION MAP - VISUALLY IMPACTED SOIL
Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX	Project No. 2770.005	Figure 8

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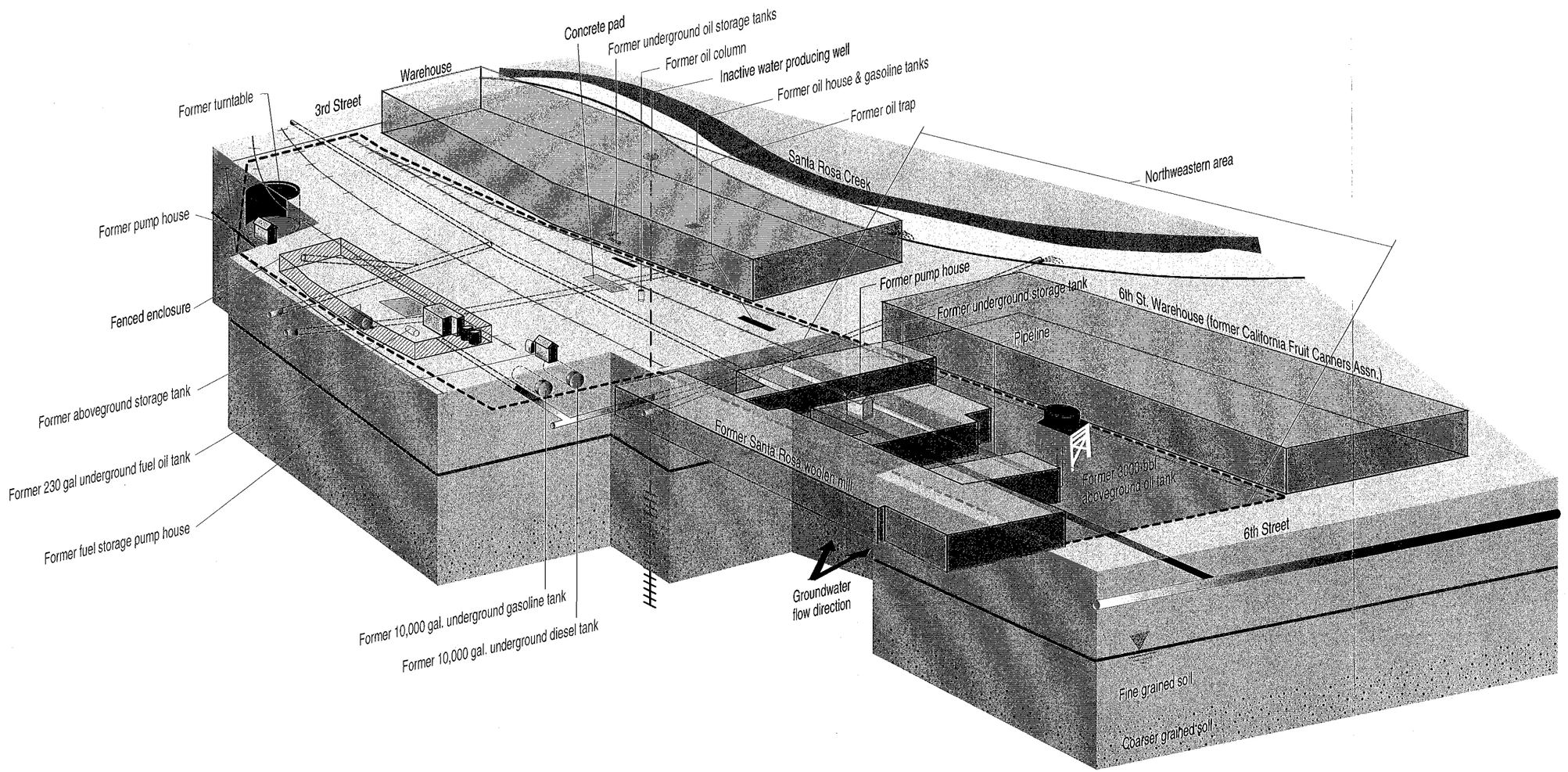
Abbreviations:
TPHg = total petroleum hydrocarbons quantified as gasoline
TPHd = total petroleum hydrocarbons quantified as diesel
TPHmo = total petroleum hydrocarbons quantified as motor oil

Notes:

1. Sampling depth measured in feet below ground surface. Depth listed represents the bottom depth of the sample (i.e., 4 equals a six inch sample collected from 3.5 - 4.0 feet below ground surface).
2. "c" denotes composite sample.
3. -- = not analyzed.
4. Some result quantified as diesel, however chromatographic pattern not typical of fuel. (See Table 6 for details)
5. Additional analyses, total purgeable/total extractable petroleum hydrocarbons, performed for SRB56-1.0, SRB62-1.5, SRB62-6.0. Results were SRB62-1.0 = 330/8200; SRB62-1.5 = <1.1/25, and SRB62-6.0 = <1.2/97, respectively.
6. 10/6.8 = Result without silica gel cleanup/result with silica gel cleanup.

DISTRIBUTION OF PETROLEUM HYDROCARBONS
Santa Rosa Option Property
Santa Rosa, California

GEOMATRIX | Project No. 2770.005 | Figure 9



LEGEND

- City of Santa Rosa sanitary sewer line
- City of Santa Rosa storm water line
- Railroad tracks, current or historical
- Chain link fence
- Site property boundary
- Generalized water level elevation

Project North
Not to scale

CONCEPTUAL SITE MODEL
Santa Rosa Station
Santa Rosa, California

GEOMATRIX	Project No. 2770	Figure 10

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A

Oil trap

SRB35

SRB22 (projected 12' E)

SRB94 (projected 2.5' W)

SRB93 (projected 2' W)

Storm water line

SRMW05 (projected 46' E)

SRB91 (projected 1.5' W)

SRB90

SRB51

SRB48 (projected 18' E)

SRB54 (projected 40' W)

Former underground storage tank

SRB68

CL
SC
CL

SWSM
CL
SP

SM
CL
SC

SM
CL
SC

FILL
CL
CL-SC
CL
CL-SC
CL
CL-SC

SM
CL
SC
CL
SC

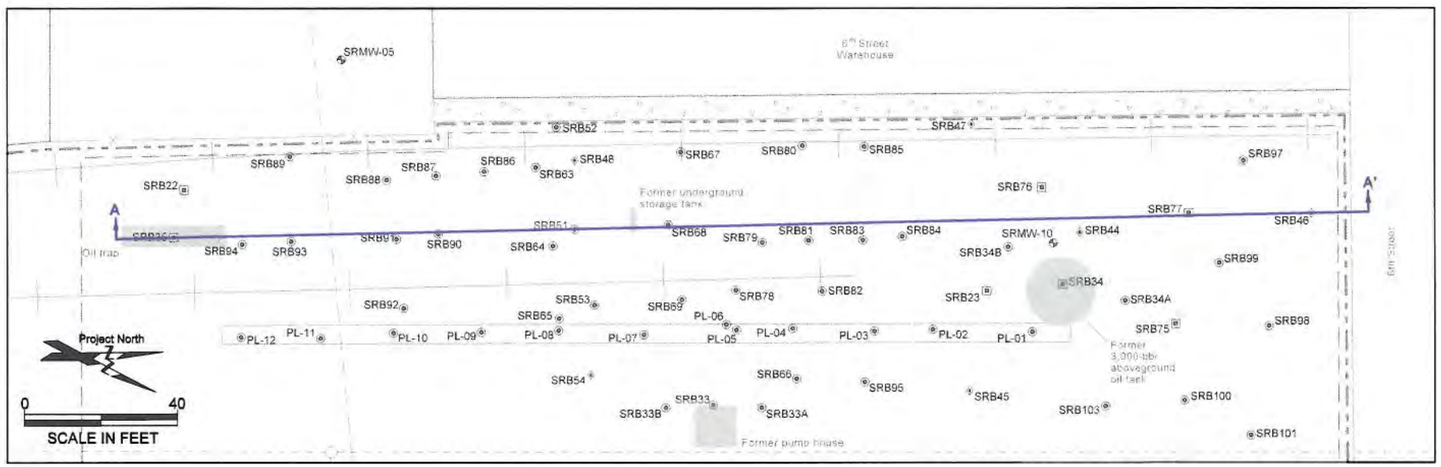
SM
CL
SC

SM
CL
SC
CL
SC

SM
CL
SC
SC

SM
CL
SC
CL
SC

SM
CL
SC
CL
SP-SC
CL
SC



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A'

SRB79 (projected 4.5' W)
SRB81 (projected 4.5' W)
SRB83 (projected 4.5' W)
SRB84 (projected 3' W)
SRB47 (projected 26' E)
SRB76 (projected 8' E)
SRMW10 (projected 6' W)
SRB44 (projected 4' W)
SRB75 (projected 28' W)
SRB77
SRB46B
Site boundary
6th Street

SRB79: SM; CL; SP-SC; CL
SRB81: SM; CL
SRB83: SM; CL; SC; CL; SC
SRB84: SM; CL; SC
SRB47: SM; CL; SC
SRB76: SM; CL; SC; CL; SC
SRMW10: FILL; CL; CL-SC; CL; CL-SC
SRB44: SM; CL; SC; CL; SC
SRB75: SM; CL; SC
SRB77: SM; CL; SC; CL; SC; SC
SRB46B: SM; CL; SC; CL; SC

EXPLANATION

Fill	SM	Silty sand, silty sand with gravel
	SW-SM	Well graded sand with silt, well graded sand with silt and gravel
Fine grained	CL	Lean clay, lean clay with sand, lean clay with gravel, sandy lean clay, gravelly lean clay, gravelly lean clay with sand
Coarse grained	SP-SC	Poorly graded sand with clay, poorly graded sand with clay and gravel
	SC	Clayey sand, clayey sand with gravel
	SP	Poorly graded sand, poorly graded sand with gravel

Screen interval

Visually impacted soil observed during drilling

Water level at time of drilling

Note:

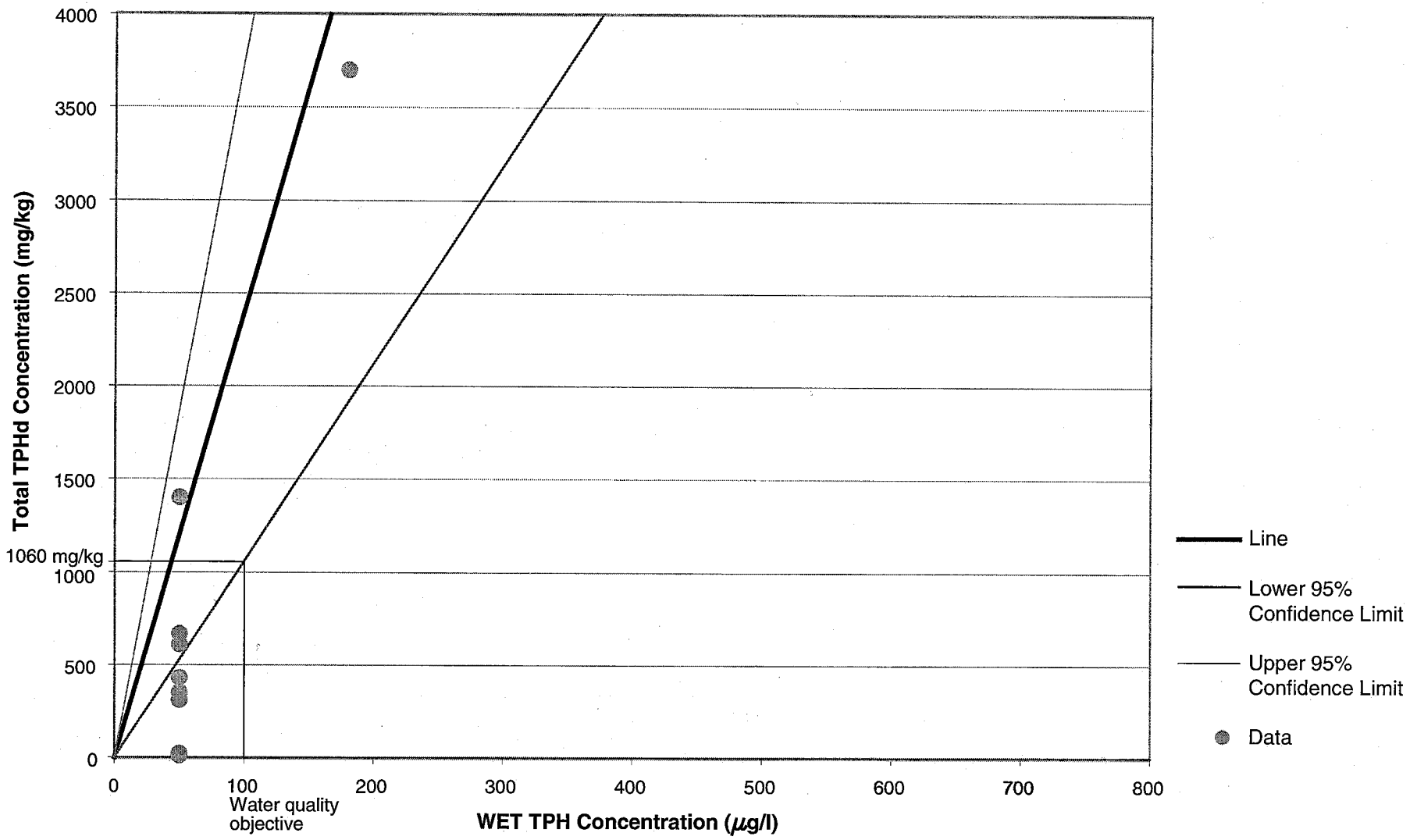
1. Borings presented are on cross section line A-A' or have had water samples collected and are projected to show screen interval against lithology.

5
0 10
SCALE IN FEET
Vertical Exageration 2x

CROSS SECTION A-A'
Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX | Project No. 2770.005 | Figure 11

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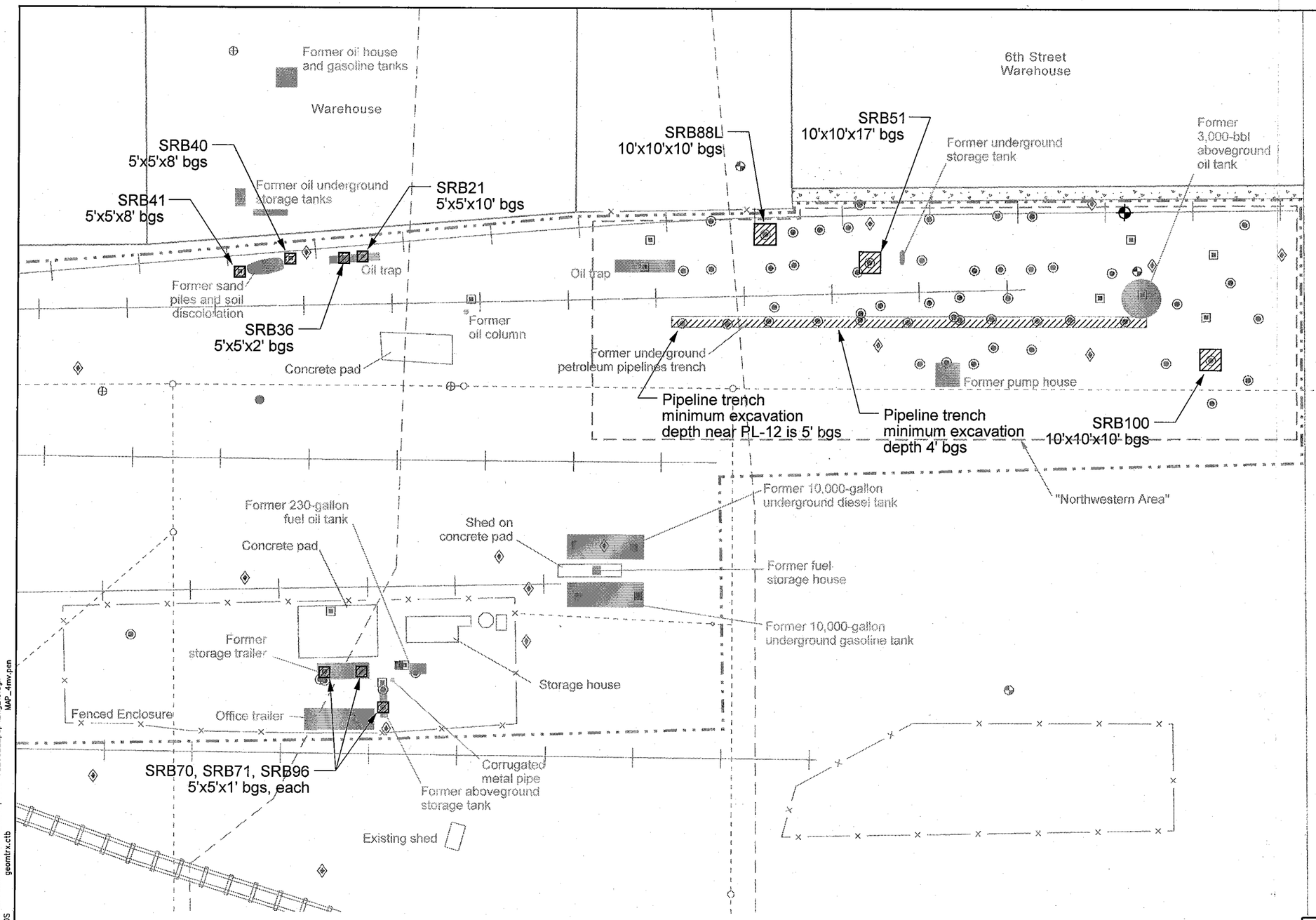


GEOMATRIX

REGRESSION OF TOTAL TPHd ON WET TPHd
Santa Rosa Station Phased Closing Property
Santa Rosa, California

Project No.
2770.005

Figure
12



EXPLANATION

- Proposed monitoring well
- Proposed excavation
- Monitoring well location
- Location of former monitoring well (NCRWQCB, April 1990)
- Soil boring (NCRWQCB, April 1990)
- Soil and grab groundwater sampling location (Industrial Compliance, May 1992)
- Soil sampling location (Geomatrix)
- Soil and grab groundwater sampling location (Geomatrix)
- Grab groundwater sampling location (Geomatrix)
- Site property boundary
- Chain link fence
- City of Santa Rosa storm water line
- City of Santa Rosa sewer line
- Manhole

Project North

0 50

SCALE IN FEET

PROPOSED REMEDIAL ALTERNATIVE
Santa Rosa Station Phased Closing Property
Santa Rosa, California

GEOMATRIX

Project No. 2770.005

Figure 13

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Appendix A

GEOMATRIX

APPENDIX A

Field and Analytical Methods – June Through November 2002 Investigation

APPENDIX A

FIELD AND ANALYTICAL METHODS
JUNE THROUGH NOVEMBER 2002 INVESTIGATION

Santa Rosa Station Option Property
Santa Rosa, California

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TABLE

Table A-1 Summary of Analyses Performed on Soil and Groundwater Samples

APPENDIX A

FIELD AND ANALYTICAL METHODS
JUNE THROUGH NOVEMBER 2002 INVESTIGATION

Santa Rosa Station Option Property
Santa Rosa, California

A.1 INTRODUCTION

The following sections summarize the field methods and analytical program utilized for pipeline removal and soil and groundwater investigation activities conducted at the Santa Rosa Station Option Property in June through November 2002.

A.2 FIELD METHODS

The field investigation was performed by Geomatrix between June 17, 2002 and November 14, 2002 in general accordance with the Work Plan for Removal of Subsurface Pipeline (Geomatrix, 2002a) and letters to the Regional Water Quality Control Board – North Coast Region (RWQCB) dated April 19, 2002[1], June 14, 2002[2], and November 4, 2002[3]. Field activities conducted in June through August 2002 consisted of removing approximately 300 feet of subsurface piping and collecting 12 samples for chemical analysis from the pipeline trench (PL-01 through PL-12); and advancing 41 soil borings (SRB-63 through SRB-103) for visual observation and collection of soil samples for chemical analysis from the fenced enclosure and the northwestern area of the site. The investigation also involved collection of soil samples from 12 locations within the pipeline excavation trench for chemical analysis and collection of grab groundwater samples from four locations for chemical analysis. Field activities conducted in November 2002 consisted of advancing six soil borings (SRB-53L, SRB-79L, SRB-88L, SRB-100L, PL-06L, and PL-12L) for collection of soil samples for chemical analysis.

A.2.1 PRE-FIELD ACTIVITIES

Prior to beginning the field program, Geomatrix prepared a site specific health and safety plan and contacted Underground Service Alert. Geomatrix subcontracted Subsurface Locating Service (Subsurface) of Petaluma, California to screen each boring location for the presence of

[1] *Work Plan for Exploratory Borings*, letter dated April 19, 2002.
[2] *Addendum to Work Plan for Exploratory Borings*, letter dated June 14, 2002.

subsurface utilities. Subsurface also marked out the location of the pipeline, in order to facilitate excavation activities.

Geomatrix obtained permits from the Sonoma County Department of Environmental Health Services for borings and a permit to excavate from the Santa Rosa Fire Department (SRFD). The current railroad operator, Railways, was notified prior to fieldwork, although the track that is located east of the site is currently inactive.

A.2.2 PIPELINE REMOVAL

On June 17 and 18, 2002, Clearwater Environmental Management, Inc. (Clearwater) of Fremont, California used a backhoe to pothole at nine locations along the suspected pipeline route. Pipes were exposed along the alignment shown on Figure 6 at an approximate depth of 1.5 feet to 2 feet below ground surface (bgs). Under the supervision of Geomatrix and SRFD personnel, Clearwater removed overburden soil from the pipeline route. The excavated soil was segregated in a stockpile adjacent to the excavation and covered with plastic sheeting. Following removal of overburden material, additional soil was removed above, below, and laterally adjacent to the pipes, exposing the entire length of the pipeline. The excavated soil was segregated from the overburden soil in a separate stockpile and covered with plastic sheeting.

Following excavation of the pipeline, Geomatrix identified couplings and joints along the pipes and performed a visual assessment of the structural integrity of individual segments, which appeared intact. Clearwater then used a vacuum truck to remove residual product in the pipes. Following removal of the product, Geomatrix proposed 12 soil sample locations in the pipeline trench (PL-01 through PL-12), which were subsequently approved by the RWQCB during an on-site meeting with Geomatrix personnel. Sample locations were spaced at intervals of approximately 20 feet, as called for in the work plan. The sample locations were selected to correspond to locations of pipeline joints or to locations of observed soil staining, as discussed with the SRFD. Samples of trench soil were collected at 12 locations along the trench in 6-inch-long by 2-inch-diameter brass sleeves that were sealed with Teflon® sheets, plastic end caps, and duct tape. Three five-gram samples also were collected at each sampling location using the EnCore® method in accordance with U.S. Environmental Protection Agency (EPA) Method 5035. The brass sleeves and Encore® samples were labeled, sealed in plastic bags,

[3] *Proposed Work Plan for Additional Evaluation of Petroleum in Soil,* letter dated November 4, 2002.

placed in an ice-cooled chest, and delivered under chain-of-custody procedures to STL San Francisco (STL) of Pleasanton, California, a California-certified analytical laboratory.

A.2.3 SOIL SAMPLING

Between June 17, 2002 and November 14, 2002, 47 soil borings were advanced with the fenced enclosure and the northwestern area of the site (not including the pipeline borings PL-01 through PL-12). Five soil borings were advanced within the fenced enclosure by a combination of potholing and hand augering. One soil boring was advanced using direct push technology within the fenced enclosure. Forty-one soil borings were advanced using direct push technology outside the fenced enclosure, in the northwestern area of the site near the Sixth Street Warehouse and the location of the former 3000-barrel aboveground storage tank (AST). Each of the above mentioned sampling methods are described in detail in the following sections.

A.2.3.1 Potholing/Hand Augering

Five soil borings (GMX-70, GMX-71, SRB-72, SRB-73, and SRB-96) were advanced within the fenced enclosure by a combination of potholing and hand augering. On June 20, 2002, Clearwater potholed the locations of SRB-72, SRB-73, and SRB-96 to a depth of about 5 feet bgs using a backhoe. Following potholing, Precision advanced the three borings to a total depth of 5 feet bgs by hand augering. On August 2, 2002, Geomatrix hand augered soil borings GMX-70 and GMX-71, located under a former storage trailer, from ground surface to a total depth of 5 feet bgs.

On November 14, 2002, Precision Sampling, Inc. (Precision), of Richmond, California, under the direction of Geomatrix field personnel, advanced two borings within the pipeline excavation trench to a total depth of 5 feet bgs by hand augering. The two borings were located directly adjacent to previous borings PL-06 and PL-12 and were named PL-06L and PL-12L, respectively. Soil samples were collected from the two boreholes at depths of approximately 1 and 5 feet bgs. Each sample was collected by filling a 6-inch-long by 2-inch-diameter brass sleeve at the desired sample interval. Each sleeve was then sealed with Teflon® sheets, plastic end caps, and duct tape. The brass sleeves were labeled, sealed in plastic bags, placed in an ice-cooled chest, and delivered under chain-of-custody procedures to Friedman and Bruya of Seattle, Washington, a California-certified analytical laboratory.

Soil samples were collected from the five boreholes at depths of approximately 1, 2, and 5 feet bgs. Each sample was collected by pushing a six-inch-long by two-inch-diameter brass sleeve

at the desired sample interval with a slide hammer. Each sleeve was then sealed with Teflon® sheets, plastic end caps, and duct tape. Three five-gram discrete-depth Encore® samples were also collected at each sampling depth in accordance with EPA Method 5035. The brass sleeves and Encore® samples were labeled, sealed in plastic bags, placed in an ice-cooled chest, and delivered under chain-of-custody procedures to STL.

A.2.3.2 Direct Push Technology

Thirty-five borings (SRB-63 through SRB-69, SRB-74 through SRB-95, and SRB-97 through SRB-103) were advanced between June 17, 2002 and July 10, 2002 and four borings (SRB-53L, SRB-79L, SRB-88L, and SRB-100L) were advanced on November 14, 2002. Borings SRB-53L, SRB-79L, SRB-88L, and SRB-100L were advanced in locations directly adjacent to previous borings SRB-53, SRB-79, SRB-88, and SRB-100, respectively. Continuous soil cores were collected by Precision by advancing a core barrel lined with stainless steel liners with a direct push drill rig at each boring. Recovered soil was described and logged by a Geomatrix geologist using the American Society Testing and Material (ASTM) Standard D2488-90 and Munsell color designations. A photoionization detector (PID) and visual observation were used to screen soil samples for visually impacted soil. Soil samples were collected from selected depths by sealing stainless steel liners with Teflon® sheets, plastic end caps, and duct tape. Selected sample depths were also sampled by collecting three five-gram discrete-depth Encore® samples in accordance with EPA Method 5035. Table A-1 provides a list of the depth intervals sampled at each boring location. Following collection, the stainless steel sleeves and Encore® samples were labeled, sealed in plastic bags, placed in an ice-cooled chest, and delivered under chain-of-custody procedures to either STL (June and July sampling events) or Freidman and Bruya (November sampling event).

Between each boring, all drilling equipment was steam-cleaned and all sampling equipment was decontaminated by scrubbing with distilled water and Alconox, followed by a distilled water rinse.

Upon completion of the borings, temporary casings were used as tremie pipes to backfill the borings from total depth to ground surface with Type I/II neat cement grout. Each boring location was later surveyed by a licensed surveyor.

A.2.4 GRAB GROUNDWATER SAMPLING

Prior to backfilling, grab groundwater samples were collected from four borings (SRB-74 through SRB-77) by advancing a drive casing with a disposable tip to total depth, placing a

temporary polyvinyl chloride (PVC) well screen within the drive casing, retracting the drive casing to expose the well screen to native sediments, and collecting groundwater samples through the well casing using a new, clean, disposable bailer. The temporary well screen was removed after sampling each location.

A.2.5 INVESTIGATION-DERIVED MATERIALS

All waste materials (e.g., soil cuttings and equipment wash water) generated during the sampling program were placed in appropriate containers, labeled, and temporarily stored within the fenced enclosure on site. Analytical results were used to characterize the waste for appropriate disposal by UPRR.

A.3 ANALYTICAL LABORATORY PROGRAM

The following sections summarize the analytical laboratory testing performed on soil and grab groundwater samples collected during the field program. Table A-1 summarizes the analytical testing performed for each sample collected. Appendix C contains the laboratory analytical results and chain-of-custody documentation.

A.3.1 SOIL

Soil samples were collected for chemical analysis from 37 borings at various sampling depths. Analyses performed on the soil samples included some or all of the following:

- benzene, toluene, ethylbenzene, and total xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by U.S. Environmental Protection Agency (EPA) Method 8260B;
- total petroleum hydrocarbons characterized as diesel (TPHd) and motor oil (TPHmo) by EPA Method 8015M with silica gel cleanup by EPA Method 3630.
- total petroleum hydrocarbons characterized as gasoline (TPHg) by EPA Method 8015M;
- total petroleum hydrocarbons characterized as Bunker-C oil (Bunker-C) by EPA Method 8015M;
- polynuclear aromatic hydrocarbons (PAHs) by EPA Method 8270C SIM; and
- California waste extraction test (WET), modified using deionized water as the extract.

A.3.2 GROUNDWATER

Grab groundwater samples were collected from accumulated water within soil boring SRB-74 within the fenced enclosure and within soil borings SRB-75 through SRB-77 in the vicinity of the former 3000-barrel AST.

Each grab groundwater sample was analyzed for BTEX and MTBE by EPA Method 8260B and for TPHg, TPHd, and TPHmo by EPA Method 8015M. Samples analyzed for TPHd and TPHmo were prepared using a silica gel cleanup to remove polar biogenic material prior to analysis by EPA Method 3630. Where sufficient sample volume permitted (i.e., SRB-74, SRB-75, and SRB-77), a portion of the sample was filtered and analyzed for the same analytes listed above in order to compare the analytical results obtained for both filtered and unfiltered samples.

GEOMATRIX

TABLE A-1

SUMMARY OF ANALYSES PERFORMED ON SOIL AND GROUNDWATER SAMPLES

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Sampling Location	Sampling Depth	BTEX	MTBE	TPHg	TPHd	TPHmo	Bunker-C	PNAs	WET (modified)
Soil									
SRB-53L	5.0, 11.0				X	X			X
GMX-70	0.5, 3.0, 5.0	X	X	X	X	X			
GMX-71	0.5, 3.0, 5.0	X	X	X	X	X			
SRB-72	0.5, 3.0, 5.0	X	X	X	X	X			
SRB-73	0.5, 3.0, 5.0	X	X	X	X	X			
SRB-74	1.0, 5.0, 9.0, 15.0	X	X	X	X	X			
SRB-75	1.0, 2.0, 5.0, 19.0	X	X	X	X	X			
	17.0, 20.0				X	X		X	
SRB-79	12.5	X						X	
SRB-79L	5.0, 11.0				X	X			X
SRB-80	16.0, 21.5				X	X		X	
SRB-81	8.5, 15.5, 22.0	X	X		X	X	X	X	
SRB-83	11.0, 14.0	X						X	
	9.0, 21.0				X	X		X	
SRB-88	21.0	X	X		X	X	X	X	
SRB-88L	8.0, 11.0				X	X			X
SRB-90	14.0, 17.0				X	X		X	
SRB-91	11.0, 14.0	X	X		X	X	X	X	
SRB-93	14.0, 18.0				X	X		X	
SRB-96	0.5, 3.0, 5.0	X	X	X	X	X			
SRB-99	14.0	X	X	X	X	X		X	
	20.0	X	X		X	X	X	X	
	17.0, 23.0				X	X		X	
SRB-100	5.0, 7.5	X	X		X	X	X	X	
	11.0, 20.0				X	X		X	
SRB-100L	4.75, 8.0				X	X			X
SRB-101	5.0, 8.0, 11.0, 17.0				X	X		X	
SRB-103	5.0, 8.0, 11.0, 17.0				X	X		X	
PL-01	0.5	X							
	1.5, 3.0				X	X		X	
PL-02	0.5	X							

GEOMATRIX

TABLE A-1

SUMMARY OF ANALYSES PERFORMED ON SOIL AND GROUNDWATER SAMPLES

Santa Rosa Station Phased Closing Property
Santa Rosa, California

Sampling Location	Sampling Depth	BTEX	MTBE	TPHg	TPHd	TPHmo	Bunker-C	PNAs	WET (modified)
PL-03	0.5	X							
	1.5, 3.0				X	X		X	
PL-04	0.5	X							
PL-05	0.5	X							
PL-06	0.5	X							
	1.5, 3.0				X	X		X	
PL-06L	1.0, 5.0				X	X			X
PL-07	0.5	X							
PL-08	0.5	X							
	1.5, 3.0				X	X		X	
PL-09	0.5	X							
PL-10	0.5	X							
PL-11	0.5	X							
PL-12	0.5	X							
	1.5, 3.0				X	X		X	
PL-12L	1.0, 5.0				X	X		X (5.0 only)	X
Groundwater									
SRB-74	NA	X	X	X	X	X			
SRB-75	NA	X	X	X	X	X			
SRB-76	NA	X	X	X	X	X			
SRB-77	NA	X	X	X	X	X			

Abbreviation:

BTEX = benzene, toluene, ethylbenzene, xylene; MTBE = methyl tert butyl ether; TPHg = total petroleum hydrocarbons characterized as gasoline; TPHd = total petroleum hydrocarbons characterized as diesel; TPHmo = total petroleum hydrocarbons characterized as motor oil; TPH bunker C = total petroleum hydrocarbons characterized as bunker C oil; PAHs = Polynuclear aromatic hydrocarbons; and WET = waste extraction test modified.

Appendix B

GEOMATRIX

APPENDIX B

Monitoring Well Construction Details and Logs

Equipment 12" Hollow Stem Auger

Elevation 153.9' Date 4/5/88

Laboratory Tests	Blows/foot	Moisture Content (%)	Dry Density (pcf)	Core Recov. % /RQD	Drilling Rate (min/ft)	Depth (ft)	Sample	
						0		ORANGE SANDY CLAY (CL) soft, moist, no gasoline odor — FILL
								GRAY SANDY CLAY (CL) soft, moist, no gasoline odor
	13					5		
	11							
						10		BROWN SILTY SAND (SM) loose, moist, fine to medium sands, no gasoline odor
	9							
								BROWN CLAY (CL) stiff, moist, no gasoline odor
	9					15		
	15							
								BROWN SILTY SAND (SM) medium dense, saturated, medium subrounded sand
						20		BROWN SANDY CLAY (CL) medium stiff, moist, no gasoline odor
	6							water level on 4/5/88
								BROWN SILTY SAND (SM) loose, saturated, fine to medium subrounded sand
	62							BROWN GRAVELLY SAND WITH SILT (SP) medium dense, saturated, coarse subrounded sand, fine subangular gravels, no gasoline odor
						25		
	30							
								BROWN CLAY (CH) very stiff, moist, no gasoline odor
						30		color change to gray at 30.0 ft
	20							color change to brown, slight increase in very fine sand content at 32.0 ft
						35		
	10							bottom of boring at 36.5 ft boring converted to monitoring well
						40		

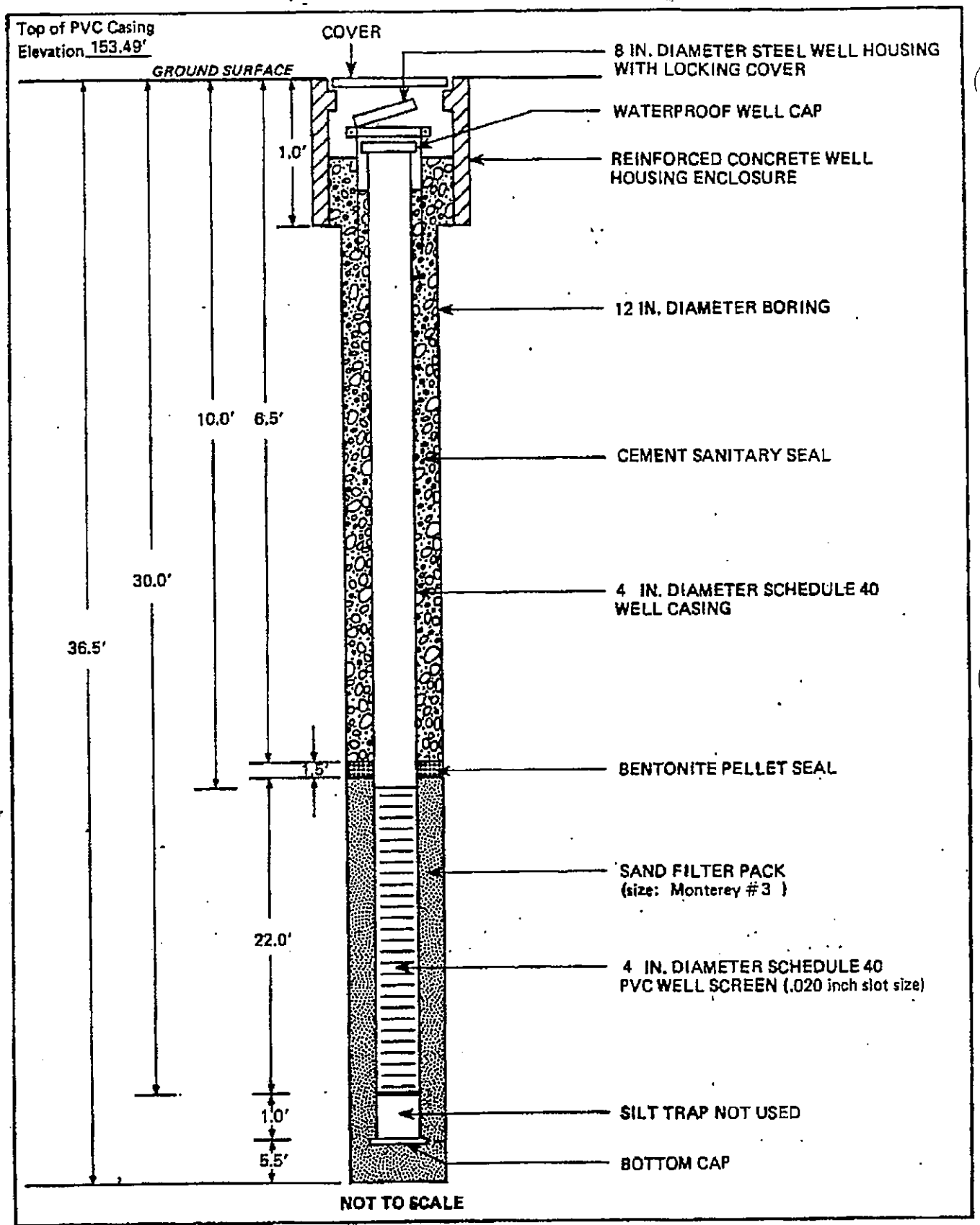
Harding Lawson Associates
Engineers and Geoscientists

Log of Boring GW-24
Mead Clark
Santa Rosa, California

PLATE A12

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
EH	18018,006.01		4/88		

022



Harding Lawson Associates
Engineers and Geoscientists

Well GW-24 Completion Diagram
Mead Clark
Santa Rosa, California

PLATE
A13

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
CSN	18,018,006.01		5/88		

FORM GW3

023

Equipment 12" Hollow Stem Auger

Elevation 152.3' Date 4/13/88

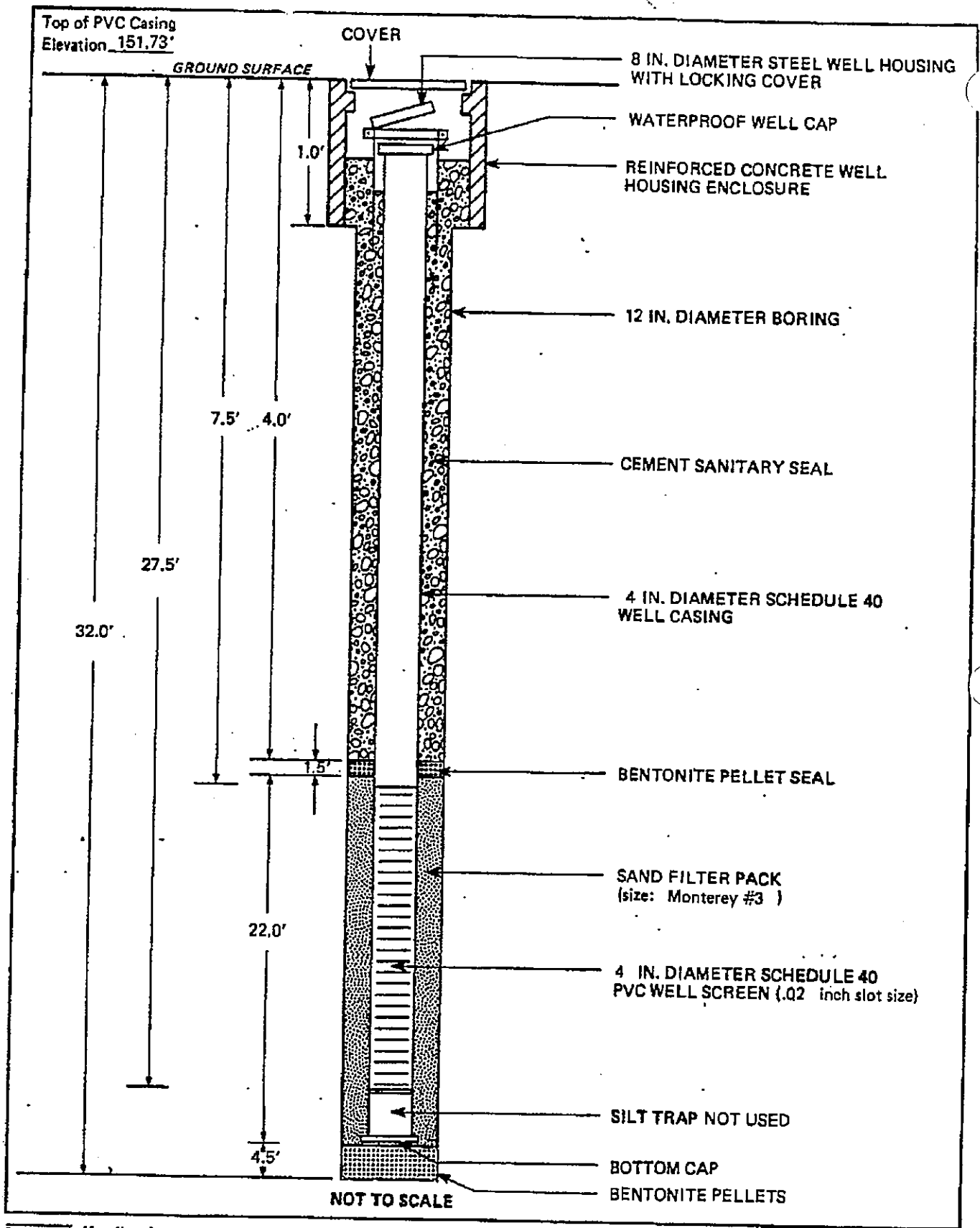
Laboratory Tests	Blows/foot	Moisture Content (%)	Dry Density (pcf)	Core Recov. % /RQD	Drilling Rate (min/ft)	Depth (ft)	Sample	
						0		BROWN CLAYEY SAND WITH GRAVEL (SC) loose, dry, no gasoline odor — FILL
								DARK BROWN SANDY CLAY (CL) soft, moist, no gasoline odor
						5		
	7							
						10		
	4							BROWN CLAYEY SAND (SC) very loose, saturated, fine to medium subrounded to rounded sand, no gasoline odor
								BROWN SANDY CLAY (CL) soft, moist, no gasoline odor
	13					15		BROWN CLAY (CL) medium stiff, moist, no gasoline odor
							▽	water level on 4/13/88
	22							BROWN SAND WITH CLAY (SP-SC) medium dense, saturated, subrounded medium grained sand, subangular fine gravel, no gasoline odor
	35					20		medium to coarse sand at 20.0 ft
	75							fine to medium subrounded gravel at 23.0 ft
						25		color change to gray,
	37							BROWN SANDY SILT (ML) medium stiff, moist, occasional medium subrounded gravel, no gasoline odor
								BROWN SANDY CLAY (CL) very stiff, moist, no gasoline odor
								color change to gray
	18					30		becoming stiff at 29.0 ft
	16							
								bottom of boring at 32.0 ft
								boring converted to a monitoring well
						35		
						40		

Harding Lawson Associates
Engineers and Geoscientists

Log of Boring GW-27
Mead Clark
Santa Rosa, California

PLATE **A18**

JOB NUMBER	APPROVED	DATE	REVISED	DATE
18018,006.01		4/88		



Harding Lawson Associates
Engineers and Geoscientists

Well GW-27 Completion Diagram
Mead Clark
Santa Rosa, California

PLATE
A19

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
CSN	18,018,006.01		5/88		

FORM GW3

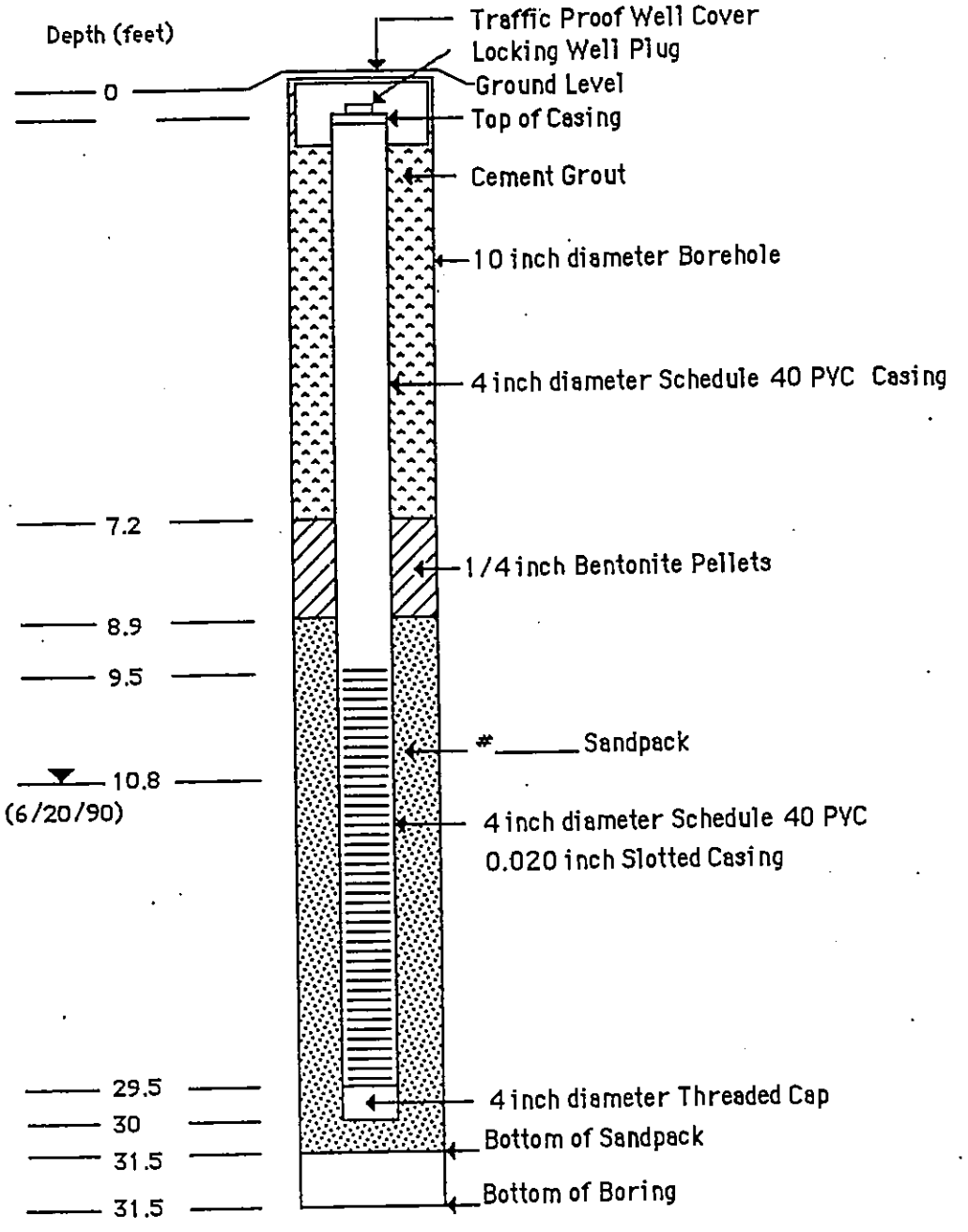
C21

PRELIMINARY

1100

Well Construction Diagram

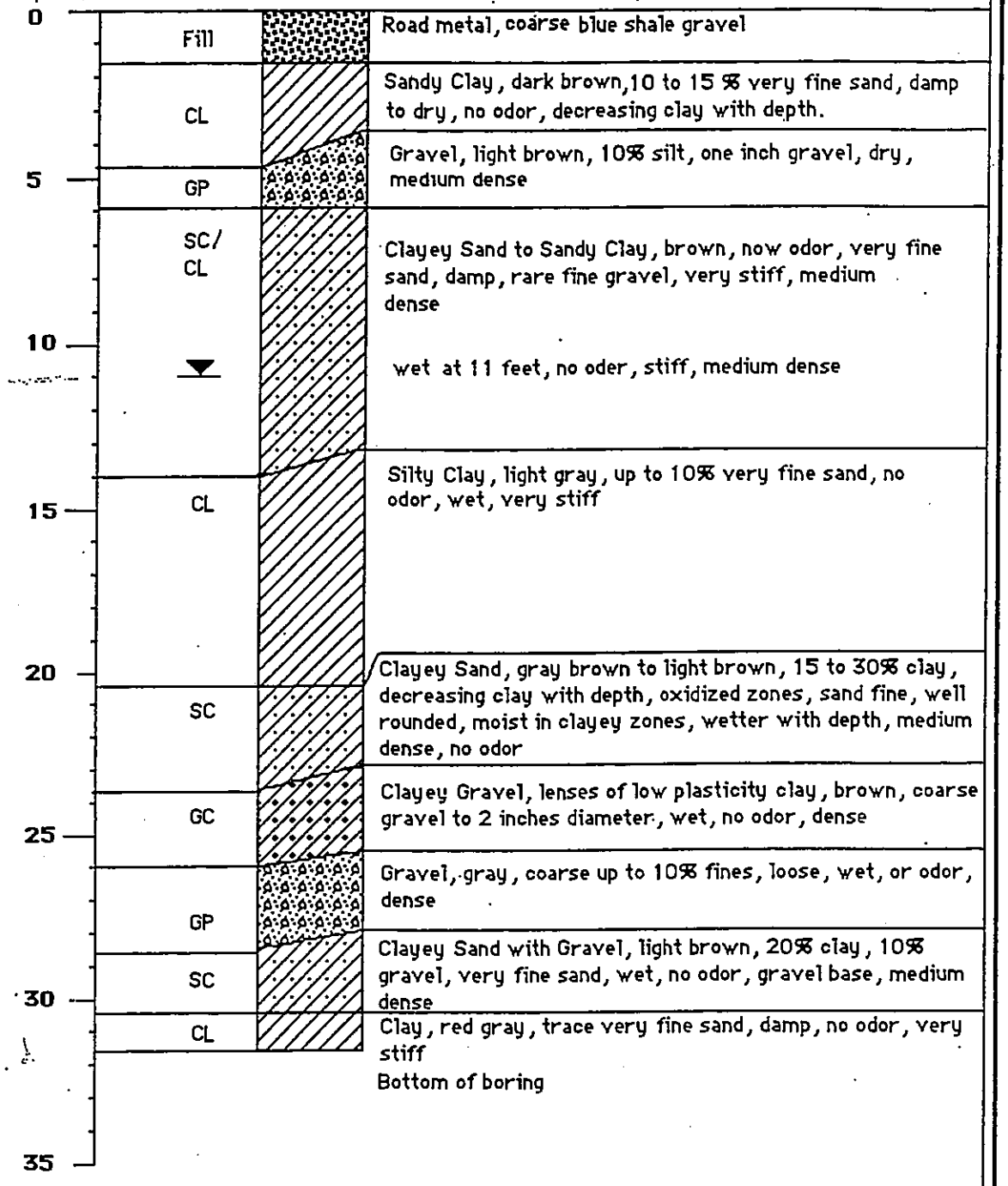
Site Address	Third Street Culvert #3 West Third Street Santa Rosa, CA 95402	**Well Number**	MW-2
		Ground Elevation (MSL)	
		Casing Elevation (MSL)	
Permit#	90-77-HMW	**Construction Date**	4/25/90



PRELIMINARY

PRELIMINARY

100



THIRD STREET CULVERT INVESTIGATION	DRILLED APRIL 25, 1990 LOGGED BY MICHAEL CLOUD
CRWQCB - NORTH COAST REGION	Boring Log Monitoring Well 2

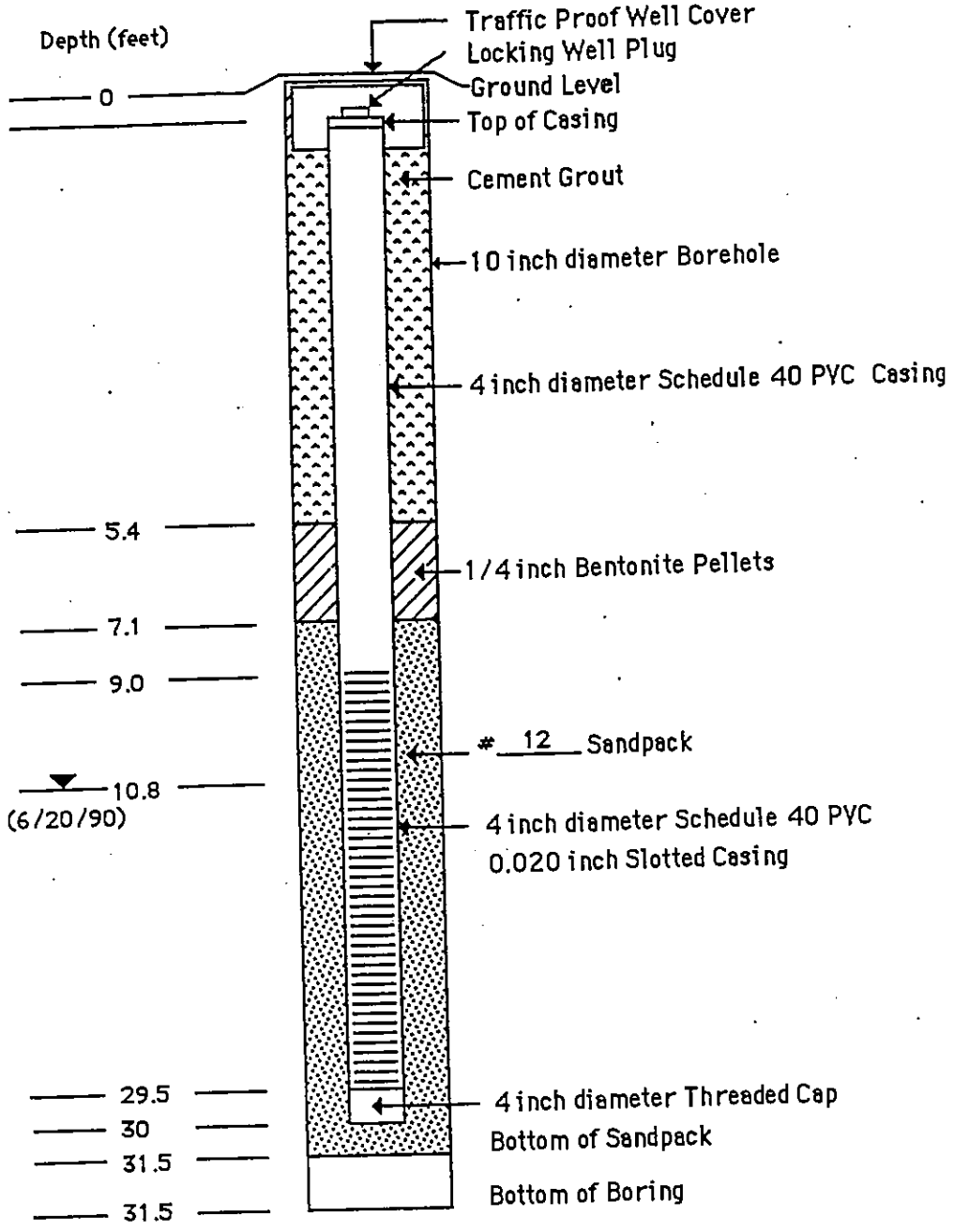
PRELIMINARY

PRELIMINARY

10

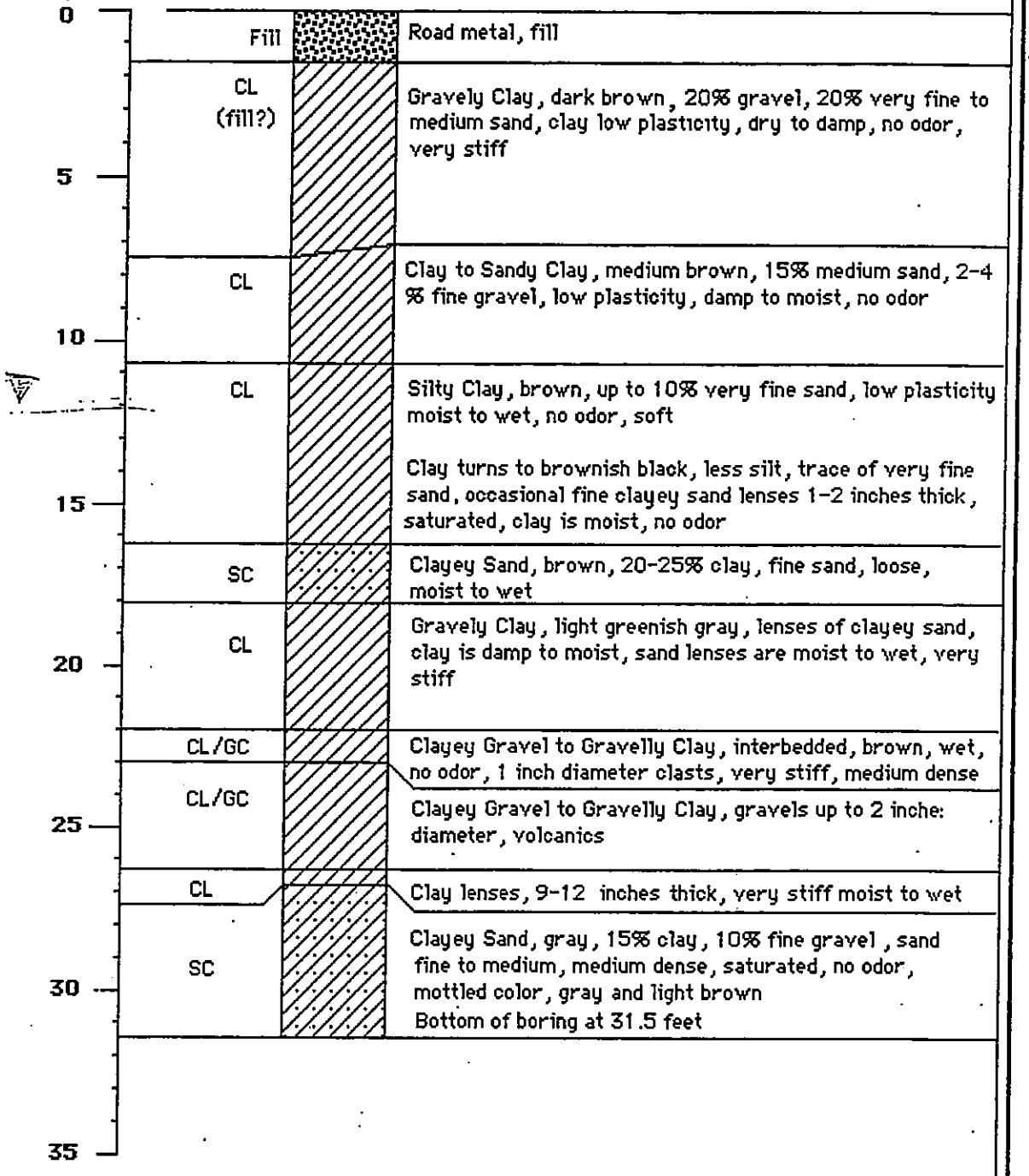
Well Construction Diagram

Site Address	Third Street Culvert #3 West Third Street Santa Rosa, CA 95402	**Well Number**	MW-3
		Ground Elevation (MSL)	
		Casing Elevation (MSL)	
Permit#	90-77-HMW	**Construction Date**	4/25/90



PRELIMINARY

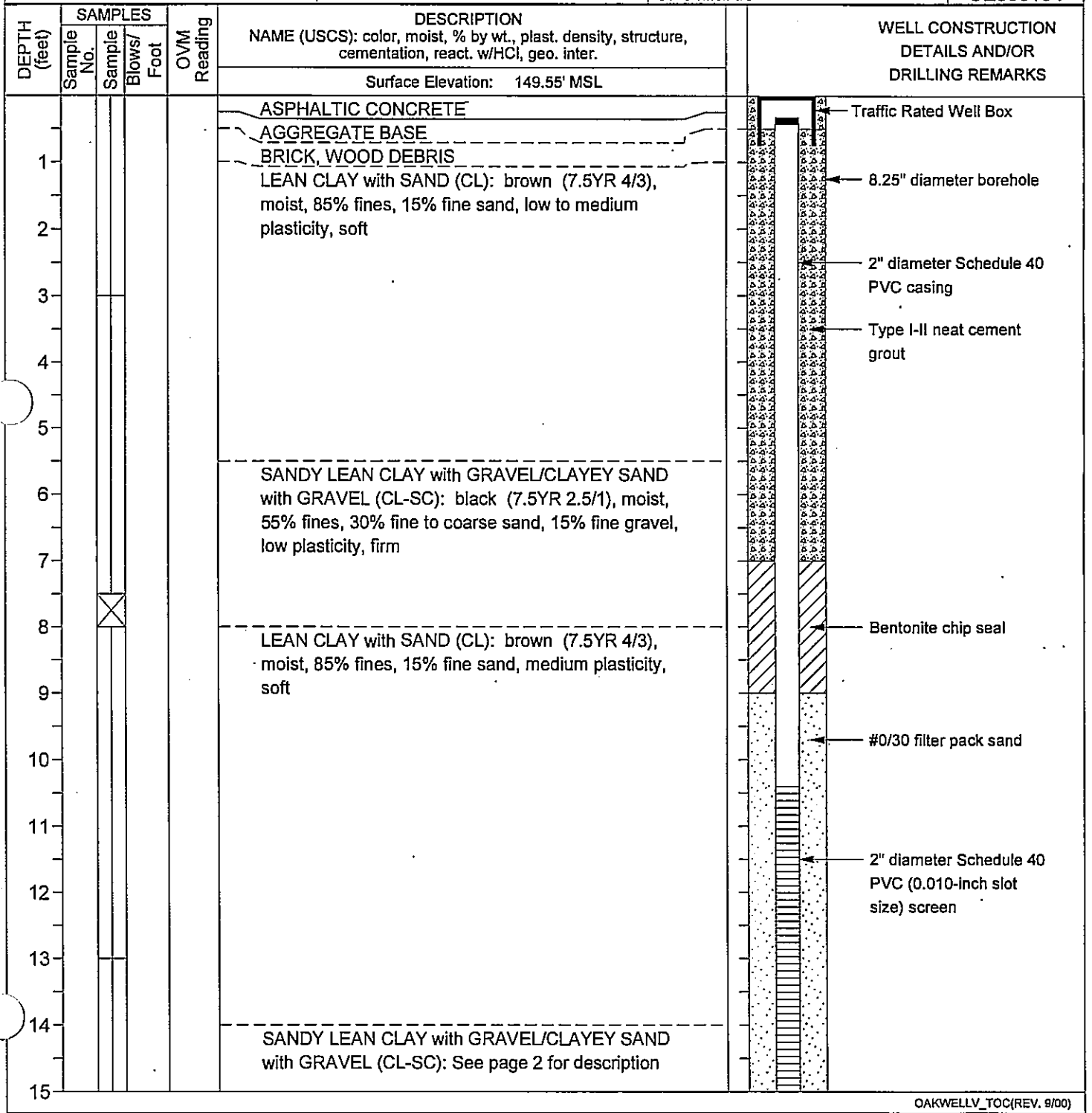
PRELIMINARY



THIRD STREET CULVERT INVESTIGATION	DRILLED APRIL 25, 1990 LOGGED BY MICHAEL CLOUD
CRWQCB - NORTH COAST REGION	Boring Log Monitoring Well 3

PRELIMINARY

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Well No. SRMW-5**
BORING LOCATION: 25' S of SE corner of warehouse building	TOP OF CASING ELEVATION AND DATUM: 149.05' MSL (NAD'83, Zone 2; State of CA)
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 9/27/01 / DATE FINISHED: 9/27/01
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 22.0 / SCREEN INTERVAL (ft.): 10.4-20.0
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST 16.5, COMPL. 16.5 / CASING: 2" Sch. 40 PVC
SAMPLING METHOD: CME continuous core system [5' x 3"]	LOGGED BY: B. Mulholland
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo / REG. NO. CE038154



PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Well No. SRMW-5 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): very dark gray (7.5YR 3/1), moist, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	2" diameter Schedule 40 PVC (0.010-inch slot size) screen
17					wet	8.25" diameter borehole
18					LEAN CLAY with SAND (CL): brown (7.5YR 4/3), wet, 85% fines, 15% fine sand, medium plasticity, soft	
19						
20					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): very dark gray (7.5YR 3/1), wet, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	Schedule 40 PVC endcap
21						#0/30 filter pack sand
22					Bottom of boring at 22.0 feet	
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Well No. SRMW-6**
BORING LOCATION: 60' N of SW corner of warehouse building	TOP OF CASING ELEVATION AND DATUM: 149.71 'MSL (NAD'83, Zone 2; State of CA)
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 9/27/01 / DATE FINISHED: 9/27/01
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 22.0 / SCREEN INTERVAL (ft.): 10.5-20.1
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST 13.0, COMPL. 13.0 / CASING: 2" Sch. 40 PVC
SAMPLING METHOD: CME continuous core system [5' x 3"]	LOGGED BY: B. Mulholland
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo / REG. NO. CE038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.01' MSL	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					ASPHALTIC CONCRETE AGGREGATE BASE	Traffic Rated Well Box
1					LEAN CLAY with SAND (CL): black (7.5YR 2.5/1), moist, 85% fines, 15% fine sand, low to medium plasticity, soft.	8.25" diameter borehole
2						
3						2" diameter Schedule 40 PVC casing
4						Type I-II neat cement grout
5					brown (7.5YR 4/3), medium plasticity	
6						
7						
8						Bentonite chip seal
9						
10						#0/30 filter pack sand
11						
12						2" diameter Schedule 40 PVC (0.010-inch slot size) screen
13					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): very dark gray (7.5YR 3/1), wet, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	
14						
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Well No. SRMW-6 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): Cont'd	2" diameter Schedule 40 PVC (0.010-inch slot size) screen
17					LEAN CLAY (CL): very dark gray (7.5YR 3/1), moist, 90% fines, 10% fine sand, low to medium plasticity, soft	8.25" diameter borehole
18						
19						
20					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): very dark gray (7.5YR 3/1), 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	Schedule 40 PVC endcap
21						#0/30 filter pack sand
22					Bottom of boring at 22.0 feet	
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Well No. SRMW-7**
BORING LOCATION: 145' S of 6th St., 170' W of railroad tracks	TOP OF CASING ELEVATION AND DATUM: 151.25' MSL (NAD 83', Zone 2; State of CA)
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 9/27/01 / DATE FINISHED: 9/27/01
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 22.0 / SCREEN INTERVAL (ft.): 10.7-20.0
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST 16.0, COMPL. 16.0 / CASING: 2" Sch. 40 PVC
SAMPLING METHOD: CME continuous core system [5' x 3"]	LOGGED BY: B. Mulholland
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo / REG. NO. CE038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 151.75' MSL	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					AGGREGATE BASE and WOOD DEBRIS	Traffic Rated Well Box
1					LEAN CLAY with SAND (CL): brown (7.5YR 4/2), moist, 85% fines, 15% fine sand, low to medium plasticity, soft	8.25" diameter borehole
2						
3						2" diameter Schedule 40 PVC casing
4						Type I-II neat cement grout
5						
6					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): black (7.5YR 2.5/1), moist, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	
7						
8						Bentonite chip seal
9						
10						#0/30 filter pack sand
11						
12					LEAN CLAY with SAND (CL): brown (7.5YR 4/3), moist, 85% fines, 15% fine sand, low to medium plasticity, soft	2" diameter Schedule 40 PVC (0.010-inch slot size) screen
13						
14						
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Well No. SRMW-7 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					LEAN CLAY with SAND (CL): Cont'd wet	2" diameter Schedule 40 PVC (0.010-inch slot size) screen
17						8.25" diameter borehole
18					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): very dark gray (7.5YR 3/1), wet, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	
19						
20						Schedule 40 PVC endcap
21						#0/30 filter pack sand
22					Bottom of boring at 22.0 feet	
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Well No. SRMW-8**
BORING LOCATION: 340' S of 6th St., adjacent to railroad tracks	TOP OF CASING ELEVATION AND DATUM: 152.29' MSL (NAD'83, Zone 2; State of CA)
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 9/28/01 / DATE FINISHED: 9/28/01
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 22.0 / SCREEN INTERVAL (ft.): 10.9-20.5
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST 13.0, COMPL. 13.0 / CASING: 2" Sch. 40 PVC
SAMPLING METHOD: CME continuous core system [5' x 3"]	LOGGED BY: B. Mulholland
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo / REG. NO. CE038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 152.89' MSL	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					AGGREGATE BASE	Traffic Rated Well Box
1					CLAYEY SAND with GRAVEL (SC): dark olive brown (2.5YR 3/3), moist, 60% fine to coarse sand, 20% low plasticity fines, 20% fine gravel	8.25" diameter borehole
2						2" diameter Schedule 40 PVC casing
3						Type I-II neat cement grout
4						
5						
6						
7					SANDY LEAN CLAY (CL): very dark grayish brown (10YR 3/2), moist, 60% fines, 40% fine to medium sand, low to medium plasticity, firm	Bentonite chip seal
8						
9						
10						#0/30 filter pack sand
11					LEAN CLAY with SAND (CL): very dark grayish brown (10YR 3/2), moist, 75% fines, 25% fine sand, medium plasticity, firm	
12						2" diameter Schedule 40 PVC (0.010-inch slot size) screen
13					brown (10YR 4/3), wet	
14						
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Well No. SRMW-8 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					LEAN CLAY with SAND (CL): Cont'd	2" diameter Schedule 40 PVC (0.010-inch slot size) screen
17					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 90% fines, 10% fine sand, medium plasticity, firm	8.25" diameter borehole
18						
19						
20						
21						Schedule 40 PVC endcap
22					Bottom of boring at 22.0 feet	#0/30 filter pack sand
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

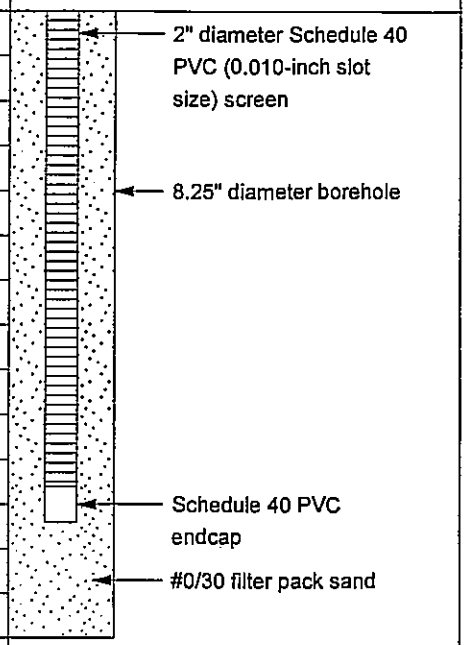
PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Well No. SRMW-10**
BORING LOCATION: 85' SE of NE corner of warehouse building	TOP OF CASING ELEVATION AND DATUM: 150.26' MSL (NAD'83, Zone 2; State of CA)
DRILLING CONTRACTOR: West Hazmat Drilling Corporation	DATE STARTED: 9/27/01 / DATE FINISHED: 9/27/01
DRILLING METHOD: Hollow-stem auger	TOTAL DEPTH (ft.): 22.0 / SCREEN INTERVAL (ft.): 10.6-20.3
DRILLING EQUIPMENT: CME-75	DEPTH TO WATER: FIRST 15.0, COMPL. 15.0 / CASING: 2" Sch. 40 PVC
SAMPLING METHOD: CME continuous core system [5' x 3"]	LOGGED BY: B. Mulholland
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo / REG. NO. CE038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt.; plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.76' MSL	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
0					BRICK FRAGMENTS, WOOD DEBRIS	Traffic Rated Well Box
1					LEAN CLAY with SAND (CL): brown (7.5YR 4/3), moist, 85% fines, 15% fine sand, low to medium plasticity, soft	8.25" diameter borehole
2						
3						2" diameter Schedule 40 PVC casing
4						Type I-II neat cement grout
5					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): black (7.5YR 2.5/1), moist, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	
6						
7						
8						Bentonite chip seal
9						
10						#0/30 filter pack sand
11					LEAN CLAY with SAND (CL): brown (7.5YR 4/3), moist, 85% fines, 15% fine sand, low to medium plasticity, soft	
12						2" diameter Schedule 40 PVC (0.010-inch slot size) screen
13						
14						
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Well No. SRMW-10 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM Reading	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	WELL CONSTRUCTION DETAILS AND/OR DRILLING REMARKS
16					SANDY LEAN CLAY with GRAVEL/CLAYEY SAND with GRAVEL (CL-SC): very dark gray (7.5YR 3/1), wet, 55% fines, 30% fine to coarse sand, 15% fine gravel, low plasticity, firm	
17						
18						
19						
20						
21						
22					Bottom of boring at 22.0 feet	
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						



Appendix C

GEOMATRIX

APPENDIX C

Geophysical Survey Report

NORCAL GEOPHYSICAL CONSULTANTS, INC.

October 19, 2001

Mr. Brenden Mulholland
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, California 94612

Subject: Geophysical Investigation
Vacant Lot, 9 Fourth Street
Santa Rosa, California

Dear Mr. Mulholland:

This letter presents the findings of a geophysical investigation performed on a portion of a vacant lot at 9 Fourth Street in Santa Rosa, California. NORCAL Geophysicist David Bissiri conducted the field investigation on September 24, 2001.

SITE DESCRIPTION

The site is currently a vacant lot east of a brick warehouse and west of the district known as "Railroad Square", between Third and Fourth Streets. Past uses of the site reportedly include that of a produce canning facility and a railroad service yard. The investigation area, as established by NORCAL per your instructions, comprised an approximately 60- by 100-foot portion of the lot immediately east of the warehouse building (see Plate 1). Besides the warehouse, the notable cultural features of the site include a former loading dock with steel railing along the western boundary and a large soil mound in the northeast corner of the investigation area.

PURPOSE

The purpose of the investigation was to determine if steel underground storage tanks (UST's) reportedly associated with the railroad yard operations exist within the investigation area.

METHODOLOGY

The geophysical methods used for this investigation include vertical magnetic gradient (VMG), metal detection (MD), and ground penetrating radar (GPR) techniques. Detailed descriptions of the geophysical methods, instrumentation, and data interpretation are provided in Appendix "A"

DATA ACQUISITION

The first task undertaken at the site was establishing a survey grid to guide the VMG data acquisition. Following the grid set-up, we used a proton precession magnetometer to collect VMG data. Survey coverage consisted of north-south lines spaced five feet apart with measurement points along the lines at 5-foot intervals. The data were up-loaded to a field computer and

processed to produce a preliminary VMG contour map. This contour map was evaluated for localized magnetic variations that may be due to possible UST's or other suspicious buried ferrous objects.

Following the VMG investigation, the MD method was used in two ways: the first was that of site-specific investigations of suspect areas identified on the VMG contour map. This involved multi-directional traverses, approximately ten feet long spaced approximately 1-foot apart, centered on the suspect area; The second use of MD was to conduct a reconnaissance of the entire investigation area using north-south traverses spaced approximately three feet apart. Following this, the GPR was then used in two ways: First, it was used to investigate suspect VMG/MD anomalies in order to further characterize them. The second use of GPR was to investigate the two proposed well locations (SRMW- 9 and SRMW-10) for possible shallow sub-surface interferences to drilling. The last task undertaken in the field was to mark the findings on the ground and map their locations.

RESULTS

The VMG data is presented as the contour map on Plate1. Besides the VMG contour data, Plate 1 also depicts the locations of buried features detected with the metal detector; the locations of GPR traverses; the nearby building and loading dock; and the soil mound.

Based on our interpretations of the geophysical data and instrument responses, the results of our investigation can be summarized as follows:

- Several large VMG anomalies with magnitudes indicative of notable amounts of buried ferrous material are present in the eastern half of the investigation area

- Three shallowly buried, relatively small localized anomalies were detected with the metal detector. The locations of these metal-detector anomalies are depicted on Plate 1 as the shaded blue squares labeled "A", "B", and "C". Of the three anomalies, Anomaly A is particularly suspicious since it lies between two of the larger VMG anomalies (noted above) and is also at the apparent terminus of a suspected undifferentiated utility line (see below).

- One undifferentiated utility line extending southward from the vicinity of metal detector Anomaly "A" was detected. This line is depicted on Plate 1 as the dashed black line labeled "uu" along the eastern boundary of the investigation area.

- One minor disturbed area and a minor localized anomaly was detected with the GPR in the vicinity of proposed well SRMW-9, in the southeast corner of the investigation area. The disturbed area is depicted on Plate 1 as the black hachured area and the localized GPR anomaly is depicted as the short double-headed blue arrow. Neither of these features are suggestive of a UST.

More detailed discussions of the results are discussed below.

VMG

The VMG contour map displays the magnetic effects of numerous ferrous objects. These effects are seen as the tightly spaced, convoluted contour lines evident in several areas. Most notable of these are the "bull's eye" appearing anomalies in the eastern half of the investigation are, especially along the investigation area's eastern boundary. While these anomalies are of large enough magnitude and shape to suggest the existence of ferrous objects large enough to be UST's, the existence of other possible magnetic sources (such as the undifferentiated utility line and metal-detector anomalies) in the same vicinity do not allow definitive determination. In addition, given the former use of the site as a railroad yard, the existence of railroad related metallic debris is also a possibility. In contrast, all of the tightly spaced contours along the western boundary can be attributed to the magnetic effects of the steel rail along the former loading dock.

MD

The MD instrument response of Anomaly "A" was consistent with that typically produced by a shallowly buried, apparently flat metallic object. Based on the location of this anomaly with its possible association with nearby VMG anomalies and the suspected undifferentiated utility, this MD anomaly is somewhat suggestive of a manway. The instrument response of Anomalies "B" and "C" were consistent with those of shallowly buried metal debris. The object labeled "uu" (undifferentiated utility line) produced an instrument response suggestive of a section of pipe.

GPR

The GPR results for localized metal detector Anomalies "A", "B", and "C" were not conclusive other to than to confirm the presence of a shallowly buried metallic object at each location. The profiles of the two proposed well locations did not indicate the presence of any obstructions to drilling.

LIMITATIONS

Not all buried objects or features can be detected or characterized by the remote sensing techniques that comprised this investigation. These often include: inactive electric, telephone, and CATV lines or those that are carrying little current where such current is required for them to be detected; non-metallic utility lines (e.g. plastic/terra-cotta sewer lines, fiber optic telephone lines, etc.); unreinforced concrete pads; concrete, fiberglass, or wooden underground storage tanks; or metal objects buried within the magnetic effect zone of other metal objects. To a large extent,

what ultimately determines the detectability of an object is the "signal-to-noise ratio" that can be obtained with each instrument. What determines the level of "noise" is different for each instrument. For magnetic instruments, noise can come from nearby metal objects or from electric lines. For GPR instruments it often is the soil conductivity and dielectric contrasts between the target and host material. The MD is affected by soil conductivity and nearby metal objects.

STANDARD CARE and WARRANTY

The scope of NORCAL's services for this project consisted of using geophysical methods to characterize the shallow subsurface. The accuracy of our findings is subject to specific site conditions and limitations inherent to the techniques used. The services were performed in a manner consistent with the level of skill ordinarily exercised by members of the profession currently employing similar methods. No warranty, with respect to the services or products delivered under this agreement, expressed or implied, is made by NORCAL. We appreciate having the opportunity to provide you with this information.

Respectfully,

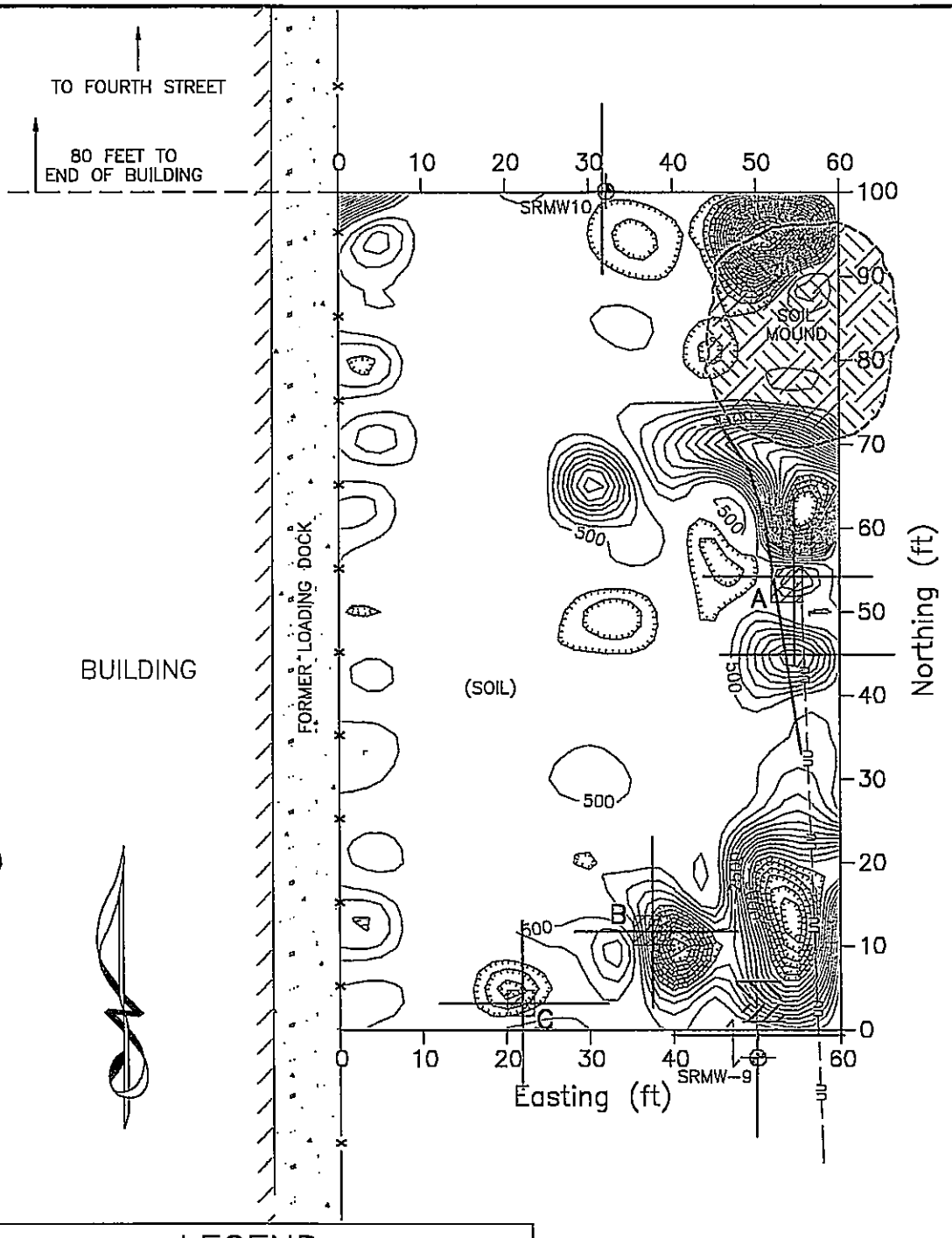
NORCAL Geophysical Consultants, Inc.

David Bissiri
Geophysicist GP-1009

DJB/KGB/jm

Enclosures: Plate 1

Appendix A GEOPHYSICAL METHODS, INSTRUMENTATION, DATA ANALYSIS, and LIMITATIONS



LEGEND

0	VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 500 nT/m)
	GPR TRAVERSE
B	LOCALIZED METAL DETECTOR ANOMALY
	LOCALIZED GPR ANOMALY
UU	UNDIFFERENTIATED UTILITY LINE
x	STEEL RAILING
	PROPOSED WELL LOCATION
	GPR DISTURBED AREA

SCALE

0 10 20 40

(1 inch = 20 feet)

NORCAL

VERTICAL MAGNETIC GRADIENT CONTOUR MAP 9 FOURTH STREET

LOCATION: SANTA ROSA, CALIFORNIA

CLIENT: GEOMATRIX

JOB #: 01-325.08 | NORCAL GEOPHYSICAL CONSULTANTS INC.

DATE: SEP. 2001 | DRAWN BY: G.RANDALL | APPROVED BY: DJB

PLATE 1

Appendix A

GEOPHYSICAL METHODS, INSTRUMENTATION, DATA ANALYSIS, and LIMITATIONS

Appendix A

GEOPHYSICAL METHODS and INSTRUMENTATION

Vertical Magnetic Gradient (VMG)

A magnetic gradiometer measures the vertical gradient of the earth's magnetic field. NORCAL's gradiometer consists of two total field magnetic sensors separated vertically by one-half meter. The magnetic field strength is measured simultaneously at both of these sensors. The difference in magnetic intensity between these measurements is essentially the vertical gradient at that point of the earth's magnetic field. Because the vertical gradient is constant with respect to time, the diurnal corrections commonly needed for total field magnetics data processing is eliminated. In addition, since a gradiometer is affected less by cultural objects such as building walls, light poles than a total field magnetometer, VMG provides higher sensitivity and better resolution of near surface sources. Areas with significant amounts of buried metal typically produce anomalously steep magnetic gradients. However, because the gradiometer is sensitive to ferrous objects both above and below ground, site and vicinity surface conditions can affect survey results.

We used an SCINTREX ENVI-MAG magnetometer to obtain the vertical magnetic gradient data. The instrument features a built-in memory that stores the vertical magnetic gradient and survey grid information. The information can be up loaded to a computer for further processing.

Metal Detection (MD)

The method is used to detect buried near surface metal objects such as UST's, metal conduits, rebar in concrete, manhole covers, and various metallic debris. This is done by holding a radio transmitter-receiver unit above the ground and continuously scanning the surface. The unit utilizes two orthogonal coils that are mounted on a common staff. One of the coils transmits an electromagnetic signal (primary magnetic field) which in turn produces a secondary magnetic field about the subsurface metal object. Since the receiver coil is orthogonal to the transmitter coil (that is, in a "null" position), it is unaffected by the primary field. However, a buried metal object is not in a similar "null" position and therefore the secondary magnetic fields produced by the buried metal object will generate an audible response from the unit. The peak of this response usually occurs when the unit is directly over the metal object. Our MD instrument for this investigation was a Fisher TW-6 pipe and cable locator. The TW-6 does not provide a recordable data output that can be used for later computer processing. Results are generally limited to marking the interpreted outlines of detected objects in the field and mapping their locations.

Ground Penetrating Radar (GPR)

Ground penetrating radar is a method that provides a continuous, high resolution cross-section depicting variations in the electrical properties of the shallow subsurface. The method is particularly sensitive to variations in electrical conductivity and electrical permittivity (the ability of a material to hold a charge when an electrical field is applied).

The system operates by repeatedly radiating an electromagnetic pulse into the ground from a transducer (antenna) as it is moved along a traverse. Since most earthen and earthen-like

materials (such as concrete) are transparent to electromagnetic energy only a portion of the radar signal is reflected back to the surface from interfaces within such materials. When the signal encounters a metal object, however, much of the incident energy is reflected. The reflected signals are received by the transducer and processed by a control console. The data are then printed in cross-section form on a graphical recorder.

Buried tanks, drums, pipes, and rebar often appear on the records as multiple inverted "V" images imbedded within the more or less horizontal banding produced by the hosting media. The effective depth of penetration is ultimately a function of the signal-to-noise ratio of the reflected signal. The amplitude of the signal received by the transducer is dependant on several factors, among them geometrical spreading, scattering, and signal damping by the hosting material(s). Generally speaking, electrically conductive materials such as clay and saturated silt can limit radar performance by either damping and or scattering the radar signal, especially if pebbles and cobbles are present.

For this investigation, we used a Geophysical Survey Systems, Inc. SIR-2 Subsurface Interface Radar System equipped with a 500 megahertz (MHz) transducer. This system usually provides both the resolution and depth penetration for characterizing the shallow subsurface at a site such as this.

DATA ANALYSIS

Computer Processing

We up-loaded the VMG data to a portable computer and converted them into a format suitable for contouring. The contouring program then calculated an evenly spaced array of values (data grid) based on the observed field data. Finally, these gridded values were contoured to produce the VMG contour map.

Contour Map Interpretation

Generally speaking, in a region with uniform conditions VMG values will vary smoothly. In contrast, in areas where variations are strong the contours are closely spaced and often highly convoluted. Such closures may even form "bull's eye" appearing shapes. Such convoluted contours are typically considered anomalous when there are no obvious above ground sources causing the strong VMG variations. If the source of a particular anomaly is an isolated object or a group of closely spaced objects, the contours may form circular or elliptical closures. A large accumulation of buried objects may appear as a group of closely spaced, contorted anomalies or a single larger anomaly. Elongated objects such as buried rails and pipes often give rise to either elongated assemblages of contour lines parallel to the object or a string of circular/elliptical closures along the axis of the object.

Actual anomaly magnitude and shape are dependent on the relative position and size of the buried objects with respect to the location of the data points. In general, anomaly magnitude will decrease and anomaly width will increase as distance (depth) from the VMG sensors to the source increases. Anomalies may or may not have paired high and low values creating what are known as "dipoles". Isolated dipoles are often, but not always, attributed to a single magnetic object such as a UST, vault, etc. Isolated high or low values are known as "monopoles". Monopoles that are

centered on a single data point and limited in extent to roughly the data point spacing of the sampling grid are often caused by small, near surface objects. Such objects are typically well caps, pull boxes, balls of wire, etc. Larger monopoles that extend across an area equal to several data point station spacings are typically associated with larger objects such as steel cased wells, ends of long pipes, etc.

LIMITATIONS

VMG Techniques

Below ground metal ferrous objects produce localized variations in the earth's magnetic field. The magnetic intensity associated with buried metal depends on the mass of the metal and the distance the metal object is from the magnetometer sensor. As the distance between the object and the magnetometer sensor increases, the intensity of the associated field decreases, thereby making detection more difficult.

In addition, the ability to detect a buried metal object is based on the difference in intensity of these variations and the intensity of background variations. The intensity of background variations is based on the amount of above and below ground metal there is within a given survey area. Cultural features such as chain link fences, buildings, debris, railroad spurs, utilities, above ground electric lines, etc. typically produce numerous magnetic variations with high intensities. These variations may mask effects from buried metal objects, or make it very difficult to determine whether the magnetic variations are associated with below ground metal or above/below ground cultural features.

MD Techniques

In general, the response of the electromagnetic metal detection instrument is proportional to the horizontal surface area of shallowly buried subsurface objects (typically in the upper three or four feet). This relationship can be used to advantage in locating buried metal debris, buried reinforced concrete pads, and utilities. However, in the presence of above ground metallic objects such as fences, walls, parked cars, and metal debris this is no longer valid. In some instances, the presence of such objects can make it very difficult to determine whether the instrument responses are associated with below ground targets or above ground cultural features. As with terrain conductivity techniques, when multiple sources are present it may not be possible to identify individual targets.

GPR Techniques

The ability to detect subsurface targets is dependent on site specific conditions. These conditions include depth of burial, the size or diameter of the target, the condition of the specific target in question, the type of backfill material associated with the target, and the surface conditions over the target. Typically, the GPR depth of detection will be reduced as the clay content in the subsurface increases. Therefore, it is possible that targets (UST's and utilities), buried greater than 2 to about 4 feet, may not be detectable by the GPR technique.

Appendix D

GEOMATRIX

APPENDIX D

Boring Logs

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-63**
BORING LOCATION: N: 1,921,934.1766; E: 6,354,569.5488	ELEVATION AND DATUM: 149.98' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/17/02 / DATE FINISHED: 6/17/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 7.5 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.98' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% non-plastic fines, 10% fine to coarse gravel	
1				0		OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2					LEAN CLAY (CL): very dark grayish brown (10YR 3/2), moist, 95% fines, 5% fine sand, medium plasticity, firm	
3						
4					90% fines, 10% fine to medium sand	
5				0		
6				0		
7	SRB-63-7.0			0		
8					POORLY GRADED SAND with CLAY (SP-SC): dark gray (10YR 4/1), wet, 90% fine to coarse sand, 10% low plasticity fines	
9						
10					LEAN CLAY (CL): brown (10YR 5/3), wet, 95% fines, 5% fine sand, medium plasticity, soft	
11				0		
12						
13				0	LEAN CLAY with SAND (CL): very dark grayish brown (10YR 3/2), 85% fines, 15% fine sand, medium plasticity, soft	
14				0	75% fines, 25% fine sand	
15					LEAN CLAY (CL): very dark grayish brown (10YR 3/2), 95% fines, 5% fine sand, medium plasticity, soft	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-63 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd	
16				0	CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 70% fine to coarse sand, 30% low plasticity fines, visually impacted soil noted	
18				0		
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
20						
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22						
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-64**
BORING LOCATION: N: 1,921,948.2436; E: 6,354,585.6713	ELEVATION AND DATUM: 149.94' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/17/02 / DATE FINISHED: 6/17/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 7.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: 149.94' MSL	
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1				0	LEAN CLAY (CL): very dark grayish brown (10YR 3/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0		
3						
4				0		
5					trace fine gravel	
6				0		
7	SRB-64-7.0			0	POORLY GRADED SAND with CLAY (SP-SC): dark gray (10YR 4/1), moist, 90% fine to coarse sand, 10% low plasticity fines, trace fine gravel wet	
8						
9						
10				0	LEAN CLAY (CL): dark gray (10YR 4/1), wet, 95% fines, 5% fine sand, medium plasticity, soft	
11						
12				0		
13					90% fines, 10% fine sand	
14				0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-64 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd	
17				3.1	CLAYEY SAND (SC): brown (10YR 4/3), wet, 75% fine to coarse sand, 20% low plasticity fines, 5% fine gravel, visually impacted soil noted	
18				4.4		
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-65**
BORING LOCATION: N: 1,921,958.9945; E: 6,354,601.7589	ELEVATION AND DATUM: 150.70' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/17/02 / DATE FINISHED: 6/17/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 10.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.70' MSL	REMARKS
1				0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	LEAN CLAY (CL): dark gray (10YR 4/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	
3						
4				0		
5						
6				0		
7	SRB-65-7.0			0	POORLY GRADED SAND with CLAY (SP-SC): dark gray (10YR 4/1), moist, 90% fine to coarse sand, 10% low plasticity fines	
8						
9						
10				0	▼ wet	
11					LEAN CLAY (CL): brown (10YR 4/3), wet, 95% fines, 5% fine sand, medium plasticity, soft	
12				0	mottled with yellowish brown (10YR 5/6)	
13				0		
14						
15				0		

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-65 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-65-16.0			0	LEAN CLAY (CL): cont'd dark gray (10YR 4/1)	
17				0		
18					CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 75% fine to coarse sand, 25% low plasticity fines	
19	SRB-65-19.0			0	Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-66**
BORING LOCATION: N: 1,922,021.0456; E: 6,354,585.7408	ELEVATION AND DATUM: 151.61' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/24/02 / DATE FINISHED: 6/24/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 10.25 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 151.61'	REMARKS
1	SRB-66-1.5			0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2				0	LEAN CLAY (CL): dark grayish brown (10Y 4/2), moist, 90% fines, 10% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3						
4				0		
5	SRB-66-5.0			0	LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), moist, 80% fines, 15% fine to coarse sand, 5% fine gravel, medium plasticity, firm	
6						
7				0		
8	SRB-66-8.0			0		
9				0		
10				0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), moist, 60% fine to coarse sand, 30% low plasticity fines, 10% fine gravel wet	
11	SRB-66-11.0			0		
12						
13				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
14	SRB-66-14.0				90% fines, 10% fine to coarse sand	
15				0		

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-66 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-66-17.0			0	LEAN CLAY (CL): cont'd. very dark gray (10YR 3/1)	
17				0		
18						
19				0	Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-67**
BORING LOCATION: N: 1,921,965.4445; E: 6,354,547.5985	ELEVATION AND DATUM: 149.66' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/17/02 / DATE FINISHED: 6/17/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 7.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.66' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1				0		OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2					LEAN CLAY (CL): dark gray (10YR 4/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	
3						
4				0		
5				0	90% fines, 10% fine sand, soft	
6	SRB-67-6.5			0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), moist, 65% fine to coarse sand, 35% low plasticity fines	
7					wet	
8					LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
9						
10						
11						
12						
13					dark gray (10YR 4/1)	
14					visually impacted soil noted	
15					dark gray (5Y 5/1)	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-67 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd	
17					90% fines, 5% fine to coarse sand, 5% fine gravel	
18					CLAYEY SAND (SC): dark gray (5Y 4/1), wet, 70% fine to coarse sand, 20% low plasticity fines, 10% fine gravel, visually impacted soil noted	
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-68**	
BORING LOCATION: N: 1,921,971.9143; E: 6,354,566.1377	ELEVATION AND DATUM: 150.05' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/17/02	DATE FINISHED: 6/17/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 11.0	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.05' MSL	REMARKS
1				0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel, wood fragments	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2					LEAN CLAY (CL): dark gray (10YR 4/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	
3						
4				7.8	CLAYEY SAND (SC): black (10YR 2/1), wet, 60% fine to coarse sand, 35% low plasticity fines, 5% fine to coarse gravel, visually impacted soil noted	
5						
6						
7				4.2		
8					LEAN CLAY (CL): dark gray (10YR 4/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm, visually impacted soil noted	
9				14.9	POORLY GRADED SAND with CLAY (SP-SC): dark gray (5Y 4/1), moist, 90% fine to coarse sand, 10% low plasticity fines, visually impacted soil noted	
10						
11				6.2	LEAN CLAY (CL): olive gray (5Y 4/2), moist, 90% fines, 10% fine to coarse sand, medium plasticity, firm, visually impacted soil noted wet	
12				3.5	soft	
13				2.3		
14						
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PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-68 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16				1.6	LEAN CLAY (CL): cont'd	
17				1.5		
18				2.1		
19				7.4	CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 70% fine to coarse sand, 25% low plasticity fines, 5% fine gravel, visually impacted soil noted	
20					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-69**	
BORING LOCATION: N: 1,921,984.6776; E: 6,354,581.8377	ELEVATION AND DATUM: 150.21' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/17/02	DATE FINISHED: 6/17/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 4.0	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.21' MSL	REMARKS
1					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						
4				8.5	CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 60% fine to coarse sand, 35% low plasticity fines, 5% fine to coarse gravel, visually impacted soil noted	
5						
6						
7				3.6	LEAN CLAY (CL): dark gray (5Y 4/1), wet, 95% fines, 5% fine sand, medium plasticity, soft, visually impacted soil noted	
8						
9						
10						
11				4.8		
12					POORLY GRADED SAND with CLAY (SP-SC): dark gray (5Y 4/1), wet, 90% fine to coarse sand, 10% low plasticity fines LEAN CLAY (CL): dark gray (5Y 4/1), wet, 95% fines, 5% fine sand, medium plasticity, soft, visually impacted soil noted	
13				6.5		
14						
15				3.6		

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-69 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16		⊠		4.7	LEAN CLAY (CL): cont'd	
17						
18				3.3		
19				1.4	CLAYEY SAND (SC): dark gray (10YR 4/1), 70% fine to coarse sand, 25% low plasticity fines, 5% fine gravel, visually impacted soil noted	
					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. GMX-70**	
BORING LOCATION: Fenced enclosure	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 8/2/02	DATE FINISHED: 8/2/02
DRILLING METHOD: Hand auger	TOTAL DEPTH (ft.): 5.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Hand auger	DEPTH TO WATER (ft.) FIRST: NA	COMPL.: NA
SAMPLING METHOD: Hand auger/slide hammer [6" x 2"]	LOGGED BY: M. Goerz	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	GMX-70-0.5				ASPHALT to 3" POORLY GRADED GRAVEL with SILT and SAND (GP-GM): light brownish gray (2.5Y 6/2), moist, 70% fine to coarse gravel, 20% fine to coarse sand, 10% nonplastic fines	
2						
3	GMX-70-3.0				very dark grayish brown (10YR 3/2), 50% fine to coarse gravel, 40% fine to coarse sand, 10% nonplastic fines SILT with SAND (ML): greenish black (10Y 2.5/1), moist, 80% fines, 20% fine sand, nonplastic, soft	
4						
5	GMX-70-5.0				Bottom of boring at 5.0 feet	
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. GMX-71**
BORING LOCATION: Fenced enclosure	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 8/2/02 / DATE FINISHED: 8/2/02
DRILLING METHOD: Hand auger	TOTAL DEPTH (ft.): 5.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Hand auger	DEPTH TO WATER (ft.) FIRST: NA / COMPL.: NA
SAMPLING METHOD: Hand auger/slide hammer [6" x 2"]	LOGGED BY: M. Goerz
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	GMX-71-0.5				POORLY GRADED GRAVEL with SILT and SAND (GP-GM): light brownish gray (2.5Y 6/2), moist, 70% fine to coarse gravel, 20% fine to coarse sand, 10% nonplastic fines	
2						
3	GMX-71-3.0				SILT with SAND (ML): brown (10YR 4/3), mottled with dark greenish gray (10GY 3/1), moist, 80% fines, 20% fine sand, nonplastic, soft	
4					▼ dark greenish gray (10GY 3/1)	
5	GMX-71-5.0				Bottom of boring at 5.0 feet	
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-72**
BORING LOCATION: N: 1,921,823.3195; E: 6,354,872.3801	ELEVATION AND DATUM: 153.60' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/20/02 / DATE FINISHED: 6/20/02
DRILLING METHOD: Hand auger	TOTAL DEPTH (ft.): 5.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Hand auger	DEPTH TO WATER (ft.) / FIRST: NA / COMPL.: NA
SAMPLING METHOD: Hand auger/slide hammer [6" x 2"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: 153.60' MSL	
1	SRB-72-0.5			0	LEAN CLAY (LC): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
2				0		OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3	SRB-72-3.0			0		
4				0		Hand augered to 5 feet bgs.
5	SRB-72-5.0			0	Bottom of boring at 5.0 feet	
6						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-73**	
BORING LOCATION: N: 1,921,850.5396; E: 6,354,864.0500	ELEVATION AND DATUM: 153.40' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/20/02	DATE FINISHED: 6/20/02
DRILLING METHOD: Hand auger	TOTAL DEPTH (ft.): 5.0	MEASURING POINT: Below ballast
DRILLING EQUIPMENT: Hand auger	DEPTH TO WATER (ft.) FIRST: NA	COMPL.: NA
SAMPLING METHOD: Slide hammer [6" x 2"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: 153.40' MSL	
0	SRB-73-0.5			0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
1				0		OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0		
3	SRB-73-3.0			2.7		
4				0		Hand augered to 5 feet bgs.
5	SRB-73-5.0			1.2	Bottom of boring at 5.0 feet	
6						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-74**
BORING LOCATION: N: 1,921,854.5402; E: 6,354,848.7851	ELEVATION AND DATUM: 153.21' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/25/02 / DATE FINISHED: 6/25/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 28.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 11.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	Sample	Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 153.21' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1	SRB-74-1.0			0	LEAN CLAY with SAND (CL): dark gray (10YR 4/1), moist, 80% fines, 20% fine to coarse sand, trace gravel, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						
4				0	very dark gray 10YR 3/1)	
5	SRB-74-5.0			0		
6						
7	SRB-74-8.0			0		
8				0	dark grayish brown (10YR 4/2)	
9	SRB-74-9.0			0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
10	SRB-74-11.0			0	mottled with reddish brown (5YR 4/4)	
11				0	wet	
12				0	very dark gray (10YR 3/1)	
13	SRB-74-14.0					
14	SRB-74-15.0/					
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-74 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16				0	LEAN CLAY (CL): cont'd black (10YR 2/1)	
17	SRB-74-17.0			0		
18				0	dark grayish brown (10YR 4/2)	
19				0		
20	SRB-74-20			0	dark gray (5Y 4/1) mottled with olive brown (2.5Y 4/4)	
21				0		
22				0 0		
23	SRB-74-23			0	dark gray (10YR 4/1) mottled with dark yellowish brown (10YR 4/4)	Grab groundwater sample SRB-74 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 2 to 28 feet bgs. Enviro-core drive casing retracted from bottom of boring to 24 feet bgs to maintain surface seal.
24				0		
25				0 0	CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 65% fine to coarse sand, 35% low plasticity fines, trace gravel 60% fine to coarse sand, 35% low plasticity fines, 5% fine gravel	
26	SRB-74-26.5			0		
27				0		
28					Bottom of boring at 28.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-75**	
BORING LOCATION: N: 1,922,100.98; E: 6,354,525.02	ELEVATION AND DATUM: 150.76' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/24/02	DATE FINISHED: 6/24/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 16.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.76' MSL	REMARKS
1	SRB-75-1.0			0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2	SRB-75-2.0			0	LEAN CLAY with SAND (CL): dark gray (10YR 4/1), moist, 75% fines, 25% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
4	SRB-75-5.0			0	90% fines, 10% fine to coarse sand	
5				0		
6						
7	SRB-75-8.0			0	LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), moist, 85% fines, 15% fine to coarse sand, medium plasticity, soft	
8				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
9					LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), moist, 85% fines, 15% fine to coarse sand, medium plasticity, soft	
10	SRB-75-11.0			0		
11				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
12						
13	SRB-75-14.0			0	dark gray (5Y 4/1) mottled with reddish brown (5YR 4/3)	
14				0	very dark gray (10YR 3/1)	
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-75 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	Sample	Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16				0	LEAN CLAY (CL): cont'd	Grab groundwater sample SRB-75 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 17 to 22 feet bgs. Enviro-core drive casing retracted from bottom of boring to 18 feet bgs to maintain surface seal.
17	SRB-75-17.0			3.1	wet trace fine gravel	
18	SRB-75-19.0			35.2	CLAYEY SAND (SC): very dark gray (5Y 3/1), wet, 65% fine to coarse sand, 30% low plasticity fines, 5% fine gravel	
19				0	visually impacted soil noted dark grayish brown (10YR 4/2), no visually impacted soil noted	
20	SRB-75-20.0			0		
21				0		
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California		**Log of Boring No. SRB-76**	
BORING LOCATION: N: 1,922,052.56; E: 6,354,510.21		ELEVATION AND DATUM: 150.08' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated		DATE STARTED: 6/24/02	DATE FINISHED: 6/24/02
DRILLING METHOD: Direct push		TOTAL DEPTH (ft.): 19.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1		DEPTH TO WATER (ft.) FIRST 7.5	COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]		LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA	DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. CO38154

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.08' MSL	REMARKS
1	SRB-76-2.0			0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0		
3						
4	SRB-76-5.0			0	LEAN CLAY with SAND (CL): very dark gray (10RY 3/1) mottled with dark reddish brown (5YR 3/3), moist, 85% fines, 15% fine to coarse sand, medium plasticity, soft	
5				0		
6						
7	SRB-76-8.0			0	80% fines, 20% fine to coarse sand	
8				0	wet	
9						
10	SRB-76-11.0			0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 35% low plasticity fines	
11				0	trace fine gravel	
12						
13	SRB-76-14.0			0	SANDY CLAY (CL): dark grayish brown (10YR 4/2), wet, 60% fines, 40% fine to coarse sand, trace fine gravel, medium plasticity, soft	
14				0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-76 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-76-17.0			0	SANDY CLAY (CL): cont'd	Grab groundwater sample SRB-76 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 14 to 19 feet bgs. Enviro-core drive casing retracted from bottom of boring to 15 feet bgs to maintain surface seal.
17					CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 60% fine to coarse sand, 35% low plasticity fines, 5% fine gravel	
18				0		
19					Bottom of boring at 19.0 feet	
20						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-77**
BORING LOCATION: N: 1,922,089.72; E: 6,354,497.59	ELEVATION AND DATUM: 150.79' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/24/02 / DATE FINISHED: 6/24/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 11.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.79' MSL	REMARKS
1	SRB-77-2.0			0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2				0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3						
4	SRB-77-4.5			0		
5				0		
6				0		
7				0	dark grayish brown (10YR 4/2), 90% fines, 10% fine to coarse sand	
8	SRB-77-8.0			0	trace fine gravel	
9				0		
10				0		
11	SRB-77-11.0			0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 35% low plasticity fines, trace gravel	
12					LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
13				0		
14	SRB-77-14.0			0	90% fines, 10% fine to coarse sand	
15					very dark gray (10YR 3/1)	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-77 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-77-17.0			0	LEAN CLAY (CL): cont'd	Grab groundwater sample SRB-77 collected through 5 feet of 3/4-inch OD Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 17 to 22 feet bgs. Enviro-core drive casing retracted from bottom of boring to 18 feet bgs to maintain surface seal.
17				0		
18				0	SANDY LEAN CLAY (CL): very dark gray (10YR 3/1), wet, 65% fines, 30% fine to coarse sand, 5% gravel, medium plasticity, soft dark grayish brown (10YR 4/2)	
19					LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 90% fines, 10% fine to coarse sand, medium plasticity, soft	
20					CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 70% fine to coarse sand, 30% low plasticity fines, trace gravel	
21	SRB-77-21.0				dark gray (5Y 4/1), visually impacted soil noted	
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-78**	
BORING LOCATION: N: 1,921,995.7458; E: 6,354,572.7979	ELEVATION AND DATUM: 150.82' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/18/02	DATE FINISHED: 6/18/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 12.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.82' MSL	REMARKS
1	SRB-78-2.0			15.1	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2					LEAN CLAY (CL): dark gray (10YR 4/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	
3						
4				16.4	CLAYEY SAND (SC): dark brown (10YR 4/1), moist, 65% fine to coarse sand, 35% low plasticity fines, visually impacted soil noted	
5					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, soft, visually impacted soil noted	
6						
7				8.5		
8						
9				9.1		
10				9.9		
11						
12				12.3	wet	
13				17.2	LEAN CLAY WITH SAND (CL): very dark gray (10YR 3/1), wet, 75% fines, 25% fine to coarse sand, medium plasticity, soft, visually impacted soil noted	
14						
15				6.2		

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-78 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16				7.0	LEAN CLAY (CL): cont'd.	
17						
18				5.4	LEAN CLAY with SAND (CL): dark gray (10YR 4/1), wet, 85% fines, 15% fine to coarse sand, trace gravel, medium plasticity, soft, visually impacted soil noted	
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-79**
BORING LOCATION: N: 1,921,995.6749; E: 6,354,558.3835	ELEVATION AND DATUM: 150.35' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/18/02 / DATE FINISHED: 6/18/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 12.5 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.35' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2) mottled with reddish brown (5YR 4/4), moist, 90% fines, 10% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2	SRB-78-2.5					
3				0	visually impacted soil noted	
4				0		
5	SRB-78-5.5			3.0	dark gray (10YR 4/1) mottled with reddish brown (5YR 4/4)	
6				0	dark gray (10YR 4/1)	
7				1.4		
8						
9				1.8	POORLY GRADED SAND with CLAY (SP-SC): dark gray (10YR 4/1), moist, 90% fine to coarse sand, 10% low plasticity fines, visually impacted soil noted	
10				7.4		
11						
12	SRB-79-12.5			3.4	wet	
13				5.4		
14				3.0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-79 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16				6.2	LEAN CLAY (CL): cont'd 95% fines, 5% fine sand	
17					trace gravel	
18				13.1	GRAVELLY LEAN CLAY (CL): dark gray (10YR 4/1), wet, 70% fines, 30% fine to coarse gravel, medium plasticity, firm, visually impacted soil noted	
19				7.0	Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-80**	
BORING LOCATION: N: 1,921,992.4260; E: 6,354,530.7883	ELEVATION AND DATUM: 149.62' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/18/02	DATE FINISHED: 6/18/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 10.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome	
HAMMER WEIGHT: NA DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.62' MSL	REMARKS
1				0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2) mottled with reddish brown (5YR 3/4), moist, 95% fines, 5% fine sand, medium plasticity, firm	
3					very dark gray (10YR 3/1)	
4				0		
5				0		
6	SRB-80-6.5			0		
7				0		
8				0		
9	SRB-80-9.5			0		
10				0	wet	
11				0		
12				0		
13				0		
14				0	dark gray (10YR 4/1) mottled with yellowish brown (10YR 5/6)	
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-80 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-80-16.0			0	LEAN CLAY (CL): cont'd	
				0		
17					LEAN CLAY with SAND (CL): dark gray (10YR 4/1), wet, 85% fines, 15% fine to coarse sand, medium plasticity, soft	
				0	GRAVELLY LEAN CLAY (CL): dark gray (10YR 4/1) mottled with dark brown (10YR 3/3), wet, 70% fines, 30% fine gravel, medium plasticity, soft	
18						
19				0		
				0	LEAN CLAY with GRAVEL (CL): dark gray (2.5Y 4/1), wet, 80% fines, 15% fine gravel, 5% fine to coarse sand, medium plasticity, soft, visually impacted soil noted	
20				6.2	CLAYEY SAND (SC): very dark grayish brown (10YR 3/2), wet, 70% fine to coarse sand, 20% low plasticity fines, 10% fine gravel, visually impacted soil noted	
21	SRB-80-21.5				no visually impacted soil noted	
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-81**
BORING LOCATION: N: 1,922,006.0347; E: 6,354,552.0508	ELEVATION AND DATUM: 149.95' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/18/02 / DATE FINISHED: 6/18/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 12.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.95' MSL	REMARKS
1				0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm trace fine gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3						
4				0	very dark gray (10YR 3/1)	
5				0		
6					dark grayish brown (10YR 4/2)	
7				0		
8	SRB-81-8.5			0		
9				0		
10				0		
11				0		
12				0	wet, very dark gray (2.5Y 3/1), visually impacted soil noted	
13				2.2		
14						
15				3.8		

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-81 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-81-15.5			6.2	LEAN CLAY (CL): cont'd	
				5.8		
17				11.1	SANDY LEAN CLAY (CL): very dark gray (10YR 4/1), wet, 65% fines, 30% fine to coarse sand, 5% fine gravel, medium plasticity, soft, visually impacted soil noted	
18				11.1		
19				29.3		
20						
21				14.2	⊤ no visually impacted soil noted	
22	SRB-81-22.0				Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-82**
BORING LOCATION: N: 1,922,015.6494; E: 6,354,562.1457	ELEVATION AND DATUM: 150.56' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/18/02 / DATE FINISHED: 6/18/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 9.75 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.56' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1				0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						
4				0		
5				0		
6						
7				0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2) mottled with brown (10YR 4/3), moist, 70% fine to coarse sand, 30% low plasticity fines, firm	
8					soft	
9				0		
10				0	wet	
11					LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
12						
13	SRB-82-13.0					
14						
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-82 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd black (10YR 2/1)	
18	SRB-82-19.0				LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), wet, 80% fines, 20% fine to coarse sand, medium plasticity, soft	
20	SRB-82-21.0				GRAVELLY LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 70% fines, 20% fine gravel, 10% fine to coarse sand, medium plasticity, soft	
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
33						

OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-83**	
BORING LOCATION: N: 1,922,018.4233; E: 6,354,545.1042	ELEVATION AND DATUM: 150.10' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/18/02	DATE FINISHED: 6/18/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 9.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.10' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1	SRB-83-1.5					
2				0	LEAN CLAY (CL): dark gray (10YR 4/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3						
4				0		
5	SRB-83-5.0			0		
6				0		
7				0	GRAVELLY LEAN CLAY (CL): dark gray (10YR 4/1), moist, 70% fines, 20% fine gravel, 10% fine to coarse sand, medium plasticity, soft	
8	SRB-83-8.0			0		
9					CLAYEY SAND (SC): dark grayish brown (10YR 4/2), moist, 70% fine to coarse sand, 30% low plasticity fines	
10	SRB-83-9.0			0	wet	
11	SRB-83-11.0			0	LEAN CLAY (CL): dark grayish brown (10YR 4/1), wet, 90% fines, 10% fine to coarse sand, medium plasticity, soft	
12				0	very dark gray (10YR 3/1), visually impacted soil noted	
13				3.3	black (10YR 2/1)	
14				1.8		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-83 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16				6.2	LEAN CLAY (CL): cont'd	
17						
18				18.4	dark grayish brown (2.5Y 4/2)	
19				5.0		
20	SRB-83-20.0			3.4	CLAYEY SAND (SC): very dark grayish brown (10YR 3/2), wet, 70% fine to coarse sand, 25% low plasticity fines, 5% fine gravel, visually impacted soil noted	
21	SRB-83-21.0				no visually impacted soil noted	
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-84**
BORING LOCATION: N: 1,922,027.0141; E: 6,354,539.2587	ELEVATION AND DATUM: 150.49' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/18/02 / DATE FINISHED: 6/18/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 9.5 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.49' MSL	REMARKS
1	SRB-84-1.5			0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2					LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3						
4				0		
5						
6						
7	SRB-84-8.0				soft	
8						
9	SRB-84-9.5				mottled with brown (10YR 4/3)	
10					wet	
11	SRB-84-11.0					
12						
13						
14	SRB-84-14.0					
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-84 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd	
					dark gray (10YR 4/1)	
17	SRB-84-17.0				black (10YR 2/1)	
18	SRB-84-18.5				CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 25% fine low plasticity fines, 10% fine gravel	
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-85**	
BORING LOCATION: N: 1,922,006.7249; E: 6,354,523.2180	ELEVATION AND DATUM: 149.65' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/18/02	DATE FINISHED: 6/18/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 9.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.65' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						
4				0		
5	SRB-85-5.0			0	mottled with brown (10YR 4/3)	
6						
7				0	very dark gray (10YR 3/1)	
8	SRB-85-8.0			0	soft	
9						
10	SRB-85-9.5			0	wet	
11	SRB-85-11.0			0		
12				0		
13						
14	SRB-85-14.0			0	dark grayish brown (10YR 4/2)	
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-85 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16				0	LEAN CLAY (CL): cont'd	
17	SRB-85-17.0			0		
18	SRB-85-18.5			0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 25% low plasticity fines, 10% fine gravel	
19				0	Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-86**	
BORING LOCATION: N: 1,921,922.8722; E: 6,354,577.0475	ELEVATION AND DATUM: 149.69' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/19/02	DATE FINISHED: 6/19/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 7.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.69' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1				0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						
4				0	90% fines, 10% fine to coarse sand	
5						
6						
7	SRB-86-7.5			0	wet	
8						
9				0		
10				0		
11					visually impacted soil noted	
12				0		
13				0	SANDY LEAN CLAY (CL): dark grayish brown (2.5Y 4/2), wet, 70% fines, 30% fine to coarse sand, medium plasticity, soft, visually impacted soil noted	
14				0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-86 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					SANDY LEAN CLAY (CL): cont'd	
17				4.6	LEAN CLAY (CL): very dark brown (10YR 2/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, firm, visually impacted soil noted	
18				10.1	SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 65% fines, 35% fine to coarse sand, medium plasticity, firm, visually impacted soil noted	
19				23.1	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 30% low plasticity fines, 5% fine gravel, visually impacted soil noted	
20	SRB-86-20.5			1.2	visually impacted soil noted	
21				0	CLAYEY SAND with GRAVEL (SC): dark grayish brown (10YR 4/2), wet, 45% fine to coarse sand, 30% low plasticity fines, 25% fine gravel	
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-87**	
BORING LOCATION: N: 1,921,912.4306; E: 6,354,584.1299	ELEVATION AND DATUM: 149.94' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/19/02	DATE FINISHED: 6/19/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 7.0	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: 149.94' MSL	
1	SRB-87-7.0			0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
3				0		
4				0	dark grayish brown (10YR 4/2), mottled with reddish brown (5YR 4/4)	
5				0		
6				0		
7				0	wet	
8				0	soft	
9				0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 70% fine to coarse sand, 30% low plasticity fines LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
10				0		
11				2.0	very dark gray (2.5Y 3/1), visually impacted soil noted	
12				3.4	dark gray (5Y 4/1)	
13				0		
14				0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-87 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd	
					90% fines, 10% fine to coarse sand, trace gravel	
17				1.2		
					CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 70% fine to coarse sand, 30% low plasticity fines, visually impacted soil noted	
18				0		
19				0	dark grayish brown (10YR 4/2), visually impacted soil noted	
20				0		
21	SRB-87-21.0					
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-88**
BORING LOCATION: N: 1,921,901.6940; E: 6,354,591.3454	ELEVATION AND DATUM: 149.75' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/19/02 / DATE FINISHED: 6/19/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 7.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon/C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.75' MSL	REMARKS
1					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2				0	LEAN CLAY (CL): very dark grayish brown (10YR 3/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3						
4				0	very dark gray (10YR 3/1) mottled with reddish brown (5YR 4/4)	
5	SRB-88-6.0					
6				0	trace fine gravel	
7				3.7	dark gray (5YR 4/1) mottled with reddish brown (5YR 4/4), wet, visually impacted soil noted	
8					SANDY LEAN CLAY (CL): dark gray (5Y 4/1), wet, 70% fines, 30% fine to coarse sand, medium plasticity, soft, visually impacted soil noted	
9				2.0		
10						
11				9.8	LEAN CLAY (CL): dark gray (5Y 4/1), wet, 90% fines, 10% fine to coarse sand, medium plasticity, soft, visible, visually impacted soil noted	
12				3.7		
13				6.0		
14				3.4	trace fine gravel	
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-88 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd	
				2.9		
17					SANDY LEAN CLAY (CL): dark gray (5Y 4/1), wet, 70% fines, 30% fine to coarse sand, medium plasticity, soft	
18				14.9	CLAYEY SAND (SC): dark gray (5Y 4/1), wet, 65% fine to coarse sand, 30% low plasticity fines, 5% fine gravel, visually impacted soil noted	
19				19.9	⊤ no visually impacted soil noted	
20	SRB-88-21.0					
21						
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-89**
BORING LOCATION: N: 1,921,876.5165; E: 6,354,598.1011	ELEVATION AND DATUM: 149.93' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/19/02 / DATE FINISHED: 6/19/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 10.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.93' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
4				0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
5					LEAN CLAY with SAND (CL): dark gray (10YR 4/1), moist, 80% fines, 20% fine to coarse sand, medium plasticity, firm	
7				0		
10				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, trace fine gravel, medium plasticity, soft	
11				0		
13				0	SANDY LEAN CLAY (CL): dark gray (10YR 4/1), wet, 85% fines, 15% fine to coarse sand, medium plasticity, soft	
14					LEAN CLAY (CL): dark gray (10YR 4/1), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
15				0		

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-89 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd	
				0	LEAN CLAY with SAND (CL): dark gray (10YR 4/1), wet, 85% fines, 15% fine to coarse sand, trace fine gravel, medium plasticity, soft	
17					CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 65% fine to coarse sand, 85% low plasticity fines, trace fine gravel	
	SRB-89-18.0			0		
18						
				0		
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-90**
BORING LOCATION: N: 1,921,920.4127; E: 6,354,597.3475	ELEVATION AND DATUM: 150.09' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/19/02 / DATE FINISHED: 6/19/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 13.25 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.09' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1	SRB-90-2.0			0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0		
3						
4	SRB-90-5.0			0		
5				0		
6				0	dark grayish brown (10YR 4/2)	
7	SRB-90-8.0			0	trace fine gravel	
8				0	soft	
9						
10	SRB-90-11.0			0		
11				0	dark gray (5Y 4/1)	
12						
13	SRB-90-14.0			0	visually impacted soil noted wet	
14						
15				0	dark grayish brown (10YR 4/2), no visually impacted soil noted	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-90 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-90-17.0				LEAN CLAY (CL): cont'd	
					90% fines, 10% fine to coarse sand, trace fine gravel, visually impacted soil noted	
17				1.2	CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 65% fine to coarse sand, 35% low plasticity fines, visually impacted soil noted	
				1.2		
18						
19				5.1		
20						
21						
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-91**
BORING LOCATION: N: 1,921,911.5462; E: 6,354,603.8470	ELEVATION AND DATUM: 149.96' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/19/02 / DATE FINISHED: 6/19/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 7.75 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	Sample	Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: 149.96' MSL	
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1	SRB-91-1.5			0		
				0	LEAN CLAY (CL): dark gray (10YR 4/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						
4	SRB-91-5.0			0		
5						
				0		
6						
7	SRB-91-7.5					
				0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), moist, 60% fine to coarse sand, 35% low plasticity fines	
8					wet	
9						
10						
	SRB-91-11.0			0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
11						
				1.8	dark gray (2.5Y 4/1), visually impacted soil noted	
12						
				1.8		
13				3.7	SANDY LEAN CLAY (CL): dark gray (2.5Y 4/1), wet, 65% fines, 35% fine to coarse sand, medium plasticity, soft, visually impacted soil noted	
14	SRB-91-14.0					
				1.2	LEAN CLAY (CL): see next page for description	
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-91 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-91-17.0			1.5	LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft, visually impacted soil noted	
17				7.9	SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 70% fines, 30% fine to coarse sand, trace fine gravel, medium plasticity, soft, visually impacted soil noted	
18				11.0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fines to coarse sand, 35% low plasticity fines, trace fine gravel, visually impacted soil noted	
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
33						

OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-92**	
BORING LOCATION: N: 1,921,922.0390; E: 6,354,619.0190	ELEVATION AND DATUM: 150.57' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/19/02	DATE FINISHED: 6/19/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 12.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.57' MSL	REMARKS
1					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						
4	SRB-92-4.5			0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
5						
6						
7				0		
8	SRB-92-8.0				CLAYEY SAND (SC): dark grayish brown (10YR 4/2), moist, 75% fine to coarse sand, 25% low plasticity fines	
9						
10	SRB-92-11.0			0		
11					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
12				0	dark grayish brown (10YR 4/2)	
13				0	wet	
14	SRB-92-14.0					
15				0		

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-92 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	SAMPLES Sample	SAMPLES Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): cont'd	
16	SRB-92-17.0			0	LEAN CLAY with SAND (LC): very dark gray (10YR 3/1), wet, 85% fines, 15% fine to coarse sand, medium plasticity, soft	
17				0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 35% low plasticity fines, trace fine gravel	
18	SRB-92-19.0			0		
19					Bottom of boring at 19.0 feet.	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-93**
BORING LOCATION: N: 1,921,887.7059; E: 6,354,617.6867	ELEVATION AND DATUM: 149.99' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/19/02 / DATE FINISHED: 6/19/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER (ft.) FIRST: 13.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 149.99' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1	SRB-93-1.5			0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2						
3						
4				0		
5	SRB-93-5.0			0		
6						
7				0		
8						
9						
10				0	LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), moist, 80% fines, 20% fine to coarse sand, medium plasticity, soft	
11						
12						
13					dark grayish brown (5Y 4/1), wet, visually impacted soil noted	
14	SRB-93-14.0				dark grayish brown (10YR 4/2)	
15				0		

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-93 (cont'd)

DEPTH (feet)	SAMPLES Sample No.	Sample	Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-93-15.5			0	LEAN CLAY with SAND (CL): cont'd trace fine gravel	
				0	SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 70% fines, 30% fine to coarse sand, trace gravel, medium plasticity, firm	
17	SRB-93-17.0			0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 35% low plasticity fines, trace gravel	
18	SRB-93-18.0			0		
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-94**
BORING LOCATION: N: 1,921,876.8330; N: 6,354,624.8020	ELEVATION AND DATUM: 150.42' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/20/02 / DATE FINISHED: 6/20/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 18.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER (ft.) FIRST: 16.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.42' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse sand	
1	SRB-97-2.0			0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, hard	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0		
3						
4	SRB-94-5.0			0	LEAN CLAY with SAND (CL): very dark gray (10YR 3/1), moist, 75% fines, 25% fine to coarse sand, medium plasticity, hard	
5				0		
6						
7				0	SANDY LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 65% fines, 35% fine to coarse sand, trace gravel, medium plasticity, firm	
8	SRB-94-8.0			0		
9						
10				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, trace gravel, medium plasticity, soft	
11	SRB-94-11.0				SANDY LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 60% fines, 40% fine to coarse sand, trace gravel, medium plasticity, soft	
12				0		
13						
14						
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-94 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-94-16.5			0	SANDY LEAN CLAY (CL): cont'd	
17					CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 35% low plasticity fines, trace gravel	
18					Bottom of boring at 18.0 feet	Drilling refusal at 18.0 feet Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-95**	
BORING LOCATION: N: 1,922,037.0694; E: 6,354,577.8689	ELEVATION AND DATUM: 151.53' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/24/02	DATE FINISHED: 6/24/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 7.25	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 151.53' MSL	REMARKS
1	SRB-95-2.0			0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0	LEAN CLAY (CL): dark gray (10YR 4/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
3					SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 65% fines, 35% fine to coarse sand, medium plasticity, firm	
4	SRB-95-5.0			0		
5				0		
6						
7				0		
8	SRB-95-8.5			0	CLAYEY SAND (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 35% low plasticity fines	
9						
10				0		
11	SRB-95-11.0			0	LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), wet, 85% fines, 15% fine to coarse sand, medium plasticity, soft	
12						
13						
14	SRB-95-14.0				LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
15					very dark gray 10YR 3/1	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-95 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-95-17.0				LEAN CLAY (CL): cont'd	
17						
18					trace fine gravel	
19					Bottom of boring at 19.0	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-96**
BORING LOCATION: N: 1,921,854.5928; E: 6,354,871.2424	ELEVATION AND DATUM: 153.29' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/20/02 / DATE FINISHED: 6/20/02
DRILLING METHOD: Hand auger	TOTAL DEPTH (ft.): 5.0 / MEASURING POINT: Below ballast
DRILLING EQUIPMENT: Hand auger	DEPTH TO WATER (ft.) / FIRST: NA / COMPL.: NA
SAMPLING METHOD: Hand auger/slide hammer [6" x 2"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 153.29' MSL	REMARKS
0	SRB-96-0.5			29.6	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	Hand auger to 5.0 feet
1						
2				0		
3	SRB-96-3.0			0	90% fines, 10% fine to coarse sand	
4						
5	SRB-96-5.0			0	Bottom of boring at 5.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface.
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PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-97 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-97-17.0			0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), mottled with reddish brown (5YR 4/4), wet, 95% fines, 5% fine sand, medium plasticity, soft	
17				0	LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), wet, 75% fines, 25% fine to coarse sand, medium plasticity, soft	
18				0	85% fines, 15% fine to coarse sand	
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-97**
BORING LOCATION: N: 1,922,095.61; E: 6,354,478.35	ELEVATION AND DATUM: 150.03' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/20/02 / DATE FINISHED: 6/20/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 11.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.03' MSL	REMARKS
1				0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
	SRB-97-2.0			0		
2				0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
3						
4				0		
	SRB-97-5.0			0	LEAN CLAY with SAND (CL): very dark gray (10YR 3/1), moist, 85% fines, 15% fine sand, medium plasticity, firm	
5				0		
6						
7				0		
				0	SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 65% fines, 35% fine to coarse sand, medium plasticity, soft	
8					LEAN CLAY dark grayish brown (10YR 4/2), moist, 90% fines, 10% fine sand, medium plasticity, soft	
				0		
9				0		
10				0		
	SRB-97-11.0			0		
11				0	▼ wet	
12						
13				0		
	SRB-97-14.0			0	SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 70% fines, 30% fine to coarse sand, medium plasticity, firm	
14				0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-97 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-97-17.0			0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), mottled with reddish brown (5YR 4/4), wet, 95% fines, 5% fine sand, medium plasticity, soft	
17				0	LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), wet, 75% fines, 25% fine to coarse sand, medium plasticity, soft	
18				0	85% fines, 15% fine to coarse sand	
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-98**
BORING LOCATION: N: 1,922,122.71; E: 6,354,513.59	ELEVATION AND DATUM: 150.67' MSL (NGVD 29)
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/25/02 / DATE FINISHED: 6/25/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 10.75 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.67' MSL	REMARKS
1	SRB-98-1.5			0	SILTY SAND (SM): dark gray (10YR 4/2), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 90% fines, 10% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
3						
4				0		
5	SRB-98-5.0			0	LEAN CLAY with SAND (CL): very dark gray (10YR 3/1), moist, 80% fines, 20% fine to coarse sand, medium plasticity, firm	
6						
7				0	75% fines, 25% fine to coarse sand, trace gravel	
8	SRB-98-8.0			0		
9					LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
10				0	mottled with reddish brown (5YR 4/4)	
11	SRB-98-11.0			0	wet	
12						
13				0		
14	SRB-98-14.0			0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-98 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-98-17.0			0	LEAN CLAY (CL): cont'd. black (10YR 2/1), trace fine gravel	
17				0		
18					LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), wet, 85% fines, 15% fine to coarse sand, medium plasticity, soft	
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-99**	
BORING LOCATION: N: 1,922,103.17; E: 6,354,505.25	ELEVATION AND DATUM: 150.74' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/25/02	DATE FINISHED: 6/25/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 25.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 14.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 150.74' MSL	REMARKS
1	SRB-99-1.5			0	SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
2						
3						
4				0		
5	SRB-99-5.0			0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
6						
7				0	dark gray (10YR 4/1)	
8	SRB-99-8.0			0	dark grayish brown (10YR 4/2), mottled with dark yellowish brown (10YR 4/4)	
9				0		
10	SRB-99-10.5				very dark gray (10YR 3/1)	
11					LEAN CLAY with GRAVEL (CL): dark gray (10YR 4/1), moist, 60% fines, 25% fine gravel, 15% fine to coarse sand, medium plasticity, soft	
12						
13					LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 90% fines, 10% fine to coarse sand, medium plasticity, soft	
14	SRB-99-14.0					
15					wet	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-99 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-99-17.0			2.0	LEAN CLAY (CL): cont'd very dark gray (5Y 3/1), visually impacted soil noted	
17				1.2		
18						
19				13.4 47.1 108.2	CLAYEY SAND (SC): dark gray (5Y 4/1), wet, 65% fine to coarse sand, 35% low plasticity fines, trace gravel, visually impacted soil noted	
20				25.2		
21						
22	SRB-99-23.0			0	70% fine to coarse sand, 30% low plasticity fines, trace gravel, no visually impacted soil noted	
23				0		
24				0		
25					Bottom of boring at 25.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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27						
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-100**	
BORING LOCATION: N: 1,922,112.88; E: 6,354,541.67	ELEVATION AND DATUM: 151.05' MSL (NGVD 29)	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 6/25/02	DATE FINISHED: 6/25/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST 12.0	COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: 151.05' MSL	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1				0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
2						
3						
4	SRB-100-5.0			0	dark grayish brown (10YR 4/2), mottled with dark yellowish brown (10YR 3/4)	
5				0		
6				0		
7	SRB-100-7.5			15.1	dark gray (5YR 4/1), visually impacted soil noted	
				6.6		
8						
9						
10	SRB-100-11.0			0	dark grayish brown (10YR 4/2), mottled with dark brown (10YR 3/3), no visually impacted soil noted	
11					SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 60% fines, 40% fine to coarse sand, medium plasticity, soft	
12				0	LEAN CLAY (CL): dark grayish brown (10YR 4/2), wet, 90% fines, 10% fine to coarse sand, medium plasticity, soft	
13				2.0	dark gray (5Y 4/1), mottled with dark reddish brown (5YR 3/2)	
14	SRB-100-14.0			5.4		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-100 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-100-17.0			1.6	LEAN CLAY (CL): cont'd dark grayish brown (10YR 4/2)	
				1.6	very dark gray (5Y 3/1)	
17				2.0		
18					trace fine gravel	
				0		
19				0	LEAN CLAY with SAND (CL): very dark gray (5Y 3/1), wet, 75% fines, 25% fine to coarse sand, medium plasticity, soft, visually impacted soil noted trace fine gravel	
20	SRB-100-20.0			0		
					CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 65% fine to coarse sand, 30% low plasticity fines, 5% fine gravel	
21				0		
22					Bottom of boring at 22.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-101**
BORING LOCATION: Northwestern area	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 7/10/02 / DATE FINISHED: 7/10/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 8.5 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1	SRB-101-1.5				LEAN CLAY (CL): very dark gray (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
2						
3						
4						
5	SRB-101-5.0				90% fines, 10% fine to coarse sand	
6						
7						
8	SRB-101-8.0					
9					wet	
10						
11	SRB-101-11.0				SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 65% fines, 35% fine to coarse sand, medium plasticity, soft	
12					LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
13						
14	SRB-101-14.0					
15					dark gray (10YR 4/1)	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-101 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-101-17.0				LEAN CLAY (CL): cont'd	
17					very dark gray (10YR 3/1), trace fine gravel	
18						
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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33						

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-102**	
BORING LOCATION: Northwestern area	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 7/10/02	DATE FINISHED: 7/10/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 12.0	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	SRB-102-2.0				SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2					LEAN CLAY (CL): very dark grayish brown (10YR 3/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
3						
4						
5	SRB-102-5.0				LEAN CLAY with SAND (CL): very dark grayish brown (10YR 3/2), moist, 85% fines, 15% fine to coarse sand, medium plasticity, firm	
6						
7					LEAN CLAY (CL): dark grayish brown (10YR 4/2), mottled with dark yellowish brown (10YR 4/4), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
8						
9					SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 65% fines, 35% fine to coarse sand, medium plasticity, firm	
10	SRB-102-11.0					
11						
12					wet	
13						
14	SRB-102-14.0					
15					LEAN CLAY with SAND (CL): dark gray (10YR 4/2), moist, 85% fines, 15% fine to coarse sand, medium plasticity, soft	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-102 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-102-17.0				LEAN CLAY (CL): very dark gray (10YR 3/1), mottled with dark yellowish brown (10YR 4/4), moist, 95% fines, 5% fine to coarse sand, medium plasticity, soft	
17						
18						
19					dark grayish brown (10YR 4/2) Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-103**
BORING LOCATION: Northwestern area	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 7/10/02 / DATE FINISHED: 7/10/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 19.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: SD-1	DEPTH TO WATER (ft.) FIRST: 11.5 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	SRB-103-2.0				SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
2					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	
3					90% fines, 10% fine to coarse sand	
4						
5	SRB-103-5.0				LEAN CLAY with SAND (CL): dark grayish brown (10YR 4/2), moist, 75% fines, 25% fine to coarse sand, medium plasticity, firm	
6						
7						
8	SRB-103-8.0					
9					LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 90% fines, 10% fine to coarse sand, medium plasticity, firm	
10					95% fines, 5% fine to coarse sand	
11	SRB-103-11.0				wet	
12					trace roots	
13						
14	SRB-103-14.0				very dark gray (10YR 3/1)	
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-103 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-103-17.0				LEAN CLAY (CL): cont'd.	
17						
18						
19					Bottom of boring at 19.0 feet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
20						
21						
22						
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31						
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OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-53L**
BORING LOCATION: Directly adjacent to SRB-53 (2 ft north)	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling Incorporated	DATE STARTED: 11/14/02 / DATE FINISHED: 11/14/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 13.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER (ft.) FIRST: 11.0 / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1						No OVM readings due to equipment malfunction.
2					LEAN CLAY (CL): dark gray (10YR 4/1) mottled with reddish brown (5YR 4/4), moist, 90% fines, 10% fine to coarse sand	
3						
4	SRB-53L-5.0					
5					visible hydrocarbon product noted	
6					dark greenish gray (5G 4/1), 95% fines, 5% fine to coarse sand	
7					dark greenish gray (5G 4/1) mottled with reddish brown (5YR 4/4)	
8					dark greenish gray (5G 4/1)	
9					dark grayish brown (10YR 4/2), 90% fines, 10% fine to coarse sand	
10	SRB-53L-11.0					
11					wet	
12					dark gray (2.5Y 4/1)	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13					Bottom of boring at 13.0 feet	
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-79L**	
BORING LOCATION: Directly adjacent to SRB-79 (2 ft east)	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 11/14/02	DATE FINISHED: 11/14/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 13.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER (ft.) FIRST: 12.0	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon	
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1					LEAN CLAY (CL): dark grayish brown (10YR 4/2) mottled with reddish brown (5YR 4/4), moist, 90% fines, 10% fine to coarse sand, medium plasticity, firm	No OVM readings due to equipment malfunction.
2						
3						
4	SRB-79L-5.0				dark gray (10YR 4/1)	
5						
6						
7					LEAN CLAY with SAND (CL): light olive brown (2.5Y 5/4), moist, 85% fines, 15% fine to coarse sand, medium plasticity, firm	
8						
9						
10	SRB-79L-11.0				LEAN CLAY (CL): dark grayish green (5G 3/2) mottled with reddish brown (5YR 4/4), moist, 90% fines, 10% fine to coarse sand, medium plasticity, firm visible hydrocarbon product noted	
11						
12					wet dark gray (10YR 4/1)	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13					Bottom of boring at 13.0 feet	
14						
15						

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PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-88L

BORING LOCATION: Directly adjacent to SRB-88 (1.5 ft north)

ELEVATION AND DATUM: Not surveyed; datum is ground surface

DRILLING CONTRACTOR: Precision Sampling, Incorporated

DATE STARTED: 11/14/02 | DATE FINISHED: 11/14/02

DRILLING METHOD: Direct push

TOTAL DEPTH (ft.): 13.0 | MEASURING POINT: Ground surface

DRILLING EQUIPMENT: XD-1

DEPTH TO WATER (ft.) FIRST: 12.0 | COMPL.: NA

SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]

LOGGED BY: S. Mearon

HAMMER WEIGHT: NA | DROP: NA

RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. | REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1					LEAN CLAY (CL): very dark grayish brown (10YR 3/2), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	No OVM readings due to equipment malfunction.
2						
3						
4					very dark gray (10YR 3/1), odor, visible hydrocarbon product noted	
5						
6					dark greenish gray (5G 4/1)	
7	SRB-88L-8.0					
8						
9						
10	SRB-88L-11.0					
11						
12					SANDY LEAN CLAY (CL): wet	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13					Bottom of boring at 13.0 feet	
14						
15						

OAKBOREV (REV. 3/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-100L**
BORING LOCATION: Directly adjacent to SRB-100 (2 ft south)	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 11/14/02 / DATE FINISHED: 11/14/02
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 10.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER (ft.) FIRST: NA / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0					SILTY SAND (SM): dark gray (10YR 4/1), moist, 60% fine to coarse sand, 30% nonplastic fines, 10% fine to coarse gravel	
1				0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580B PID calibrated with 100 ppm isobutylene standard.
2				0		
3				0	90% fines, 10% fine to coarse sand	
4	SRB-100L-4.75			0	very dark gray (10YR 3/1) mottled with dark yellowish brown (10YR 3/4)	
5				0		
6						
7	SRB-100L-8.0			0	dark gray (5YR 4/1), visible hydrocarbon product noted	
8				8.3		
9						
10					Bottom of boring at 10.0 feet	
11						
12						Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
13						
14						
15						

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. PL-06L**
BORING LOCATION: Directly adjacent to PL-06 (2 ft south)	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 11/14/02 / DATE FINISHED: 11/14/02
DRILLING METHOD: Hand auger	TOTAL DEPTH (ft.): 5.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Hand auger	DEPTH TO WATER (ft.) FIRST: NA / COMPL.: NA
SAMPLING METHOD: Hand auger	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1	PL-06L-1.0				LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 90% fines, 10% fine to coarse sand, medium plasticity, firm	No OVM readings due to equipment malfunction.
2					dark grayish brown (10YR 4/2)	
3					LEAN CLAY with SAND (CL): very dark gray (10YR 3/1), moist, 85% fines, 15% fine to coarse sand, medium plasticity, firm	
4						
5	PL-06L-5.0				Bottom of boring at 5.0	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. PL-12L**
BORING LOCATION: Directly adjacent to PL-12 (1 ft south)	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 11/14/02 / DATE FINISHED: 11/14/02
DRILLING METHOD: Hand auger	TOTAL DEPTH (ft.): 5.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: Hand auger	DEPTH TO WATER (ft.) — FIRST: NA / COMPL.: NA
SAMPLING METHOD: Hand auger	LOGGED BY: S. Mearon
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0					SANDY LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 70% fines, 30% fine to coarse sand, medium plasticity, firm	
1	PL-12L-1.0				LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 95% fines, 5% fine to coarse sand, medium plasticity, firm	No OVM readings due to equipment malfunction.
2					⊤ dark greenish gray (5G 4/1), visible hydrocarbon product noted	
3						
4						
5	PL-12L-5.0				Bottom of boring at 5.0	Borehole destroyed using Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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Appendix E

GEOMATRIX

APPENDIX E

Chain-of-Custody Records and Laboratory Analytical Results – June Through August 2002

Submission #: 2002-06-0471

Date: July 3, 2002

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com
CA DHS ELAP#2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn: Charles Rome

Attached is our report for your samples received on Tuesday June 25, 2002
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 9, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour

Afsaneh Salimpour
Project Manager

Submission #: 2002-06-0471

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/25/2002 18:40

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www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-99-14.0	06/25/2002 15:20	Soil	32

Submission #: 2002-06-0471

PNA analysis by 8270C/SIM GC/MS

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Project: 2770.005

Received: 06/25/2002 18:40

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-99-14.0**
Lab ID: 2002-06-0471 - 32
Sampled: 06/25/2002 15:20
Extracted: 6/28/2002 05:27
Matrix: Soil
QC Batch#: 2002/06/28-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Fluorene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Anthracene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Pyrene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Chrysene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/02/2002 11:18	
Surrogates(s)						
2-Fluorobiphenyl	34.4	30-115	%	1.00	07/02/2002 11:18	
p-Terphenyl-d14	50.5	18-137	%	1.00	07/02/2002 11:18	

Submission #: 2002-06-0471

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/25/2002 18:40

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www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Method Blank **Soil** **QC Batch # 2002/06/28-01.40**

MB: 2002/06/28-01.40-003
Date Extracted: 06/28/2002 05:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	07/01/2002 11:18	
Acenaphthylene	ND	5.0	ug/Kg	07/01/2002 11:18	
Acenaphthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Fluorene	ND	5.0	ug/Kg	07/01/2002 11:18	
Phenanthrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(a)anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Chrysene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(a)pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	07/01/2002 11:18	
Surrogates(s)					
2-Fluorobiphenyl	64.8	30-115	%	07/01/2002 11:18	
p-Terphenyl-d14	88.0	18-137	%	07/01/2002 11:18	

Submission #: 2002-06-0471

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

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2101 Webster Street, 12th Floor
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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/25/2002 18:40

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Laboratory Control Spike **Soil** **QC Batch # 2002/06/28-01.40**

LCS 2002/06/28-01.40-004 Extracted: 06/28/2002 Analyzed: 07/01/2002 11:45

LCSD 2002/06/28-01.40-005 Extracted: 06/28/2002 Analyzed: 07/01/2002 12:12

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Acenaphthene	229	259	332	69.0	77.8	12.0	50-150	30		
Phenanthrene	240	272	332	72.3	81.7	12.2	50-150	30		
Pyrene	290	324	332	87.3	97.3	10.8	50-150	30		
Chrysene	248	280	332	74.7	84.1	11.8	50-150	30		
Benzo(a)pyrene	204	245	332	61.4	73.6	18.1	50-150	30		
Surrogates(s)										
2-Fluorobiphenyl	5.83	7.01	10	58.3	70.1		30-115			
p-Terphenyl-d14	8.52	9.47	10	85.2	94.7		18-137			

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-74-1.0	06/25/2002 08:40	Soil	3
SRB-74-5.0	06/25/2002 09:00	Soil	4
SRB-74-9.0	06/25/2002 09:04	Soil	6
SRB-74-15.0	06/25/2002 09:17	Soil	9
SRB-75-1.0	06/25/2002 15:20	Soil	27
SRB-99-14.0	06/25/2002 15:20	Soil	32

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B
Sample ID: **SRB-74-1.0**
Lab ID: 2002-06-0471 - 3
Sampled: 06/25/2002 08:40
Extracted: 6/28/2002 13:04
Matrix: Soil
QC Batch#: 2002/06/28-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/28/2002 13:04	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/28/2002 13:04	
Benzene	ND	5.0	ug/Kg	1.00	06/28/2002 13:04	
Toluene	ND	5.0	ug/Kg	1.00	06/28/2002 13:04	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/28/2002 13:04	
Total xylenes	ND	5.0	ug/Kg	1.00	06/28/2002 13:04	
Surrogates(s)						
1,2-Dichloroethane-d4	122.3	70-121	%	1.00	06/28/2002 13:04	sh
Toluene-d8	97.8	81-117	%	1.00	06/28/2002 13:04	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-74-5.0**
Lab ID: 2002-06-0471 - 4

Sampled: 06/25/2002 09:00
Extracted: 6/28/2002 13:26

Matrix: Soil
QC Batch#: 2002/06/28-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1600	ug/Kg	1.62	06/28/2002 13:26	
Methyl tert-butyl ether (MTBE)	ND	8.1	ug/Kg	1.62	06/28/2002 13:26	
Benzene	ND	8.1	ug/Kg	1.62	06/28/2002 13:26	
Toluene	ND	8.1	ug/Kg	1.62	06/28/2002 13:26	
Ethyl benzene	ND	8.1	ug/Kg	1.62	06/28/2002 13:26	
Total xylenes	ND	8.1	ug/Kg	1.62	06/28/2002 13:26	
Surrogates(s)						
1,2-Dichloroethane-d4	131.1	70-121	%	1.62	06/28/2002 13:26	sh
Toluene-d8	95.1	81-117	%	1.62	06/28/2002 13:26	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s): 5030B
Sample ID: **SRB-74-9.0**
Sampled: 06/25/2002 09:04
Matrix: Soil

Test(s): 8260B
Lab ID: 2002-06-0471 - 6
Extracted: 6/28/2002 13:48
QC Batch#: 2002/06/28-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/28/2002 13:48	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/28/2002 13:48	
Benzene	ND	5.0	ug/Kg	1.00	06/28/2002 13:48	
Toluene	ND	5.0	ug/Kg	1.00	06/28/2002 13:48	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/28/2002 13:48	
Total xylenes	ND	5.0	ug/Kg	1.00	06/28/2002 13:48	
Surrogates(s)						
1,2-Dichloroethane-d4	115.0	70-121	%	1.00	06/28/2002 13:48	
Toluene-d8	100.5	81-117	%	1.00	06/28/2002 13:48	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-74-15.0**
Lab ID: 2002-06-0471 - 9

Sampled: 06/25/2002 09:17
Extracted: 6/28/2002 16:23

Matrix: Soil
QC Batch#: 2002/06/28-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/28/2002 16:23	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/28/2002 16:23	
Benzene	ND	5.0	ug/Kg	1.00	06/28/2002 16:23	
Toluene	ND	5.0	ug/Kg	1.00	06/28/2002 16:23	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/28/2002 16:23	
Total xylenes	ND	5.0	ug/Kg	1.00	06/28/2002 16:23	
Surrogates(s)						
1,2-Dichloroethane-d4	119.0	70-121	%	1.00	06/28/2002 16:23	
Toluene-d8	100.6	81-117	%	1.00	06/28/2002 16:23	

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-75-1.0**
Lab ID: 2002-06-0471 - 27

Sampled: 06/25/2002 15:20
Extracted: 6/28/2002 16:45

Matrix: Soil
QC Batch#: 2002/06/28-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/28/2002 16:45	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/28/2002 16:45	
Benzene	ND	5.0	ug/Kg	1.00	06/28/2002 16:45	
Toluene	ND	5.0	ug/Kg	1.00	06/28/2002 16:45	
Ethyl benzene	11	5.0	ug/Kg	1.00	06/28/2002 16:45	
Total xylenes	51	5.0	ug/Kg	1.00	06/28/2002 16:45	
Surrogates(s)						
1,2-Dichloroethane-d4	138.7	70-121	%	1.00	06/28/2002 16:45	sh
Toluene-d8	103.6	81-117	%	1.00	06/28/2002 16:45	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-99-14.0**
Lab ID: 2002-06-0471 - 32

Sampled: 06/25/2002 15:20
Extracted: 7/2/2002 13:48

Matrix: Soil
QC Batch#: 2002/07/02-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	07/02/2002 13:48	
Benzene	ND	5.0	ug/Kg	1.00	07/02/2002 13:48	
Toluene	19	5.0	ug/Kg	1.00	07/02/2002 13:48	
Ethyl benzene	ND	5.0	ug/Kg	1.00	07/02/2002 13:48	
Total xylenes	ND	5.0	ug/Kg	1.00	07/02/2002 13:48	
Surrogates(s)						
1,2-Dichloroethane-d4	98.1	70-121	%	1.00	07/02/2002 13:48	
Toluene-d8	103.7	81-117	%	1.00	07/02/2002 13:48	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/06/28-01.27-005

Soil

Test(s): 8260FAB
QC Batch # 2002/06/28-01.27
Date Extracted: 06/28/2002 11:25

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/28/2002 11:25	
Benzene	ND	5.0	ug/Kg	06/28/2002 11:25	
Toluene	ND	5.0	ug/Kg	06/28/2002 11:25	
Ethyl benzene	ND	5.0	ug/Kg	06/28/2002 11:25	
Total xylenes	ND	5.0	ug/Kg	06/28/2002 11:25	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/28/2002 11:25	
Surrogates(s)					
1,2-Dichloroethane-d4	104.2	70-121	%	06/28/2002 11:25	
Toluene-d8	101.8	81-117	%	06/28/2002 11:25	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Soil** — **QC Batch # 2002/06/28-01.27**

MB: 2002/06/28-01.27-007 — Date Extracted: 06/28/2002 11:25

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/28/2002 11:25	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/28/2002 11:25	
Benzene	ND	5.0	ug/Kg	06/28/2002 11:25	
Toluene	ND	5.0	ug/Kg	06/28/2002 11:25	
Ethyl benzene	ND	5.0	ug/Kg	06/28/2002 11:25	
Total xylenes	ND	5.0	ug/Kg	06/28/2002 11:25	
Surrogates(s)					
1,2-Dichloroethane-d4	104.2	70-121	%	06/28/2002 11:25	
Toluene-d8	101.8	81-117	%	06/28/2002 11:25	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Soil** **QC Batch # 2002/06/28-01.27**

LCS 2002/06/28-01.27-003 Extracted: 06/28/2002 Analyzed: 06/28/2002 10:33

LCSD 2002/06/28-01.27-006 Extracted: 06/28/2002 Analyzed: 06/28/2002 11:47

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	49.5	51.5	50.0	99.0	103.0	4.0	69-129	20		
Toluene	51.3	53.9	50.0	102.6	107.8	4.9	70-130	20		
Methyl tert-butyl ether (MTBE)	45.3	48.1	50.0	90.6	96.2	6.0	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	530	551	500	106.0	110.2		70-121			
Toluene-d8	516	510	500	103.2	102.0		81-117			

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

sh

Surrogate recovery was higher than QC limit due to matrix interference.

Submission #: 2002-06-0471

Gasoline

Geomatrix Consultants

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-77	06/24/2002 16:00	Water	1
SRB-75	06/25/2002 07:45	Water	2
SRB-74	06/25/2002 11:30	Water	14

Submission #: 2002-06-0471

Gasoline

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CA DHS ELAP# 2496

Prep(s): 5030 Test(s): 8015M

Sample ID: SRB-77 Lab ID: 2002-06-0471 - 1

Sampled: 06/24/2002 16:00 Extracted: 6/26/2002 17:39

Matrix: Water QC Batch#: 2002/06/26-01.04

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/26/2002 17:39	
Surrogates(s)						
4-Bromofluorobenzene-FID	95.0	50-150	%	1.00	06/26/2002 17:39	

Submission #: 2002-06-0471

Gasoline

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CA DHS ELAP# 2496

Prep(s): 5030 Test(s): 8015M

Sample ID: **SRB-75** Lab ID: 2002-06-0471 - 2

Sampled: 06/25/2002 07:45 Extracted: 6/26/2002 18:06

Matrix: Water QC Batch#: 2002/06/26-01.04

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	76	50	ug/L	1.00	06/26/2002 18:06	g
Surrogates(s)						
4-Bromofluorobenzene-FID	88.7	50-150	%	1.00	06/26/2002 18:06	

Submission #: 2002-06-0471

Gasoline

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5030
Sample ID: SRB-74
Sampled: 06/25/2002 11:30
Matrix: Water

Test(s): 8015M
Lab ID: 2002-06-0471 - 14
Extracted: 6/26/2002 18:33
QC Batch#: 2002/06/26-01.04

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/26/2002 18:33	
Surrogates(s)						
4-Bromofluorobenzene-FID	119.1	50-150	%	1.00	06/26/2002 18:33	

Submission #: 2002-06-0471

Gasoline

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030 Test(s): 8015M

Method Blank **Water** **QC Batch # 2002/06/26-01.04**

MB: 2002/06/26-01.04-006 Date Extracted: 06/26/2002 10:14

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/26/2002 10:14	
Surrogates(s)					
4-Bromofluorobenzene-FID	94.2	50-150	%	06/26/2002 10:14	

Submission #: 2002-06-0471

Gasoline

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2002/06/26-01.04**

LCS 2002/06/26-01.04-007 Extracted: 06/26/2002 Analyzed: 06/26/2002 10:41

LCSD 2002/06/26-01.04-008 Extracted: 06/26/2002 Analyzed: 06/26/2002 11:08

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	483	463	500	96.6	92.6	4.2	75-125	20		
Surrogates(s)										
4-Bromofluorobenzene-FID	427	416	500	85.4	83.2		50-150			

Submission #: 2002-06-0471

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Received: 06/25/2002 18:40

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-77	06/24/2002 16:00	Water	1
SRB-75	06/25/2002 07:45	Water	2
SRB-74	06/25/2002 11:30	Water	14

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B
Sample ID: SRB-77
Lab ID: 2002-06-0471 - 1
Sampled: 06/24/2002 16:00
Extracted: 7/2/2002 14:18
Matrix: Water
QC Batch#: 2002/07/02-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	0.60	0.50	ug/L	1.00	07/02/2002 14:18	
Benzene	ND	0.50	ug/L	1.00	07/02/2002 14:18	
Toluene	ND	0.50	ug/L	1.00	07/02/2002 14:18	
Ethylbenzene	ND	0.50	ug/L	1.00	07/02/2002 14:18	
Total xylenes	ND	1.0	ug/L	1.00	07/02/2002 14:18	
Surrogates(s)						
1,2-Dichloroethane-d4	91.2	76-114	%	1.00	07/02/2002 14:18	
Toluene-d8	97.1	88-110	%	1.00	07/02/2002 14:18	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-75**
Lab ID: 2002-06-0471 - 2

Sampled: 06/25/2002 07:45
Extracted: 7/2/2002 14:40

Matrix: Water
QC Batch#: 2002/07/02-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	3.3	0.50	ug/L	1.00	07/02/2002 14:40	
Benzene	ND	0.50	ug/L	1.00	07/02/2002 14:40	
Toluene	ND	0.50	ug/L	1.00	07/02/2002 14:40	
Ethylbenzene	ND	0.50	ug/L	1.00	07/02/2002 14:40	
Total xylenes	ND	1.0	ug/L	1.00	07/02/2002 14:40	
Surrogates(s)						
1,2-Dichloroethane-d4	90.5	76-114	%	1.00	07/02/2002 14:40	
Toluene-d8	101.8	88-110	%	1.00	07/02/2002 14:40	

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CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**SRB-74**	Lab ID:	2002-06-0471 - 14
Sampled:	06/25/2002 11:30	Extracted:	7/1/2002 20:30
Matrix:	Water	QC Batch#:	2002/07/01-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	33	0.50	ug/L	1.00	07/01/2002 20:30	
Benzene	ND	0.50	ug/L	1.00	07/01/2002 20:30	
Toluene	ND	0.50	ug/L	1.00	07/01/2002 20:30	
Ethylbenzene	ND	0.50	ug/L	1.00	07/01/2002 20:30	
Total xylenes	ND	1.0	ug/L	1.00	07/01/2002 20:30	
Surrogates(s)						
1,2-Dichloroethane-d4	90.2	76-114	%	1.00	07/01/2002 20:30	
Toluene-d8	99.8	88-110	%	1.00	07/01/2002 20:30	

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Project: 2770.005

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Batch QC Report

Prep(s): 5030B
Method Blank

Water

Test(s): 8260B
QC Batch # 2002/07/01-01.62

MB: 2002/07/01-01.62-041

Date Extracted: 07/01/2002 12:41

Compound	Conc.	RL	Unit	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/01/2002 12:41	
Benzene	ND	0.5	ug/L	07/01/2002 12:41	
Toluene	ND	0.5	ug/L	07/01/2002 12:41	
Ethylbenzene	ND	0.5	ug/L	07/01/2002 12:41	
Total xylenes	ND	1.0	ug/L	07/01/2002 12:41	
Surrogates(s)					
1,2-Dichloroethane-d4	86.3	76-114	%	07/01/2002 12:41	
Toluene-d8	101.0	88-110	%	07/01/2002 12:41	

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — **Water** — **QC Batch # 2002/07/02-01.62**

MB: 2002/07/02-01.62-009 — Date Extracted: 07/02/2002 11:09

Compound	Conc.	RL	Unit	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/02/2002 11:09	
Benzene	ND	0.5	ug/L	07/02/2002 11:09	
Toluene	ND	0.5	ug/L	07/02/2002 11:09	
Ethylbenzene	ND	0.5	ug/L	07/02/2002 11:09	
Total xylenes	ND	1.0	ug/L	07/02/2002 11:09	
Surrogates(s)					
1,2-Dichloroethane-d4	87.6	76-114	%	07/02/2002 11:09	
Toluene-d8	100.0	88-110	%	07/02/2002 11:09	

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Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2002/07/01-01.62**

LCS 2002/07/01-01.62-056 Extracted: 07/01/2002 Analyzed: 07/01/2002 11:56

LCSD 2002/07/01-01.62-019 Extracted: 07/01/2002 Analyzed: 07/01/2002 12:19

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	26.4	27.2	25.0	105.6	108.8	3.0	65-165	20		
Benzene	25.6	23.6	25.0	102.4	94.4	8.1	69-129	20		
Toluene	26.2	25.0	25.0	104.8	100.0	4.7	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	485	481	500	97.0	96.2		76-114			
Toluene-d8	509	489	500	101.8	97.8		88-110			

Submission #: 2002-06-0471

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2002/07/02-01.62**

LCS 2002/07/02-01.62-048 Extracted: 07/02/2002 Analyzed: 07/02/2002 10:24

LCSD 2002/07/02-01.62-046 Extracted: 07/02/2002 Analyzed: 07/02/2002 10:46

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	27.9	26.6	25.0	111.6	106.4	4.8	65-165	20		
Benzene	25.8	23.5	25.0	103.2	94.0	9.3	69-129	20		
Toluene	25.9	25.2	25.0	103.6	100.8	2.7	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	486	472	500	97.2	94.4		76-114	0		
Toluene-d8	498	489	500	99.6	97.8		88-110	0		

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-74-1.0	06/25/2002 08:40	Soil	3
SRB-74-5.0	06/25/2002 09:00	Soil	4
SRB-74-11.0	06/25/2002 09:05	Soil	7
SRB-74-15.0	06/25/2002 09:17	Soil	9
SRB-75-1.0	06/25/2002 15:20	Soil	27
SRB-99-14.0	06/25/2002 15:20	Soil	32

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-74-1.0**
Lab ID: 2002-06-0471 - 3
Sampled: 06/25/2002 08:40
Extracted: 6/26/2002 04:47
Matrix: Soil
QC Batch#: 2002/06/26-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	8.0	1.0	mg/Kg	1.00	07/04/2002 02:47	ndp
Motor Oil	87	50	mg/Kg	1.00	07/04/2002 02:47	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	1.00	07/04/2002 02:47	sd

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-74-5.0**
Lab ID: 2002-06-0471 - 4
Sampled: 06/25/2002 09:00
Extracted: 6/26/2002 04:47
Matrix: Soil
QC Batch#: 2002/06/26-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 19:19	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 19:19	
Surrogates(s)						
o-Terphenyl	86.6	60-130	%	1.00	07/03/2002 19:19	

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Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-74-11.0**
Lab ID: 2002-06-0471 - 7
Sampled: 06/25/2002 09:05
Extracted: 6/26/2002 04:47
Matrix: Soil
QC Batch#: 2002/06/26-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 23:17	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 23:17	
Surrogates(s)						
o-Terphenyl	95.7	60-130	%	1.00	07/03/2002 23:17	

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Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-74-15.0**
Lab ID: 2002-06-0471 - 9

Sampled: 06/25/2002 09:17
Extracted: 6/26/2002 04:47

Matrix: Soil
QC Batch#: 2002/06/26-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 22:37	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 22:37	
Surrogates(s)						
o-Terphenyl	93.2	60-130	%	1.00	07/03/2002 22:37	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**SRB-75-1.0**	Lab ID:	2002-06-0471 - 27
Sampled:	06/25/2002 15:20	Extracted:	6/26/2002 04:47
Matrix:	Soil	QC Batch#:	2002/06/26-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	6.3	1.0	mg/Kg	1.00	07/04/2002 02:10	ndp
Motor Oil	57	50	mg/Kg	1.00	07/04/2002 02:10	
Surrogates(s)						
o-Terphenyl	95.2	60-130	%	1.00	07/04/2002 02:10	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-99-14.0**
Lab ID: 2002-06-0471 - 32

Sampled: 06/25/2002 15:20
Extracted: 6/28/2002 05:20

Matrix: Soil
QC Batch#: 2002/06/28-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	10	1.0	mg/Kg	1.00	07/04/2002 00:56	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/04/2002 00:56	
Surrogates(s)						
o-Terphenyl	90.1	60-130	%	1.00	07/04/2002 00:56	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank
MB: 2002/06/26-01.10-001

Soil

Test(s): 8015M
QC Batch # 2002/06/26-01.10
Date Extracted: 06/26/2002 04:47

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/26/2002 09:17	
Motor Oil	ND	50	mg/Kg	06/26/2002 09:17	
Surrogates(s)					
o-Terphenyl	77.4	60-130	%	06/26/2002 09:17	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank

Soil

Test(s): 8015M
QC Batch # 2002/06/28-01.10

MB: 2002/06/28-01.10-001

Date Extracted: 06/28/2002 05:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/28/2002 12:22	
Motor Oil	ND	50	mg/Kg	06/28/2002 12:22	
Surrogates(s)					
o-Terphenyl	92.6	60-130	%	06/28/2002 12:22	

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/26-01.10**

LCS 2002/06/26-01.10-002 Extracted: 06/26/2002 Analyzed: 06/26/2002 09:17

LCSD 2002/06/26-01.10-003 Extracted: 06/26/2002 Analyzed: 06/26/2002 09:55

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	33.3	34.5	41.7	79.9	82.7	3.4	60-130	25		
Surrogates(s)										
o-Terphenyl	18.9	19.5	20.0	94.6	97.6		60-130	0		

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Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/28-01.10**

LCS 2002/06/28-01.10-002 Extracted: 06/28/2002 Analyzed: 06/28/2002 12:56
LCSD 2002/06/28-01.10-003 Extracted: 06/28/2002 Analyzed: 06/28/2002 13:36

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	32.6	37.6	41.7	78.2	90.2	14.3	60-130	25		
Surrogates(s)										
o-Terphenyl	18.8	21.0	20.0	94.0	104.8		60-130	0		

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
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Project: 2770.005

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

ndp — Hydrocarbon reported does not match the pattern of our Diesel standard

sd — Surrogate recovery not reportable due to required dilution.

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-77	06/24/2002 16:00	Water	1
SRB-75	06/25/2002 07:45	Water	2
SRB-74	06/25/2002 11:30	Water	14
SRB-74(FILTER)	06/25/2002	Water	34
SRB-75(FILTER)	06/25/2002	Water	35
SRB-77(FILTER)	06/25/2002	Water	36

Submission #: 2002-06-0471

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Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M

Sample ID: **SRB-77**
Lab ID: 2002-06-0471 - 1

Sampled: 06/24/2002 16:00
Extracted: 6/26/2002 18:13

Matrix: Water
QC Batch#: 2002/06/26-05.10

Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	950	65	ug/L	1.30	07/09/2002 20:12	ndp
Motor Oil	1100	650	ug/L	1.30	07/09/2002 20:12	
Surrogates(s)						
o-Terphenyl	98.1	60-130	%	1.30	07/09/2002 20:12	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M
Sample ID: **SRB-75**
Lab ID: 2002-06-0471 - 2
Sampled: 06/25/2002 07:45
Extracted: 6/26/2002 18:13
Matrix: Water
QC Batch#: 2002/06/26-05.10
Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	4100	67	ug/L	1.33	07/09/2002 20:12	ndp
Motor Oil	3900	670	ug/L	1.33	07/09/2002 20:12	
Surrogates(s)						
o-Terphenyl	99.5	60-130	%	1.33	07/09/2002 20:12	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M
Sample ID: **SRB-74**
Lab ID: 2002-06-0471 - 14
Sampled: 06/25/2002 11:30
Extracted: 6/26/2002 18:13
Matrix: Water
QC Batch#: 2002/06/26-05.10
Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	71	ug/L	1.43	07/09/2002 18:20	
Motor Oil	ND	710	ug/L	1.43	07/09/2002 18:20	
Surrogates(s)						
o-Terphenyl	91.1	60-130	%	1.43	07/09/2002 18:20	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M

Sample ID: **SRB-74(FILTER)**
Lab ID: 2002-06-0471 - 34

Sampled: 06/25/2002
Extracted: 6/28/2002 05:28

Matrix: Water
QC Batch#: 2002/06/28-03.10

Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	79	ug/L	1.59	07/09/2002 19:34	
Motor Oil	ND	790	ug/L	1.59	07/09/2002 19:34	
Surrogates(s)						
o-Terphenyl	95.7	60-130	%	1.59	07/09/2002 19:34	

Submission #: 2002-06-0471

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Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M
Sample ID: **SRB-75(FILTER)**
Lab ID: 2002-06-0471 - 35
Sampled: 06/25/2002
Extracted: 6/28/2002 05:28
Matrix: Water
QC Batch#: 2002/06/28-03.10
Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	180	63	ug/L	1.25	07/09/2002 19:34	ndp
Motor Oil	ND	630	ug/L	1.25	07/09/2002 19:34	
Surrogates(s)						
o-Terphenyl	108.5	60-130	%	1.25	07/09/2002 19:34	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M

Sample ID: **SRB-77(FILTER)**
Lab ID: 2002-06-0471 - 36

Sampled: 06/25/2002
Extracted: 6/28/2002 05:28

Matrix: Water
QC Batch#: 2002/06/28-03.10

Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	180	67	ug/L	1.33	07/09/2002 18:57	ndp
Motor Oil	ND	670	ug/L	1.33	07/09/2002 18:57	
Surrogates(s)						
o-Terphenyl	105.0	60-130	%	1.33	07/09/2002 18:57	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M
Test(s): 8015M

Method Blank
Water
QC Batch # 2002/06/26-05.10

MB: 2002/06/26-05.10-001
Date Extracted: 06/26/2002 18:13

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/27/2002 09:00	
Motor Oil	ND	500	ug/L	06/27/2002 09:00	
Surrogates(s)					
o-Terphenyl	96.4	60-130	%	06/27/2002 09:00	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M
Method Blank
MB: 2002/06/28-03.10-001

Water

Test(s): 8015M
QC Batch # 2002/06/28-03.10
Date Extracted: 06/28/2002 05:28

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/28/2002 11:37	
Motor Oil	ND	500	ug/L	06/28/2002 11:37	
Surrogates(s)					
o-Terphenyl	78.3	60-130	%	06/28/2002 11:37	

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2002/06/26-05.10**

LCS 2002/06/26-05.10-002 Extracted: 06/26/2002 Analyzed: 06/27/2002 07:46
LCSD 2002/06/26-05.10-003 Extracted: 06/26/2002 Analyzed: 06/27/2002 08:23

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	899	942	1250	71.9	75.4	4.8	60-130	25		
Surrogates(s)										
o-Terphenyl	18.2	19.2	20.0	90.8	96.2		60-130	0		

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2002/06/28-03.10**

LCS 2002/06/28-03.10-002 Extracted: 06/28/2002 Analyzed: 06/28/2002 10:17

LCSD 2002/06/28-03.10-003 Extracted: 06/28/2002 Analyzed: 06/28/2002 10:57

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	855	899	1250	68.4	71.9	5.0	60-130	25		
Surrogates(s)										
o-Terphenyl	20.5	21.2	20.0	102.6	105.9		60-130	0		

Submission #: 2002-06-0471

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Legend and Notes

Analysis Flag

rl

Reporting limits raised due to reduced sample size.

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-77	06/24/2002 16:00	Water	1
SRB-75	06/25/2002 07:45	Water	2
SRB-74-1.0	06/25/2002 08:40	Soil	3
SRB-74-5.0	06/25/2002 09:00	Soil	4
SRB-74-11.0	06/25/2002 09:05	Soil	7
SRB-74-15.0	06/25/2002 09:17	Soil	9
SRB-74	06/25/2002 11:30	Water	14
SRB-75-1.0	06/25/2002 15:20	Soil	27
SRB-99-14.0	06/25/2002 15:20	Soil	32
SRB-74(FILTER)	06/25/2002	Water	34
SRB-75(FILTER)	06/25/2002	Water	35
SRB-77(FILTER)	06/25/2002	Water	36

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M
Sample ID: SRB-77
Lab ID: 2002-06-0471 - 1
Sampled: 06/24/2002 16:00
Extracted: 6/26/2002 07:28
Matrix: Water
QC Batch#: 2002/06/26-03.10
Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	960	65	ug/L	1.30	06/27/2002 12:54	ndp
Motor Oil	1100	650	ug/L	1.30	06/27/2002 12:54	
Surrogates(s)						
o-Terphenyl	86.9	60-130	%	1.30	06/27/2002 12:54	

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M

Sample ID: **SRB-75**
Lab ID: 2002-06-0471 - 2

Sampled: 06/25/2002 07:45
Extracted: 6/26/2002 07:28

Matrix: Water
QC Batch#: 2002/06/26-03.10

Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	3700	67	ug/L	1.30	06/27/2002 21:26	ndp
Motor Oil	3800	670	ug/L	1.30	06/27/2002 21:26	
Surrogates(s)						
o-Terphenyl	88.7	60-130	%	1.30	06/27/2002 21:26	

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-74-1.0**
Lab ID: 2002-06-0471 - 3
Sampled: 06/25/2002 08:40
Extracted: 6/26/2002 12:30
Matrix: Soil
QC Batch#: 2002/06/26-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	7.2	1.0	mg/Kg	1.00	06/28/2002 10:27	ndp
Motor Oil	74	50	mg/Kg	1.00	06/28/2002 10:27	
Surrogates(s)						
o-Terphenyl	106.5	60-130	%	1.00	06/28/2002 10:27	

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-74-5.0**
Sampled: 06/25/2002 09:00
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0471 - 4
Extracted: 6/26/2002 12:30
QC Batch#: 2002/06/26-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/28/2002 06:19	
Motor Oil	ND	50	mg/Kg	1.00	06/28/2002 06:19	
Surrogates(s)						
o-Terphenyl	87.5	60-130	%	1.00	06/28/2002 06:19	

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-74-11.0**
Sampled: 06/25/2002 09:05
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0471 - 7
Extracted: 6/27/2002 11:43
QC Batch#: 2002/06/27-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/28/2002 06:58	
Motor Oil	ND	50	mg/Kg	1.00	06/28/2002 06:58	
Surrogates(s)						
o-Terphenyl	89.9	60-130	%	1.00	06/28/2002 06:58	

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TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-74-15.0**
Sampled: 06/25/2002 09:17
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0471 - 9
Extracted: 6/26/2002 12:30
QC Batch#: 2002/06/26-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/27/2002 12:48	
Motor Oil	ND	50	mg/Kg	1.00	06/27/2002 12:48	
Surrogates(s)						
o-Terphenyl	77.7	60-130	%	1.00	06/27/2002 12:48	

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M
Sample ID: SRB-74
Lab ID: 2002-06-0471 - 14
Sampled: 06/25/2002 11:30
Extracted: 6/26/2002 07:28
Matrix: Water
QC Batch#: 2002/06/26-03.10
Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	71	ug/L	1.40	06/27/2002 12:48	
Motor Oil	ND	710	ug/L	1.40	06/27/2002 12:48	
Surrogates(s)						
o-Terphenyl	80.9	60-130	%	1.40	06/27/2002 12:48	

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-75-1.0**
Sampled: 06/25/2002 15:20
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0471 - 27
Extracted: 6/26/2002 12:30
QC Batch#: 2002/06/26-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	4.9	1.0	mg/Kg	1.00	06/28/2002 11:06	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/28/2002 11:06	
Surrogates(s)						
o-Terphenyl	94.9	60-130	%	1.00	06/28/2002 11:06	

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**SRB-99-14.0**	Lab ID:	2002-06-0471 - 32
Sampled:	06/25/2002 15:20	Extracted:	6/28/2002 05:23
Matrix:	Soil	QC Batch#:	2002/06/28-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	8.4	1.0	mg/Kg	1.00	07/01/2002 08:13	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/01/2002 08:13	
Bunker-C	ND	50	mg/Kg	1.00	07/01/2002 08:13	
Surrogates(s)						
o-Terphenyl	78.2	60-130	%	1.00	07/01/2002 08:13	

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M

Sample ID: **SRB-74(FILTER)**
Lab ID: 2002-06-0471 - 34

Sampled: 06/25/2002
Extracted: 6/28/2002 05:30

Matrix: Water
QC Batch#: 2002/06/28-05.10

Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	79	ug/L	1.60	07/01/2002 08:27	
Motor Oil	ND	790	ug/L	1.60	07/01/2002 08:27	
Surrogates(s)						
o-Terphenyl	94.2	60-130	%	1.60	07/01/2002 08:27	

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M
Sample ID: **SRB-75(FILTER)**
Lab ID: 2002-06-0471 - 35
Sampled: 06/25/2002
Extracted: 6/28/2002 05:30
Matrix: Water
QC Batch#: 2002/06/28-05.10
Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	63	ug/L	1.30	07/01/2002 07:33	
Motor Oil	ND	630	ug/L	1.30	07/01/2002 07:33	
Surrogates(s)						
o-Terphenyl	87.2	60-130	%	1.30	07/01/2002 07:33	

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M

Sample ID: **SRB-77(FILTER)**
Lab ID: 2002-06-0471 - 36

Sampled: 06/25/2002
Extracted: 6/28/2002 05:30

Matrix: Water
QC Batch#: 2002/06/28-05.10

Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	67	ug/L	1.30	07/01/2002 06:54	
Motor Oil	ND	670	ug/L	1.30	07/01/2002 06:54	
Surrogates(s)						
o-Terphenyl	86.8	60-130	%	1.30	07/01/2002 06:54	

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M
Method Blank
MB: 2002/06/26-03.10-001

Water

Test(s): 8015M
QC Batch # 2002/06/26-03.10
Date Extracted: 06/26/2002 07:28

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/26/2002 12:54	
Motor Oil	ND	500	ug/L	06/26/2002 12:54	
Bunker-C	ND	50	ug/L	06/26/2002 12:54	
Surrogates(s)					
o-Terphenyl	95.1	60-130	%	06/26/2002 12:54	

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank
MB: 2002/06/26-04.10-006

Soil

Test(s): 8015M
QC Batch # 2002/06/26-04.10
Date Extracted: 06/26/2002 12:30

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/28/2002 09:49	
Motor Oil	ND	50	mg/Kg	06/28/2002 09:49	
Bunker-C	ND	50	mg/Kg	06/28/2002 09:49	
Surrogates(s)					
o-Terphenyl	91.0	60-130	%	06/28/2002 09:49	

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank
MB: 2002/06/27-03.10-001

Soil

Test(s): 8015M
QC Batch # 2002/06/27-03.10
Date Extracted: 06/27/2002 11:43

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/28/2002 09:49	
Motor Oil	ND	50	mg/Kg	06/28/2002 09:49	
Surrogates(s)					
o-Terphenyl	81.3	60-130	%	06/28/2002 09:49	

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank

Soil

Test(s): 8015M
QC Batch # 2002/06/28-02.10

MB: 2002/06/28-02.10-003

Date Extracted: 06/28/2002 05:23

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/28/2002 12:59	
Motor Oil	ND	50	mg/Kg	06/28/2002 12:59	
Bunker-C	ND	50	mg/Kg	06/28/2002 12:59	
Surrogates(s)					
o-Terphenyl	78.7	60-130	%	06/28/2002 12:59	

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M
Method Blank
MB: 2002/06/28-05.10-001

Water

Test(s): 8015M
QC Batch # 2002/06/28-05.10
Date Extracted: 06/28/2002 05:30

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	07/01/2002 07:13	
Motor Oil	ND	500	ug/L	07/01/2002 07:13	
Bunker-C	ND	50	ug/L	07/01/2002 07:13	
Surrogates(s)					
o-Terphenyl	90.5	60-130	%	07/01/2002 07:13	

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2002/06/26-03.10**

LCS 2002/06/26-03.10-002 Extracted: 06/26/2002 Analyzed: 06/26/2002 11:34
LCSD 2002/06/26-03.10-003 Extracted: 06/26/2002 Analyzed: 06/26/2002 12:14

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	783	808	1250	62.6	64.6	3.1	60-130	25		
Surrogates(s)										
o-Terphenyl	18.9	19.4	20.0	94.7	97.0		60-130	0		

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/26-04.10**

LCS 2002/06/26-04.10-002 Extracted: 06/26/2002 Analyzed: 06/28/2002 08:35
LCSD 2002/06/26-04.10-003 Extracted: 06/26/2002 Analyzed: 06/28/2002 09:12

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	38.0	41.6	41.7	91.1	99.8	9.1	60-130	25		
Surrogates(s)										
o-Terphenyl	19.5	21.0	20.0	97.3	104.9		60-130	0		

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/27-03.10**

LCS 2002/06/27-03.10-002 Extracted: 06/27/2002 Analyzed: 06/28/2002 08:35
LCSD 2002/06/27-03.10-003 Extracted: 06/27/2002 Analyzed: 06/28/2002 09:12

Compound	Conc.	mg/Kg	Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	31.6	31.5	41.7	75.8	75.5	0.4	60-130	25		
Surrogates(s)										
o-Terphenyl	17.8	18.2	20.0	88.9	91.2		60-130	0		

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/28-02.10**

LCS 2002/06/28-02.10-001 Extracted: 06/28/2002 Analyzed: 07/01/2002 05:58

LCSD 2002/06/28-02.10-002 Extracted: 06/28/2002 Analyzed: 07/01/2002 06:35

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	35.1	35.9	41.7	84.2	86.1	2.2	60-130	25		
Surrogates(s)										
o-Terphenyl	19.9	20.7	20.0	99.4	103.5		60-130	0		

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2002/06/28-05.10**

LCS 2002/06/28-05.10-002 Extracted: 06/28/2002 Analyzed: 07/01/2002 07:33

LCSD 2002/06/28-05.10-003 Extracted: 06/28/2002 Analyzed: 07/01/2002 08:13

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	906	842	1250	72.5	67.4	7.3	60-130	25		
Surrogates(s)										
o-Terphenyl	18.0	17.9	20.0	89.8	89.5		60-130	0		

Submission #: 2002-06-0471

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/06/26-04.10**

SRB-74-5.0 >> MS

Lab ID: 2002-06-0471 - 004

MS: 2002/06/26-04.10-004 Extracted: 06/26/2002 Analyzed: 06/27/2002 18:57
Dilution: 1.00

MSD: 2002/06/26-04.10-005 Extracted: 06/26/2002 Analyzed: 06/27/2002 18:57
Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	31.4	47.5	ND	40.7	77.1	117.0	41.1	60-130	25		rpd
Surrogate(s)											
o-Terphenyl	18.2	27.0		20.0	90.8	134.8		60-130	0		sh

Submission #: 2002-06-0471

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/06/28-02.10**

SRB-99-14.0 >> MS

Lab ID: 2002-06-0471 - 032

MS: 2002/06/28-02.10-004 Extracted: 06/28/2002 Analyzed: 07/01/2002 08:53
Dilution: 1.00

MSD: 2002/06/28-02.10-005 Extracted: 06/28/2002 Analyzed: 07/01/2002 09:32
Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	37.4	35.1	8.42	41.7	69.5	64.4	7.6	60-130	25		
Surrogate(s)											
o-Terphenyl	15.6	16.1		20.0	78.2	80.5		60-130	0		

TEPH w/ Silica Gel Clean-up

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CA DHS ELAP# 2496

Legend and Notes

Analysis Flag

rl

Reporting limits raised due to reduced sample size.

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

rpd

Analyte RPD was out of QC limits due to sample heterogeneity.

sh

Surrogate recovery was higher than QC limit due to matrix interference.

2002-06-0471

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Chain-of Custody Record

016299

Date: 6/24/2002 | Page 1 of 3

Project No.: 2770.005

Samplers (Signature:)

Sarah Mearon

	Date	Time	Sample Number
1	6/24/02	1600	SRB-77
2	6/25/02	0745	SRB-75
3	6/25/02	0840	SRB-74-1.0
4	6/25/02	900	SRB-74-5.0
5	6/25/02	0902	SRB-74-8.0
6	6/25/02	0904	SRB-74-9.0
7	6/25/02	0905	SRB-74-11.0
8	6/25/02	0915	SRB-74-14.0
9	6/25/02	0917	SRB-74-15.0
10	6/25/02	0920	SRB-74-17.0
11	6/25/02	0925	SRB-74-20.0
12	6/25/02	1035	SRB-74-23.0
13	6/25/02	1050	SRB-74-26.5
14	6/25/02	1130	SRB-74
15	6/25/02	1245	SRB-97-2.0

ANALYSES

Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 BTEX + MTBE	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil) 3630	Silica Gel Cleanup	HOLD	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	* Preserved	Cooled	No. of Containers
SRB-77				X			X	X	X	X		W		X	X	10
SRB-75				X			X	X	X	X		W		X	X	10
SRB-74-1.0				X			X	X	X	X		S			X	4
SRB-74-5.0				X			X	X	X	X		S			X	4
SRB-74-8.0											X	S			X	1
SRB-74-9.0				X			X	X	X	X		S			X	3
SRB-74-11.0											X	S			X	1
SRB-74-14.0											X	S			X	1
SRB-74-15.0				X			X	X	X	X		S			X	4
SRB-74-17.0											X	S			X	1
SRB-74-20.0											X	S			X	1
SRB-74-23.0											X	S			X	1
SRB-74-26.5											X	S			X	1
SRB-74				X			X	X	X	X		W		X	X	10
SRB-97-2.0											X	S			X	1

REMARKS

Additional Comments

*Encore must be preserved or analyzed within 48 hours of sample collection.

*Call Susan Gallardo at 510-663-4137 for analytical requirements for samples on hold

SRB-77: 6 VOAs, 4 1-L ambers

SRB-75: ↓

SRB-74-1.0: 1-6"x15/8" metal sleeve, 3 Encore

SRB-74-5.0: ↓

SRB-74-8.0: 6"x15/8" metal sleeve

SRB-74-9.0: EnCores

SRB-74-11.0: 6"x15/8" metal sleeve

SRB-74-14.0: ↓

SRB-74-15.0: 1-6"x15/8" metal sleeve, 3 Encore

SRB-74-17.0: 6"x15/8" metal sleeve

SRB-74-20.0: ↓

SRB-74-23.0: ↓

SRB-74-26.5: ↓

SRB-74: 6 VOAs, 4 1-L ambers

SRB-97-2.0: 6"x15/8" metal sleeve

*VOAs preserved with HCl

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rome

Total No. of Containers: 53

Relinquished by (Signature): Sarah Mearon — Date: 6/25/02 — Time: 1545

Printed Name: Mearon

Relinquished by (Signature): [signature] — Date: 6/25/02 — Time: 1840

Printed Name: K. Coss

Company: World Courier

Relinquished by (Signature): — Date: — Time:

Printed Name:

Company:

Received by: — Date: — Time:

Printed Name:

Company:

Received by: [signature] — Date: 6/25/02 — Time: 1840

Printed Name: Joanna K.

Company: STL-SF

Method of Shipment: courier

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

02-06-0471

67134

Chain-of Custody Record

016298

Date: 6/26/2002 | Page 2 of 3

Project No.: 2770.005

Samplers (Signature:)

Sarah Mearon

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 (BTEX + MTBE)	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup (3630)				HOLD	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
				ANALYSES														REMARKS					* Call Susan Gallardo at 510-663-4137 for analytical requirements.
16	6/25/02	1250	SRB-97-5.0														X	S			X	1	6"x15/8" metal sleeve
17	6/25/02	1255	SRB-97-8.0														X	S			X	1	
18	6/25/02	1300	SRB-97-11.0														X	S			X	1	
19	6/25/02	1305	SRB-97-14.0														X	S			X	1	
20	6/25/02	1310	SRB-97-17.0														X	S			X	1	
21	6/25/02	1345	SRB-98-1.5														X	S			X	1	
22	6/25/02	1350	SRB-98-5.0														X	S			X	1	
23	6/25/02	1355	SRB-98-8.0														X	S			X	1	
24	6/25/02	1400	SRB-98-11.0														X	S			X	1	
25	6/25/02	1405	SRB-98-14.0														X	S			X	1	
26	6/25/02	1410	SRB-98-17.0														X	S			X	1	
27	6/25/02	1520	SRB-75-1.0				X			X	X	X	X					S			X	4	3 Encore, 1 6"x15/8" metal sleeve
28	6/25/02	1440	SRB-99-1.5														X	S			X	1	6"x15/8" metal sleeve
29	6/25/02	1445	SRB-99-5.0														X	S			X	1	
30	6/25/02	1450	SRB-99-8.0														X	S			X	1	

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rome

Total No. of Containers: 18

* Encores must be preserved or analyzed within 48 hours of sample collection.

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Sarah Mearon	6/25/02	R Coss	6/25/02		
Printed Name: Sarah Mearon	Time:	Printed Name: R. Coss	Time:	Printed Name:	Time:
Company: Geomatrix	1545	Company: World Courier	1840	Company:	
Received by: R Coss	Date: 6/25/02	Received by:	Date:	Received by: N. Nolinck	Date: 6/25/02
Printed Name: R Coss	Time:	Printed Name:	Time:	Printed Name: N. Nolinck	Time:
Company: World Courier	1545	Company:		Company: STL-SF	1840

Method of Shipment: courier

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 5[illegible]4141

02-06-0471

67124

Chain-of-Custody Record

003924

Date: 6/25/2002

Page 3 of 3

Project No.: 2770.005

Samplers (Signature): Sarah Mearon

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	HOLD	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
31	6/25/02	1515	SRB-99-10.5											X	S			X	1	*Call Susan Gallardo at 510-663-4137 for analytical requirements. 6"x 15/8" metal sleeve
32	6/25/02	1520	SRB-99-14.0											X	S			X	1	
33	6/25/02	1525	SRB-99-17.0											X	S			X	1	

SA 6/25/02

21.5°C (~4 hrs)

Laboratory: STL San Francisco

Turnaround Time: Standard

Results to: C. Rome

Total No. of Containers

Relinquished by (Signature): Sarah Mearon	Date: 6/25/02	Relinquished by (Signature): L Coss	Date: 6/25/02	Relinquished by (Signature):	Date:	Method of Shipment: Courier	
Printed Name: Sarah Mearon	Time: 1545	Printed Name: L. Coss	Time: 1840	Printed Name:	Time:	Laboratory Comments and Log No.:	
Company: Geomatrix		Company: World courier		Company:			
Received by: L Coss	Date: 6/25/02	Received by:	Date:	Received by: N. Ken	Date: 6/25/02		
Printed Name: L. Coss	Time: 1545	Printed Name:	Time:	Printed Name: Naina K.	Time: 1840		
Company: World courier		Company:		Company: STL-SF			

Geomatrix Consultants
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Phone: 510-663-4100 • Fax: 510-663-4141

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 06 - 0471

Checklist completed by: (initials) CR Date: 06 / 25 /02

Courier name: ☐ STL San Francisco ☐ Client world

Custody seals intact on shipping container/samples	Yes____ No____	Not Present ✓
Chain of custody present?	Yes ✓ No____	
Chain of custody signed when relinquished and received?	Yes ✓ No____	
Chain of custody agrees with sample labels?	Yes ✓ No____	
Samples in proper container/bottle?	Yes ✓ No____	
Sample containers intact?	Yes ✓ No____	
Sufficient sample volume for indicated test?	Yes____ No ✓	
All samples received within holding time?	Yes ✓ No____	
Container/Temp Blank temperature in compliance (4^0 C ± 2)?	Temp 2/.5°C Yes____	No ✓
Water - VOA vials have zero headspace?	No VOA vials submitted____ Yes ✓	No____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - pH acceptable upon receipt? ☐ Yes ☐ No

☐ pH adjusted– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: No sleeve received for : SRB-74-9.0

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ____/____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client): called Sarah on 6/26/02 @ 12:00
left a message
Client called (Brenda) SRB-74-9.0 only ens

Submission#: 2002-07-0202

July 23, 2002

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn.: Charles Rome
Project#: 2770.005

Attached is our report for your samples received on 07/10/2002 16:40
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 08/24/2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour

Afsaneh Salimpour
Project Manager

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/10/2002 16:40

SEVERN TRENT LABORATORY

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www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-101-5.0	07/10/2002 09:10	Soil	2
SRB-101-8.0	07/10/2002 09:15	Soil	3
SRB-101-11.0	07/10/2002 09:17	Soil	4
SRB-101-17.0	07/10/2002 09:25	Soil	6
SRB-103-5.0	07/10/2002 11:10	Soil	14
SRB-103-8.0	07/10/2002 11:12	Soil	15
SRB-103-11.0	07/10/2002 11:15	Soil	16
SRB-103-17.0	07/10/2002 11:25	Soil	18

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/10/2002 16:40

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Sample ID: **SRB-101-5.0**
Sampled: 07/10/2002 09:10
Matrix: Soil

Test(s): 8270C-SIM
Lab ID: 2002-07-0202 - 2
Extracted: 7/15/2002 10:14
QC Batch#: 2002/07/15-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Fluorene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Chrysene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/15/2002 16:47	
Surrogates(s)						
2-Fluorobiphenyl	77.9	30-115	%	1.00	07/15/2002 16:47	
p-Terphenyl-d14	83.5	18-137	%	1.00	07/15/2002 16:47	

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/10/2002 16:40

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-101-8.0**
Lab ID: 2002-07-0202 - 3
Sampled: 07/10/2002 09:15
Extracted: 7/15/2002 10:14
Matrix: Soil
QC Batch#: 2002/07/15-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Fluorene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Chrysene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/15/2002 15:27	
Surrogates(s)						
2-Fluorobiphenyl	66.5	30-115	%	1.00	07/15/2002 15:27	
p-Terphenyl-d14	82.8	18-137	%	1.00	07/15/2002 15:27	

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
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Project: 2770.005

Received: 07/10/2002 16:40

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-101-11.0**
Lab ID: 2002-07-0202 - 4
Sampled: 07/10/2002 09:17
Extracted: 7/15/2002 10:14
Matrix: Soil
QC Batch#: 2002/07/15-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Fluorene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Chrysene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/15/2002 17:14	
Surrogates(s)						
2-Fluorobiphenyl	79.7	30-115	%	1.00	07/15/2002 17:14	
p-Terphenyl-d14	87.5	18-137	%	1.00	07/15/2002 17:14	

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/10/2002 16:40

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **SRB-101-17.0**
Lab ID: 2002-07-0202 - 6

Sampled: 07/10/2002 09:25
Extracted: 7/15/2002 10:14

Matrix: Soil
QC Batch#: 2002/07/15-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Fluorene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Chrysene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/15/2002 17:40	
Surrogates(s)						
2-Fluorobiphenyl	75.4	30-115	%	1.00	07/15/2002 17:40	
p-Terphenyl-d14	86.1	18-137	%	1.00	07/15/2002 17:40	

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/10/2002 16:40

SEVERN TRENT LABORATORY

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Sample ID: **SRB-103-5.0**
Sampled: 07/10/2002 11:10
Matrix: Soil

Test(s): 8270C-SIM
Lab ID: 2002-07-0202 - 14
Extracted: 7/15/2002 10:14
QC Batch#: 2002/07/15-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Fluorene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Chrysene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/15/2002 18:07	
Surrogates(s)						
2-Fluorobiphenyl	79.1	30-115	%	1.00	07/15/2002 18:07	
p-Terphenyl-d14	83.0	18-137	%	1.00	07/15/2002 18:07	

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-103-8.0**
Lab ID: 2002-07-0202 - 15
Sampled: 07/10/2002 11:12
Extracted: 7/15/2002 10:14
Matrix: Soil
QC Batch#: 2002/07/15-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Fluorene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Chrysene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/15/2002 18:34	
Surrogates(s)						
2-Fluorobiphenyl	75.6	30-115	%	1.00	07/15/2002 18:34	
p-Terphenyl-d14	80.7	18-137	%	1.00	07/15/2002 18:34	

Submission #: 2002-07-0202

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Sample ID: **SRB-103-11.0**
Sampled: 07/10/2002 11:15
Matrix: Soil

Test(s): 8270C-SIM
Lab ID: 2002-07-0202 - 16
Extracted: 7/15/2002 10:14
QC Batch#: 2002/07/15-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Fluorene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Chrysene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/15/2002 19:00	
Surrogates(s)						
2-Fluorobiphenyl	72.2	30-115	%	1.00	07/15/2002 19:00	
p-Terphenyl-d14	75.6	18-137	%	1.00	07/15/2002 19:00	

Submission #: 2002-07-0202

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-103-17.0**
Lab ID: 2002-07-0202 - 18
Sampled: 07/10/2002 11:25
Extracted: 7/15/2002 10:14
Matrix: Soil
QC Batch#: 2002/07/15-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Fluorene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Chrysene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/15/2002 19:27	
Surrogates(s)						
2-Fluorobiphenyl	71.2	30-115	%	1.00	07/15/2002 19:27	
p-Terphenyl-d14	86.1	18-137	%	1.00	07/15/2002 19:27	

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM
Method Blank
MB: 2002/07/15-01.40-003

Soil

Test(s): 8270C-SIM
QC Batch # 2002/07/15-01.40
Date Extracted: 07/15/2002 10:14

Compound	Conc.	RL	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	07/15/2002 13:43	
Acenaphthylene	ND	5.0	ug/Kg	07/15/2002 13:43	
Acenaphthene	ND	5.0	ug/Kg	07/15/2002 13:43	
Fluorene	ND	5.0	ug/Kg	07/15/2002 13:43	
Phenanthrene	ND	5.0	ug/Kg	07/15/2002 13:43	
Anthracene	ND	5.0	ug/Kg	07/15/2002 13:43	
Fluoranthene	ND	5.0	ug/Kg	07/15/2002 13:43	
Pyrene	ND	5.0	ug/Kg	07/15/2002 13:43	
Benzo(a)anthracene	ND	5.0	ug/Kg	07/15/2002 13:43	
Chrysene	ND	5.0	ug/Kg	07/15/2002 13:43	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	07/15/2002 13:43	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	07/15/2002 13:43	
Benzo(a)pyrene	ND	5.0	ug/Kg	07/15/2002 13:43	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	07/15/2002 13:43	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	07/15/2002 13:43	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	07/15/2002 13:43	
Surrogates(s)					
2-Fluorobiphenyl	83.4	30-115	%	07/15/2002 13:43	
p-Terphenyl-d14	78.9	18-137	%	07/15/2002 13:43	

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Laboratory Control Spike **Soil** **QC Batch # 2002/07/15-01.40**

LCS 2002/07/15-01.40-004 Extracted: 07/15/2002 Analyzed: 07/15/2002 14:10

LCSD 2002/07/15-01.40-005 Extracted: 07/15/2002 Analyzed: 07/15/2002 14:36

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Acenaphthene	305	311	332	91.9	93.7	1.9	50-150	30		
Phenanthrene	315	324	332	94.9	97.6	2.8	50-150	30		
Pyrene	293	303	332	88.3	91.3	3.3	50-150	30		
Chrysene	317	330	332	95.5	99.4	4.0	50-150	30		
Benzo(a)pyrene	316	335	332	95.2	100.9	5.8	50-150	30		
Surrogates(s)										
2-Fluorobiphenyl	8.05	8.03	10	80.5	80.3		30-115			
p-Terphenyl-d14	7.23	7.40	10	72.3	74.0		18-137			

Submission #: 2002-07-0202

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/07/15-01.40**

SRB-101-8.0 >> MS

Lab ID: 2002-07-0202 - 003

MS: 2002/07/15-01.40-007 Extracted: 07/15/2002 Analyzed: 07/15/2002 15:54
Dilution: 1.00

MSD: 2002/07/15-01.40-008 Extracted: 07/15/2002 Analyzed: 07/15/2002 16:20
Dilution: 1.00

Compound	Conc. ug/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	ug/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Acenaphthene	272	301	ND	331	82.2	91.2	10.4	50-150	30		
Phenanthrene	288	309	ND	331	87.0	93.6	7.3	50-150	30		
Pyrene	271	293	ND	331	81.9	88.8	8.1	50-150	30		
Chrysene	317	315	ND	331	95.8	95.5	0.3	50-150	30		
Benzo(a)pyrene	324	322	ND	331	97.9	97.6	0.3	50-150	30		
Surrogate(s)											
2-Fluorobiphenyl	7.49	8.18		10	74.9	81.8		30-115			
p-Terphenyl-d14	8.27	8.49		10	82.7	84.9		18-137			

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-101-5.0	07/10/2002 09:10	Soil	2
SRB-101-8.0	07/10/2002 09:15	Soil	3
SRB-101-11.0	07/10/2002 09:17	Soil	4
SRB-101-17.0	07/10/2002 09:25	Soil	6
SRB-103-5.0	07/10/2002 11:10	Soil	14
SRB-103-8.0	07/10/2002 11:12	Soil	15
SRB-103-11.0	07/10/2002 11:15	Soil	16
SRB-103-17.0	07/10/2002 11:25	Soil	18

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-101-5.0**
Sampled: 07/10/2002 09:10
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0202 - 2
Extracted: 7/15/2002 05:26
QC Batch#: 2002/07/15-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1.1	1.0	mg/Kg	1.00	07/17/2002 08:23	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/17/2002 08:23	
Surrogates(s)						
o-Terphenyl	81.1	60-130	%	1.00	07/17/2002 08:23	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-101-8.0**
Lab ID: 2002-07-0202 - 3

Sampled: 07/10/2002 09:15
Extracted: 7/15/2002 05:26

Matrix: Soil
QC Batch#: 2002/07/15-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/16/2002 06:59	
Motor Oil	ND	50	mg/Kg	1.00	07/16/2002 06:59	
Surrogates(s)						
o-Terphenyl	85.8	60-130	%	1.00	07/16/2002 06:59	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-101-11.0**
Sampled: 07/10/2002 09:17
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0202 - 4
Extracted: 7/15/2002 05:26
QC Batch#: 2002/07/15-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/16/2002 07:39	
Motor Oil	ND	50	mg/Kg	1.00	07/16/2002 07:39	
Surrogates(s)						
o-Terphenyl	84.5	60-130	%	1.00	07/16/2002 07:39	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-101-17.0**
Lab ID: 2002-07-0202 - 6

Sampled: 07/10/2002 09:25
Extracted: 7/15/2002 05:26

Matrix: Soil
QC Batch#: 2002/07/15-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/16/2002 08:19	
Motor Oil	ND	50	mg/Kg	1.00	07/16/2002 08:19	
Surrogates(s)						
o-Terphenyl	85.2	60-130	%	1.00	07/16/2002 08:19	

Submission #: 2002-07-0202

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Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-103-5.0**
Sampled: 07/10/2002 11:10
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0202 - 14
Extracted: 7/17/2002 05:05
QC Batch#: 2002/07/17-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/17/2002 16:00	
Motor Oil	ND	50	mg/Kg	1.00	07/17/2002 16:00	
Surrogates(s)						
o-Terphenyl	89.3	60-130	%	1.00	07/17/2002 16:00	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-103-8.0**
Lab ID: 2002-07-0202 - 15
Sampled: 07/10/2002 11:12
Extracted: 7/17/2002 05:05
Matrix: Soil
QC Batch#: 2002/07/17-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/17/2002 15:06	
Motor Oil	ND	50	mg/Kg	1.00	07/17/2002 15:06	
Surrogates(s)						
o-Terphenyl	85.8	60-130	%	1.00	07/17/2002 15:06	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/10/2002 16:40

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-103-11.0**
Sampled: 07/10/2002 11:15
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0202 - 16
Extracted: 7/17/2002 05:05
QC Batch#: 2002/07/17-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/17/2002 18:00	
Motor Oil	ND	50	mg/Kg	1.00	07/17/2002 18:00	
Surrogates(s)						
o-Terphenyl	80.5	60-130	%	1.00	07/17/2002 18:00	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-103-17.0**
Lab ID: 2002-07-0202 - 18

Sampled: 07/10/2002 11:25
Extracted: 7/17/2002 05:05

Matrix: Soil
QC Batch#: 2002/07/17-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/17/2002 21:19	
Motor Oil	ND	50	mg/Kg	1.00	07/17/2002 21:19	
Surrogates(s)						
o-Terphenyl	87.5	60-130	%	1.00	07/17/2002 21:19	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Test(s): 8015M

Method Blank
Soil
QC Batch # 2002/07/15-01.10

MB: 2002/07/15-01.10-001
Date Extracted: 07/15/2002 05:26

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	07/15/2002 10:55	
Motor Oil	ND	50	mg/Kg	07/15/2002 10:55	
Surrogates(s)					
o-Terphenyl	90.1	60-130	%	07/15/2002 10:55	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank

Soil

Test(s): 8015M
QC Batch # 2002/07/17-04.10

MB: 2002/07/17-04.10-001

Date Extracted: 07/17/2002 05:05

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	07/17/2002 10:53	
Motor Oil	ND	50	mg/Kg	07/17/2002 10:53	
Surrogates(s)					
o-Terphenyl	88.1	60-130	%	07/17/2002 10:53	

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 07/10/2002 16:40

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/07/15-01.10**

LCS 2002/07/15-01.10-002 Extracted: 07/15/2002 Analyzed: 07/15/2002 09:36

LCSD 2002/07/15-01.10-003 Extracted: 07/15/2002 Analyzed: 07/15/2002 10:16

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	34.5	34.2	41.7	82.7	82.0	0.9	60-130	25		
Surrogates(s)										
o-Terphenyl	22.4	22.2	20.0	112.0	110.9		60-130	0		

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/07/17-04.10**

LCS 2002/07/17-04.10-002 Extracted: 07/17/2002 Analyzed: 07/18/2002 08:27
LCSD 2002/07/17-04.10-003 Extracted: 07/17/2002 Analyzed: 07/18/2002 09:05

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	35.1	33.9	41.7	84.2	81.3	3.5	60-130	25		
Surrogates(s)										
o-Terphenyl	20.5	19.3	20.0	102.3	96.4		60-130	0		

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 07/10/2002 16:40

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/07/17-04.10**

SRB-103-5.0 >> MS

Lab ID: 2002-07-0202 - 014

MS: 2002/07/17-04.10-004 Extracted: 07/17/2002 Analyzed: 07/17/2002 16:40
Dilution: 1.00

MSD: 2002/07/17-04.10-005 Extracted: 07/17/2002 Analyzed: 07/17/2002 17:20
Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	34.2	32.8	ND	41.6	82.2	79.4	3.5	60-130	25		
Surrogate(s)											
o-Terphenyl	18.9	18.5		20.0	94.4	92.4		60-130	0		

Submission #: 2002-07-0202

Total Extractable Petroleum Hydrocarbons (TEPH)

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Oakland, CA 94612
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Project: 2770.005

Received: 07/10/2002 16:40

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www.chromalab.com

CA DHS ELAP# 2496

Legend and Notes

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

2002-07-0202 07387

Chain-of Custody Record

016257

Date: 7/10/2002 Page 1 of 2

Project No.: 2770.005

Samplers (Signature:) Sarah Meaney

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup				HOLD	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
7/10/02	0905	SRB-101-1.5														X	S			X	1	6"x15/8" metal sleeve
7/10/02	0910	SRB-101-5.0														X	S			X	1	
7/10/02	0915	SRB-101-8.0														X	S			X	1	
7/10/02	0917	SRB-101-11.0														X	S			X	1	
7/10/02	0920	SRB-101-14.0														X	S			X	1	
7/10/02	0925	SRB-101-17.0														X	S			X	1	
7/10/02	1000	SRB-102-2.0														X	S			X	1	
7/10/02	1010	SRB-102-5.0														X	S			X	1	
7/10/02	1015	SRB-102-8.0														X	S			X	1	
7/10/02	1020	SRB-102-11.0														X	S			X	1	
7/10/02	1025	SRB-102-14.0														X	S			X	1	
7/10/02	1030	SRB-102-17.0														X	S			X	1	
7/10/02	1107	SRB-103-2.0														X	S			X	1	
7/10/02	1110	SRB-103-5.0														X	S			X	1	
7/10/02	1112	SRB-103-8.0														X	S			X	1	

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rorrer

Total No. of Containers: 15

Relinquished by (Signature): Brenda J. Mulholland — Date: 7/10/02 — Time: 1000

Printed Name: Brenda J. Mulholland

Company: Geomatrix Consultants

Received by:

Printed Name:

Company:

Date:

Time:

Relinquished by (Signature):

Printed Name:

Company:

Date:

Time:

Received by:

Printed Name:

Company:

Date:

Time:

Relinquished by (Signature):

Printed Name:

Company:

Date:

Time:

Received by: N Harrington

Printed Name: D Harrington

Company: STL-SF

Date: 7/10/02

Time: 1640

Method of Shipment: drop-off to lab.

Laboratory Comments and Log No.:

7.7°C

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-[illegible]4141

2002-07-0202

Chain-of Custody Record

016258

Date: 7/10/2002 | Page 2 of 2

Project No.: 277C.005

Samplers (Signature:)
Brenda Mullvad
Sarah McCarron

Date	Time	Sample Number
7/10/02	1115	SRB-103-11.0
7/10/02	1120	SRB-103-14.0
7/10/02	1125	SRB-103-17.0

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup						Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
7/10/02	1115	SRB-103-11.0															X	S			X	1	6"x 1 5/8" metal sleeves
7/10/02	1120	SRB-103-14.0															X	S			X	1	
7/10/02	1125	SRB-103-17.0															X	S			X	1	

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rome

Total No. of Containers: 18 total | 3

Relinquished by (Signature):	Date: 7/10/02	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment: drop off to lab
Printed Name: Brenda J. Mullvad	Time: 1600	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix Consultants		Company:		Company:		
Received by:	Date:	Received by:	Date:	Received by: D. Harrington	Date: 7/10/02	
Printed Name:	Time:	Printed Name:	Time:	Printed Name: D. Harrington	Time: 1640	
Company:		Company:		Company: STL-SF		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

67387

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 07 - 0202

Checklist completed by: (initials) DSH Date: 07 / 11 /02

Courier name: ☐ STL San Francisco ☒ Client _____

Custody seals intact on shipping container/samples	Yes ✓	No ___	Not Present ___
Chain of custody present?	Yes ✓	No ___	
Chain of custody signed when relinquished and received?	Yes ✓	No ___	
Chain of custody agrees with sample labels?	Yes ✓	No ___	
Samples in proper container/bottle?	Yes ✓	No ___	
Sample containers intact?	Yes ✓	No ___	
Sufficient sample volume for indicated test?	Yes ✓	No ___	
All samples received within holding time?	Yes ✓	No ___	
Container/Temp Blank temperature in compliance (4^0 C ± 2)?	Temp: 7.7 °C	Yes ___	No ✓ (1)
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes ___	No ___

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - **pH acceptable upon receipt?** ☐ Yes ☐ No

☐ **pH adjusted**– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: (1) plenty of ice

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ____/____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

Submission #: 2002-06-0507 .Date: July 3, 2002

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com
CA DHS ELAP#2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn: Charles Rome

Attached is our report for your samples received on Wednesday June 26, 2002
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 10, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour
Project Manager

Submission #: 2002-06-0507

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/26/2002 18:10

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-100-5.0	06/26/2002 16:40	Soil	3
SRB-100-7.5	06/26/2002 16:50	Soil	6

Submission #: 2002-06-0507

Fuel Oxygenates by 8260B

Geomatrix Consultants

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Received: 06/26/2002 18:10

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CA DHS ELAP# 2496

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**SRB-100-5.0**	Lab ID:	2002-06-0507 - 3
Sampled:	06/26/2002 16:40	Extracted:	7/1/2002 20:15
Matrix:	Soil	QC Batch#:	2002/07/01-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	07/01/2002 20:15	
Benzene	ND	5.0	ug/Kg	1.00	07/01/2002 20:15	
Toluene	27	5.0	ug/Kg	1.00	07/01/2002 20:15	
Ethyl benzene	ND	5.0	ug/Kg	1.00	07/01/2002 20:15	
Total xylenes	ND	5.0	ug/Kg	1.00	07/01/2002 20:15	
Surrogates(s)						
1,2-Dichloroethane-d4	139.4	70-121	%	1.00	07/01/2002 20:15	sh
Toluene-d8	100.0	81-117	%	1.00	07/01/2002 20:15	

Submission #: 2002-06-0507

Fuel Oxygenates by 8260B

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B
Sample ID: **SRB-100-7.5**
Lab ID: 2002-06-0507 - 6
Sampled: 06/26/2002 16:50
Extracted: 7/1/2002 20:37
Matrix: Soil
QC Batch#: 2002/07/01-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	07/01/2002 20:37	
Benzene	ND	5.0	ug/Kg	1.00	07/01/2002 20:37	
Toluene	42	5.0	ug/Kg	1.00	07/01/2002 20:37	
Ethyl benzene	ND	5.0	ug/Kg	1.00	07/01/2002 20:37	
Total xylenes	ND	5.0	ug/Kg	1.00	07/01/2002 20:37	
Surrogates(s)						
1,2-Dichloroethane-d4	153.7	70-121	%	1.00	07/01/2002 20:37	sh
Toluene-d8	84.7	81-117	%	1.00	07/01/2002 20:37	

Submission #: 2002-06-0507

Fuel Oxygenates by 8260B

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Project: 2770.005

Received: 06/26/2002 18:10

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/07/01-02.27-004

Soil

Test(s): 8260B
QC Batch # 2002/07/01-02.27
Date Extracted: 07/01/2002 14:49

Compound	Conc.	RL	Unit	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	07/01/2002 14:49	
Benzene	ND	5.0	ug/Kg	07/01/2002 14:49	
Toluene	ND	5.0	ug/Kg	07/01/2002 14:49	
Ethyl benzene	ND	5.0	ug/Kg	07/01/2002 14:49	
Total xylenes	ND	5.0	ug/Kg	07/01/2002 14:49	
Surrogates(s)					
1,2-Dichloroethane-d4	108.2	70-121	%	07/01/2002 14:49	
Toluene-d8	101.2	81-117	%	07/01/2002 14:49	

Submission #: 2002-06-0507

Fuel Oxygenates by 8260B

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Soil** **QC Batch # 2002/07/01-02.27**

LCS 2002/07/01-02.27-002 Extracted: 07/01/2002 Analyzed: 07/01/2002 14:04

LCSD 2002/07/01-02.27-003 Extracted: 07/01/2002 Analyzed: 07/01/2002 14:26

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	47.9	50.9	50.0	95.8	101.8	6.1	69-129	20		
Toluene	50.2	53.9	50.0	100.4	107.8	7.1	70-130	20		
Methyl tert-butyl ether (MTBE)	41.1	45.8	50.0	82.2	91.6	10.8	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	530	547	500	106.0	109.4		70-121	0		
Toluene-d8	514	509	500	102.8	101.8		81-117	0		

Submission #: 2002-06-0507

Fuel Oxygenates by 8260B

Geomatrix Consultants

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2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/26/2002 18:10

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

sh

Surrogate recovery was higher than QC limit due to matrix interference.

Submission #: 2002-06-0507

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
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Phone: (510) 663-4100 Fax: (510) 663-4141

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-99-20.0	06/26/2002 15:50	Soil	7

Submission #: 2002-06-0507

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-99-20.0**
Lab ID: 2002-06-0507 - 7

Sampled: 06/26/2002 15:50
Extracted: 7/2/2002 16:27

Matrix: Soil
QC Batch#: 2002/07/02-02.27

Analysis Flag: lrn (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Benzene	ND	500	ug/Kg	200.00	07/02/2002 16:27	
Toluene	ND	500	ug/Kg	1.00	07/02/2002 16:27	
Ethyl benzene	ND	500	ug/Kg	1.00	07/02/2002 16:27	
Total xylenes	ND	500	ug/Kg	200.00	07/02/2002 16:27	
Methyl tert-butyl ether (MTBE)	ND	500	ug/Kg	200.00	07/02/2002 16:27	
Surrogates(s)						
1,2-Dichloroethane-d4	102.0	70-121	%	200.00	07/02/2002 16:27	
Toluene-d8	110.5	81-117	%	200.00	07/02/2002 16:27	

Submission #: 2002-06-0507

Gas/BTEXFuel Oxygenates by 8260B (High Level)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/07/02-02.27-016

Soil

Test(s): 8260B
QC Batch # 2002/07/02-02.27
Date Extracted: 07/02/2002 15:58

Compound	Conc.	RL	Unit	Analyzed	Flag
Benzene	ND	500	ug/Kg	07/02/2002 15:58	
Toluene	ND	500	ug/Kg	07/02/2002 15:58	
Ethyl benzene	ND	500	ug/Kg	07/02/2002 15:58	
Total xylenes	ND	500	ug/Kg	07/02/2002 15:58	
Methyl tert-butyl ether (MTBE)	ND	500	ug/Kg	07/02/2002 15:58	
Surrogates(s)					
1,2-Dichloroethane-d4	94.0	70-121	%	07/02/2002 15:58	
Toluene-d8	97.0	81-117	%	07/02/2002 15:58	

Submission #: 2002-06-0507

Gas/BTEXFuel Oxygenates by 8260B (High Level)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2002/07/02-02.27**

LCS 2002/07/02-02.27-015 Extracted: 07/02/2002 Analyzed: 07/02/2002 15:29

LCSD 2002/07/02-02.27-013 Extracted: 07/02/2002 Analyzed: 07/02/2002 14:33

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	47.0	46.1	50.0	94.0	92.2	1.9	69-129	20		
Toluene	49.0	47.5	50.0	98.0	95.0	3.1	70-130	20		
Methyl tert-butyl ether (MTBE)	37.2	37.1	50.0	74.4	74.2	0.3	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	225	222	250	90.0	88.8		70-121			
Toluene-d8	251	243	250	100.4	97.2		81-117			

Submission #: 2002-06-0507

Gas/BTEXFuel Oxygenates by 8260B (High Level)

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Project: 2770.005

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CA DHS ELAP# 2496

Legend and Notes

Analysis Flag

lm

Reporting limits raised due to high level of non-target analyte materials.

Submission #: 2002-06-0507

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
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Project: 2770.005

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-100-5.0	06/26/2002 16:40	Soil	3
SRB-100-7.5	06/26/2002 16:50	Soil	6
SRB-99-20.0	06/26/2002 15:50	Soil	7

Submission #: 2002-06-0507

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants
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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: SRB-100-5.0
Sampled: 06/26/2002 16:40
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0507 - 3
Extracted: 6/28/2002 05:20
QC Batch#: 2002/06/28-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	130	10	mg/Kg	10.00	07/04/2002 04:34	ndp
Motor Oil	1200	500	mg/Kg	10.00	07/04/2002 04:34	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	10.00	07/04/2002 04:34	sd

Submission #: 2002-06-0507

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-100-7.5**
Sampled: 06/26/2002 16:50
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0507 - 6
Extracted: 6/28/2002 05:20
QC Batch#: 2002/06/28-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1800	50	mg/Kg	50.00	07/09/2002 10:10	ndp
Motor Oil	5100	2500	mg/Kg	50.00	07/09/2002 10:10	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	50.00	07/09/2002 10:10	sd

Submission #: 2002-06-0507

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Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-99-20.0**
Sampled: 06/26/2002 15:50
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0507 - 7
Extracted: 6/28/2002 05:20
QC Batch#: 2002/06/28-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1300	10	mg/Kg	10.00	07/05/2002 11:57	ndp
Motor Oil	1300	500	mg/Kg	10.00	07/05/2002 11:57	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	10.00	07/05/2002 11:57	sd

Submission #: 2002-06-0507

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank
MB: 2002/06/28-01.10-001

Soil

Test(s): 8015M
QC Batch # 2002/06/28-01.10
Date Extracted: 06/28/2002 05:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/28/2002 12:22	
Motor Oil	ND	50	mg/Kg	06/28/2002 12:22	
Surrogates(s)					
o-Terphenyl	92.6	60-130	%	06/28/2002 12:22	

Submission #: 2002-06-0507

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/28-01.10**

LCS 2002/06/28-01.10-002 Extracted: 06/28/2002 Analyzed: 06/28/2002 12:56
LCSD 2002/06/28-01.10-003 Extracted: 06/28/2002 Analyzed: 06/28/2002 13:36

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	32.6	37.6	41.7	78.2	90.2	14.3	60-130	25		
Surrogates(s)										
o-Terphenyl	18.8	21.0	20.0	94.0	104.8		60-130	0		

Submission #: 2002-06-0507

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.

Submission #: 2002-06-0507

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-100-5.0	06/26/2002 16:40	Soil	3
SRB-100-7.5	06/26/2002 16:50	Soil	6
SRB-99-20.0	06/26/2002 15:50	Soil	7

Submission #: 2002-06-0507

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-100-5.0**
Lab ID: 2002-06-0507 - 3
Sampled: 06/26/2002 16:40
Extracted: 6/28/2002 05:27
Matrix: Soil
QC Batch#: 2002/06/28-01.40
Analysis Flag: lrn (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Acenaphthylene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Acenaphthene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Fluorene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Phenanthrene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Anthracene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Fluoranthene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Pyrene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Benzo(a)anthracene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Chrysene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Benzo(b)fluoranthene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Benzo(k)fluoranthene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Benzo(a)pyrene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Indeno(1,2,3-c,d)pyrene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Dibenzo(a,h)anthracene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Benzo(g,h,i)perylene	ND	50	ug/Kg	10.00	07/02/2002 11:45	
Surrogates(s)						
2-Fluorobiphenyl	89.5	30-115	%	10.00	07/02/2002 11:45	
p-Terphenyl-d14	137.8	18-137	%	10.00	07/02/2002 11:45	sh

Submission #: 2002-06-0507

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **SRB-100-7.5**
Lab ID: 2002-06-0507 - 6

Sampled: 06/26/2002 16:50
Extracted: 6/28/2002 05:27

Matrix: Soil
QC Batch#: 2002/06/28-01.40

Analysis Flag: Irn (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Acenaphthylene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Acenaphthene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Fluorene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Phenanthrene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Anthracene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Fluoranthene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Pyrene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Benzo(a)anthracene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Chrysene	110	50	ug/Kg	10.00	07/02/2002 12:12	
Benzo(b)fluoranthene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Benzo(k)fluoranthene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Benzo(a)pyrene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Indeno(1,2,3-c,d)pyrene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Dibenzo(a,h)anthracene	ND	50	ug/Kg	10.00	07/02/2002 12:12	
Benzo(g,h,i)perylene	60	50	ug/Kg	10.00	07/02/2002 12:12	
Surrogates(s)						
2-Fluorobiphenyl	88.4	30-115	%	10.00	07/02/2002 12:12	
p-Terphenyl-d14	120.2	18-137	%	10.00	07/02/2002 12:12	

Submission #: 2002-06-0507

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-99-20.0**
Lab ID: 2002-06-0507 - 7
Sampled: 06/26/2002 15:50
Extracted: 6/28/2002 05:27
Matrix: Soil
QC Batch#: 2002/06/28-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Acenaphthylene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Acenaphthene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Fluorene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Phenanthrene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Anthracene	22	10	ug/Kg	2.00	07/02/2002 10:52	
Fluoranthene	11	10	ug/Kg	2.00	07/02/2002 10:52	
Pyrene	53	10	ug/Kg	2.00	07/02/2002 10:52	
Benzo(a)anthracene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Chrysene	59	10	ug/Kg	2.00	07/02/2002 10:52	
Benzo(b)fluoranthene	11	10	ug/Kg	2.00	07/02/2002 10:52	
Benzo(k)fluoranthene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Benzo(a)pyrene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Indeno(1,2,3-c,d)pyrene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Dibenzo(a,h)anthracene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Benzo(g,h,i)perylene	ND	10	ug/Kg	2.00	07/02/2002 10:52	
Surrogates(s)						
2-Fluorobiphenyl	31.1	30-115	%	2.00	07/02/2002 10:52	
p-Terphenyl-d14	43.6	18-137	%	2.00	07/02/2002 10:52	

Submission #: 2002-06-0507

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants
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Project: 2770.005

Received: 06/26/2002 18:10

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM
Method Blank
MB: 2002/06/28-01.40-003

Soil

Test(s): 8270C-SIM
QC Batch # 2002/06/28-01.40
Date Extracted: 06/28/2002 05:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	07/01/2002 11:18	
Acenaphthylene	ND	5.0	ug/Kg	07/01/2002 11:18	
Acenaphthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Fluorene	ND	5.0	ug/Kg	07/01/2002 11:18	
Phenanthrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(a)anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Chrysene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(a)pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	07/01/2002 11:18	
Surrogates(s)					
2-Fluorobiphenyl	64.8	30-115	%	07/01/2002 11:18	
p-Terphenyl-d14	88.0	18-137	%	07/01/2002 11:18	

Submission #: 2002-06-0507

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/26/2002 18:10

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Laboratory Control Spike **Soil** **QC Batch # 2002/06/28-01.40**

LCS 2002/06/28-01.40-004 Extracted: 06/28/2002 Analyzed: 07/01/2002 11:45

LCSD 2002/06/28-01.40-005 Extracted: 06/28/2002 Analyzed: 07/01/2002 12:12

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Acenaphthene	229	259	332	69.0	77.8	12.0	50-150	30		
Phenanthrene	240	272	332	72.3	81.7	12.2	50-150	30		
Pyrene	290	324	332	87.3	97.3	10.8	50-150	30		
Chrysene	248	280	332	74.7	84.1	11.8	50-150	30		
Benzo(a)pyrene	204	245	332	61.4	73.6	18.1	50-150	30		
Surrogates(s)										
2-Fluorobiphenyl	5.83	7.01	10	58.3	70.1		30-115			
p-Terphenyl-d14	8.52	9.47	10	85.2	94.7		18-137			

Submission #: 2002-06-0507

PNA analysis by 8270C/SIM GC/MS

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Project: 2770.005

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CA DHS ELAP# 2496

Legend and Notes

Analysis Flag

lrn

Reporting limits raised due to high level of non-target analyte materials.

Result Flag

sh

Surrogate recovery was higher than QC limit due to matrix interference.

Submission #: 2002-06-0507

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/26/2002 18:10

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www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-100-5.0	06/26/2002 16:40	Soil	3
SRB-100-7.5	06/26/2002 16:50	Soil	6
SRB-99-20.0	06/26/2002 15:50	Soil	7

Submission #: 2002-06-0507

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Charles Rome
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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/26/2002 18:10

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-100-5.0**
Lab ID: 2002-06-0507 - 3
Sampled: 06/26/2002 16:40
Extracted: 6/28/2002 05:23
Matrix: Soil
QC Batch#: 2002/06/28-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	120	10	mg/Kg	10.00	07/01/2002 10:19	ndp
Motor Oil	930	500	mg/Kg	10.00	07/01/2002 10:19	
Bunker-C	ND	500	mg/Kg	10.00	07/01/2002 10:19	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	10.00	07/01/2002 10:19	sd

Submission #: 2002-06-0507

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Project: 2770.005

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-100-7.5**
Sampled: 06/26/2002 16:50
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0507 - 6
Extracted: 6/28/2002 05:23
QC Batch#: 2002/06/28-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1700	50	mg/Kg	50.00	07/09/2002 22:40	ndp
Motor Oil	3900	2500	mg/Kg	50.00	07/09/2002 22:40	
Bunker-C	ND	2500	mg/Kg	50.00	07/09/2002 22:40	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	50.00	07/09/2002 22:40	sd

Submission #: 2002-06-0507

TEPH w/ Silica Gel Clean-up

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-99-20.0**
Lab ID: 2002-06-0507 - 7
Sampled: 06/26/2002 15:50
Extracted: 6/28/2002 05:23
Matrix: Soil
QC Batch#: 2002/06/28-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1100	10	mg/Kg	10.00	07/01/2002 09:42	ndp
Motor Oil	940	500	mg/Kg	10.00	07/01/2002 09:42	
Bunker-C	ND	500	mg/Kg	10.00	07/01/2002 09:42	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	10.00	07/01/2002 09:42	sd

Submission #: 2002-06-0507

TEPH w/ Silica Gel Clean-up

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s):. 3550/8015M
Method Blank
MB: 2002/06/28-02.10-003

Soil

Test(s): 8015M
QC Batch # 2002/06/28-02.10
Date Extracted: 06/28/2002 05:23

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/28/2002 12:59	
Motor Oil	ND	50	mg/Kg	06/28/2002 12:59	
Bunker-C	ND	50	mg/Kg	06/28/2002 12:59	
Surrogates(s)					
o-Terphenyl	78.7	60-130	%	06/28/2002 12:59	

Submission #: 2002-06-0507

TEPH w/ Silica Gel Clean-up

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Project: 2770.005

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/28-02.10**

LCS 2002/06/28-02.10-001 Extracted: 06/28/2002 Analyzed: 07/01/2002 05:58
LCSD 2002/06/28-02.10-002 Extracted: 06/28/2002 Analyzed: 07/01/2002 06:35

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	35.1	35.9	41.7	84.2	86.1	2.2	60-130	25		
Surrogates(s)										
o-Terphenyl	19.9	20.7	20.0	99.4	103.5		60-130	0		

Submission #: 2002-06-0507

TEPH w/ Silica Gel Clean-up

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Project: 2770.005

Received: 06/26/2002 18:10

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www.chromalab.com

CA DHS ELAP# 2496

Legend and Notes

Result Flag

ndp — Hydrocarbon reported does not match the pattern of our Diesel standard

sd — Surrogate recovery not reportable due to required dilution.

2002.06-0507

67/79

Chain-of Custody Record

016329

Date: 6/25/02 | Page: 1 of 1

Project No.: 2770.005

Samplers (Signature:)

Date	Time	Sample Number
6/25/02	1705	SRB-100-17.0
2	1720	SRB-100-20.0
3	1640	SRB-100-5.0
4	1655	SRB-100-11.0
5	1700	SRB-100-14.0
6	1650	SRB-100-7.5
7	1550	SRB-99-20.0
8	1600	SRB-99-23.0

ANALYSES

EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 BTEX 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup (3630)	Hold	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers
										X	S			✓	1
										X	S			✓	1
										X	S			✓	1
										X	S			✓	1
										X	S			✓	1
										X	S			✓	1
										X	S			✓	1
										X	S			✓	1

REMARKS

Additional Comments

6" x 1 5/8" metal sleeve

6.0°C

Laboratory: STL-San Francisco

Turnaround Time: Standard

Results to: C. Rowe

Total No. of Containers: 8

Relinquished by (Signature):	Date: 6/25/02	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date: 6/26/02	Method of Shipment: Lab courier		
Printed Name: Brendan J Mulholland	Time: 2033	Printed Name:	Time:	Printed Name:	Time: 1810	Laboratory Comments and Log No.:		
Company: Geomatrix		Company:		Company: STL-SF				
Received by:	Date: 6/26/02	Received by:	Date:	Received by:	Date: 6/26/02			
Printed Name:	Time: 1150	Printed Name:	Time:	Printed Name:	Time: 1810			
Company: STL-SF		Company:		Company: STL-SF				

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 06 - 0507

Checklist completed by: (initials) CR Date: 06/27/02

Courier name: ☑ STL San Francisco ☐ Client _____

Custody seals intact on shipping container/samples	Yes ____	No ____	Not Present ✓
Chain of custody present?	Yes ✓	No ____	
Chain of custody signed when relinquished and received?	Yes ✓	No ____	
Chain of custody agrees with sample labels?	Yes ____	No ✓	
Samples in proper container/bottle?	Yes ✓	No ____	
Sample containers intact?	Yes ✓	No ____	
Sufficient sample volume for indicated test?	Yes ✓	No ____	
All samples received within holding time?	Yes ✓	No ____	
Container/Temp Blank temperature in compliance (4^{o} C ± 2)?	Temp 1.0 °C	Yes ✓	No ____
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes ____	No ____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - pH acceptable upon receipt? ☐ Yes ☐ No

☐ pH adjusted– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: Did not receive SRB-100-14.0

Rec'd sample not listed on COC: SRB-100-17.0

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ____/____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

Submission#: 2002-07-0480

July 31, 2002

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Ln
Pleasanton CA 94566

Tel.: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn.: Charles Rome
Project#: 2770.005

Attached is our report for your samples received on 07/24/2002 17:33
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 09/07/2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour
Project Manager

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/24/2002 17:33

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www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
PL-01-0.5	07/23/2002 09:40	Soil	1
PL-01-1.5	07/23/2002 09:45	Soil	2
PL-01-3.0	07/23/2002 09:55	Soil	3
PL-03-0.5	07/23/2002 10:00	Soil	4
PL-03-1.5	07/23/2002 10:10	Soil	5
PL-03-3.0	07/23/2002 10:15	Soil	6
PL-06-0.5	07/23/2002 10:30	Soil	7
PL-06-1.5	07/23/2002 10:40	Soil	8
PL-06-3.0	07/23/2002 10:50	Soil	9
PL-08-0.5	07/23/2002 11:00	Soil	10
PL-08-1.5	07/23/2002 11:10	Soil	11
PL-08-3.0	07/23/2002 11:15	Soil	12
PL-12-0.5	07/23/2002 11:25	Soil	13
PL-12-1.5	07/23/2002 11:30	Soil	14
PL-12-3.0	07/23/2002 11:40	Soil	15

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

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Project: 2770.005

Received: 07/24/2002 17:33

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **PL-01-0.5**
Lab ID: 2002-07-0480 - 1

Sampled: 07/23/2002 09:40
Extracted: 7/29/2002 09:44

Matrix: Soil
QC Batch#: 2002/07/29-02.40

Analysis Flag: sdo (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Acenaphthylene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Acenaphthene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Fluorene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Phenanthrene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Anthracene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Fluoranthene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Pyrene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Benzo(a)anthracene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Chrysene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Benzo(b)fluoranthene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Benzo(k)fluoranthene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Benzo(a)pyrene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Indeno(1,2,3-c,d)pyrene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Dibenzo(a,h)anthracene	ND	130	ug/Kg	25.00	07/29/2002 19:04	
Benzo(g,h,i)perylene	130	130	ug/Kg	25.00	07/29/2002 19:04	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	25.00	07/29/2002 19:04	
p-Terphenyl-d14	NA	18-137	%	25.00	07/29/2002 19:04	

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/24/2002 17:33

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **PL-01-1.5**
Lab ID: 2002-07-0480 - 2
Sampled: 07/23/2002 09:45
Extracted: 7/29/2002 09:44
Matrix: Soil
QC Batch#: 2002/07/29-02.40
Analysis Flag: sdo (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Acenaphthylene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Acenaphthene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Fluorene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Phenanthrene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Anthracene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Fluoranthene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Pyrene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Benzo(a)anthracene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Chrysene	380	250	ug/Kg	50.02	07/31/2002 12:22	
Benzo(b)fluoranthene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Benzo(k)fluoranthene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Benzo(a)pyrene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Indeno(1,2,3-c,d)pyrene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Dibenzo(a,h)anthracene	ND	250	ug/Kg	50.02	07/31/2002 12:22	
Benzo(g,h,i)perylene	550	250	ug/Kg	50.02	07/31/2002 12:22	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	50.02	07/31/2002 12:22	
p-Terphenyl-d14	NA	18-137	%	50.02	07/31/2002 12:22	

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

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Project: 2770.005

Received: 07/24/2002 17:33

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **PL-01-3.0**
Lab ID: 2002-07-0480 - 3

Sampled: 07/23/2002 09:55
Extracted: 7/29/2002 09:44

Matrix: Soil
QC Batch#: 2002/07/29-02.40

Analysis Flag: sdo (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Acenaphthylene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Acenaphthene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Fluorene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Phenanthrene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Anthracene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Pyrene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Benzo(a)anthracene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Chrysene	150	130	ug/Kg	25.00	07/31/2002 10:47	
Benzo(b)fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Benzo(k)fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Benzo(a)pyrene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Indeno(1,2,3-c,d)pyrene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Dibenzo(a,h)anthracene	ND	130	ug/Kg	25.00	07/31/2002 10:47	
Benzo(g,h,i)perylene	250	130	ug/Kg	25.00	07/31/2002 10:47	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	25.00	07/31/2002 10:47	
p-Terphenyl-d14	NA	18-137	%	25.00	07/31/2002 10:47	

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Sample ID: **PL-03-0.5**
Sampled: 07/23/2002 10:00
Matrix: Soil

Test(s): 8270C-SIM
Lab ID: 2002-07-0480 - 4
Extracted: 7/29/2002 09:44
QC Batch#: 2002/07/29-02.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	25	ug/Kg	5.00	07/29/2002 16:23	
Acenaphthylene	ND	25	ug/Kg	5.00	07/29/2002 16:23	
Acenaphthene	31	25	ug/Kg	5.00	07/29/2002 16:23	
Fluorene	47	25	ug/Kg	5.00	07/29/2002 16:23	
Phenanthrene	240	25	ug/Kg	5.00	07/29/2002 16:23	
Anthracene	56	25	ug/Kg	5.00	07/29/2002 16:23	
Fluoranthene	87	25	ug/Kg	5.00	07/29/2002 16:23	
Pyrene	190	25	ug/Kg	5.00	07/29/2002 16:23	
Benzo(a)anthracene	60	25	ug/Kg	5.00	07/29/2002 16:23	
Chrysene	160	25	ug/Kg	5.00	07/29/2002 16:23	
Benzo(b)fluoranthene	84	25	ug/Kg	5.00	07/29/2002 16:23	
Benzo(k)fluoranthene	26	25	ug/Kg	5.00	07/29/2002 16:23	
Benzo(a)pyrene	82	25	ug/Kg	5.00	07/29/2002 16:23	
Indeno(1,2,3-c,d)pyrene	58	25	ug/Kg	5.00	07/29/2002 16:23	
Dibenzo(a,h)anthracene	ND	25	ug/Kg	5.00	07/29/2002 16:23	
Benzo(g,h,i)perylene	130	25	ug/Kg	5.00	07/29/2002 16:23	
Surrogates(s)						
2-Fluorobiphenyl	81.3	30-115	%	5.00	07/29/2002 16:23	
p-Terphenyl-d14	98.4	18-137	%	5.00	07/29/2002 16:23	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **PL-03-1.5**
Lab ID: 2002-07-0480 - 5
Sampled: 07/23/2002 10:10
Extracted: 7/29/2002 09:44
Matrix: Soil
QC Batch#: 2002/07/29-02.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/29/2002 17:44	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/29/2002 17:44	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/29/2002 17:44	
Fluorene	ND	5.0	ug/Kg	1.00	07/29/2002 17:44	
Phenanthrene	11	5.0	ug/Kg	1.00	07/29/2002 17:44	
Anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 17:44	
Fluoranthene	30	5.0	ug/Kg	1.00	07/29/2002 17:44	
Pyrene	32	5.0	ug/Kg	1.00	07/29/2002 17:44	
Benzo(a)anthracene	21	5.0	ug/Kg	1.00	07/29/2002 17:44	
Chrysene	23	5.0	ug/Kg	1.00	07/29/2002 17:44	
Benzo(b)fluoranthene	20	5.0	ug/Kg	1.00	07/29/2002 17:44	
Benzo(k)fluoranthene	18	5.0	ug/Kg	1.00	07/29/2002 17:44	
Benzo(a)pyrene	25	5.0	ug/Kg	1.00	07/29/2002 17:44	
Indeno(1,2,3-c,d)pyrene	13	5.0	ug/Kg	1.00	07/29/2002 17:44	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 17:44	
Benzo(g,h,i)perylene	14	5.0	ug/Kg	1.00	07/29/2002 17:44	
Surrogates(s)						
2-Fluorobiphenyl	83.6	30-115	%	1.00	07/29/2002 17:44	
p-Terphenyl-d14	93.6	18-137	%	1.00	07/29/2002 17:44	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **PL-03-3.0**
Lab ID: 2002-07-0480 - 6
Sampled: 07/23/2002 10:15
Extracted: 7/29/2002 09:44
Matrix: Soil
QC Batch#: 2002/07/29-02.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Fluorene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Fluoranthene	7.2	5.0	ug/Kg	1.00	07/29/2002 17:17	
Pyrene	7.4	5.0	ug/Kg	1.00	07/29/2002 17:17	
Benzo(a)anthracene	5.6	5.0	ug/Kg	1.00	07/29/2002 17:17	
Chrysene	7.0	5.0	ug/Kg	1.00	07/29/2002 17:17	
Benzo(b)fluoranthene	6.7	5.0	ug/Kg	1.00	07/29/2002 17:17	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Benzo(a)pyrene	6.8	5.0	ug/Kg	1.00	07/29/2002 17:17	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 17:17	
Benzo(g,h,i)perylene	6.9	5.0	ug/Kg	1.00	07/29/2002 17:17	
Surrogates(s)						
2-Fluorobiphenyl	62.1	30-115	%	1.00	07/29/2002 17:17	
p-Terphenyl-d14	67.4	18-137	%	1.00	07/29/2002 17:17	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **PL-06-0.5**
Lab ID: 2002-07-0480 - 7

Sampled: 07/23/2002 10:30
Extracted: 7/29/2002 09:44

Matrix: Soil
QC Batch#: 2002/07/29-02.40

Analysis Flag: Irn (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Acenaphthylene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Acenaphthene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Fluorene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Phenanthrene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Anthracene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Fluoranthene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Pyrene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Benzo(a)anthracene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Chrysene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Benzo(b)fluoranthene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Benzo(k)fluoranthene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Benzo(a)pyrene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Indeno(1,2,3-c,d)pyrene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Dibenzo(a,h)anthracene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Benzo(g,h,i)perylene	ND	50	ug/Kg	10.00	07/29/2002 18:37	
Surrogates(s)						
2-Fluorobiphenyl	90.5	30-115	%	10.00	07/29/2002 18:37	
p-Terphenyl-d14	107.2	18-137	%	10.00	07/29/2002 18:37	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **PL-06-1.5**
Lab ID: 2002-07-0480 - 8
Sampled: 07/23/2002 10:40
Extracted: 7/29/2002 09:44
Matrix: Soil
QC Batch#: 2002/07/29-02.40
Analysis Flag: lrn,sdo (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Acenaphthylene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Acenaphthene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Fluorene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Phenanthrene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Anthracene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Pyrene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Benzo(a)anthracene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Chrysene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Benzo(b)fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Benzo(k)fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Benzo(a)pyrene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Indeno(1,2,3-c,d)pyrene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Dibenzo(a,h)anthracene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Benzo(g,h,i)perylene	ND	130	ug/Kg	25.00	07/31/2002 11:14	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	25.00	07/31/2002 11:14	
p-Terphenyl-d14	NA	18-137	%	25.00	07/31/2002 11:14	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **PL-06-3.0**
Lab ID: 2002-07-0480 - 9

Sampled: 07/23/2002 10:50
Extracted: 7/29/2002 09:44

Matrix: Soil
QC Batch#: 2002/07/29-02.40

Analysis Flag: lrn,sdo (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Acenaphthylene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Acenaphthene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Fluorene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Phenanthrene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Anthracene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Fluoranthene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Pyrene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Benzo(a)anthracene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Chrysene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Benzo(b)fluoranthene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Benzo(k)fluoranthene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Benzo(a)pyrene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Indeno(1,2,3-c,d)pyrene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Dibenzo(a,h)anthracene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Benzo(g,h,i)perylene	ND	130	ug/Kg	25.00	07/29/2002 20:50	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	25.00	07/29/2002 20:50	
p-Terphenyl-d14	NA	18-137	%	25.00	07/29/2002 20:50	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Sample ID: **PL-08-0.5**
Sampled: 07/23/2002 11:00
Matrix: Soil

Test(s): 8270C-SIM
Lab ID: 2002-07-0480 - 10
Extracted: 7/29/2002 09:44
QC Batch#: 2002/07/29-02.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Fluorene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Phenanthrene	12	5.0	ug/Kg	1.00	07/29/2002 15:57	
Anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Pyrene	5.2	5.0	ug/Kg	1.00	07/29/2002 15:57	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Chrysene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/29/2002 15:57	
Surrogates(s)						
2-Fluorobiphenyl	55.5	30-115	%	1.00	07/29/2002 15:57	
p-Terphenyl-d14	66.8	18-137	%	1.00	07/29/2002 15:57	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **PL-08-1.5**
Lab ID: 2002-07-0480 - 11
Sampled: 07/23/2002 11:10
Extracted: 7/29/2002 09:44
Matrix: Soil
QC Batch#: 2002/07/29-02.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Fluorene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Phenanthrene	22	5.0	ug/Kg	1.00	07/29/2002 16:50	
Anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Pyrene	11	5.0	ug/Kg	1.00	07/29/2002 16:50	
Benzo(a)anthracene	7.1	5.0	ug/Kg	1.00	07/29/2002 16:50	
Chrysene	8.7	5.0	ug/Kg	1.00	07/29/2002 16:50	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/29/2002 16:50	
Surrogates(s)						
2-Fluorobiphenyl	56.9	30-115	%	1.00	07/29/2002 16:50	
p-Terphenyl-d14	63.7	18-137	%	1.00	07/29/2002 16:50	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Sample ID: **PL-08-3.0**
Sampled: 07/23/2002 11:15
Matrix: Soil

Test(s): 8270C-SIM
Lab ID: 2002-07-0480 - 12
Extracted: 7/29/2002 09:44
QC Batch#: 2002/07/29-02.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/29/2002 18:10	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/29/2002 18:10	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/29/2002 18:10	
Fluorene	ND	5.0	ug/Kg	1.00	07/29/2002 18:10	
Phenanthrene	12	5.0	ug/Kg	1.00	07/29/2002 18:10	
Anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 18:10	
Fluoranthene	8.3	5.0	ug/Kg	1.00	07/29/2002 18:10	
Pyrene	12	5.0	ug/Kg	1.00	07/29/2002 18:10	
Benzo(a)anthracene	6.4	5.0	ug/Kg	1.00	07/29/2002 18:10	
Chrysene	9.5	5.0	ug/Kg	1.00	07/29/2002 18:10	
Benzo(b)fluoranthene	11	5.0	ug/Kg	1.00	07/29/2002 18:10	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/29/2002 18:10	
Benzo(a)pyrene	5.0	5.0	ug/Kg	1.00	07/29/2002 18:10	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/29/2002 18:10	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/29/2002 18:10	
Benzo(g,h,i)perylene	5.1	5.0	ug/Kg	1.00	07/29/2002 18:10	
Surrogates(s)						
2-Fluorobiphenyl	68.2	30-115	%	1.00	07/29/2002 18:10	
p-Terphenyl-d14	87.1	18-137	%	1.00	07/29/2002 18:10	

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

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Project: 2770.005

Received: 07/24/2002 17:33

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **PL-12-0.5**
Lab ID: 2002-07-0480 - 13
Sampled: 07/23/2002 11:25
Extracted: 7/29/2002 09:44
Matrix: Soil
QC Batch#: 2002/07/29-02.40
Analysis Flag: lrn,sdo (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Acenaphthylene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Acenaphthene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Fluorene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Phenanthrene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Anthracene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Pyrene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Benzo(a)anthracene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Chrysene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Benzo(b)fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Benzo(k)fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Benzo(a)pyrene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Indeno(1,2,3-c,d)pyrene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Dibenzo(a,h)anthracene	ND	130	ug/Kg	25.00	07/31/2002 11:40	
Benzo(g,h,i)perylene	170	130	ug/Kg	25.00	07/31/2002 11:40	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	25.00	07/31/2002 11:40	
p-Terphenyl-d14	NA	18-137	%	25.00	07/31/2002 11:40	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **PL-12-1.5**
Lab ID: 2002-07-0480 - 14

Sampled: 07/23/2002 11:30
Extracted: 7/29/2002 09:44

Matrix: Soil
QC Batch#: 2002/07/29-02.40

Analysis Flag: lrn,sdo (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Acenaphthylene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Acenaphthene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Fluorene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Phenanthrene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Anthracene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Pyrene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Benzo(a)anthracene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Chrysene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Benzo(b)fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Benzo(k)fluoranthene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Benzo(a)pyrene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Indeno(1,2,3-c,d)pyrene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Dibenzo(a,h)anthracene	ND	130	ug/Kg	25.00	07/31/2002 10:20	
Benzo(g,h,i)perylene	160	130	ug/Kg	25.00	07/31/2002 10:20	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	25.00	07/31/2002 10:20	
p-Terphenyl-d14	NA	18-137	%	25.00	07/31/2002 10:20	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **PL-12-3.0**
Lab ID: 2002-07-0480 - 15

Sampled: 07/23/2002 11:40
Extracted: 7/29/2002 09:44

Matrix: Soil
QC Batch#: 2002/07/29-02.40

Analysis Flag: sdo (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Acenaphthylene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Acenaphthene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Fluorene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Phenanthrene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Anthracene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Fluoranthene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Pyrene	480	130	ug/Kg	25.00	07/29/2002 20:24	
Benzo(a)anthracene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Chrysene	470	130	ug/Kg	25.00	07/29/2002 20:24	
Benzo(b)fluoranthene	180	130	ug/Kg	25.00	07/29/2002 20:24	
Benzo(k)fluoranthene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Benzo(a)pyrene	290	130	ug/Kg	25.00	07/29/2002 20:24	
Indeno(1,2,3-c,d)pyrene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Dibenzo(a,h)anthracene	ND	130	ug/Kg	25.00	07/29/2002 20:24	
Benzo(g,h,i)perylene	200	130	ug/Kg	25.00	07/29/2002 20:24	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	25.00	07/29/2002 20:24	
p-Terphenyl-d14	NA	18-137	%	25.00	07/29/2002 20:24	

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM
Method Blank
MB: 2002/07/29-02.40-006

Soil

Test(s): 8270C-SIM
QC Batch # 2002/07/29-02.40
Date Extracted: 07/29/2002 09:44

Compound	Conc.	RL	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	07/29/2002 11:28	
Acenaphthylene	ND	5.0	ug/Kg	07/29/2002 11:28	
Acenaphthene	ND	5.0	ug/Kg	07/29/2002 11:28	
Fluorene	ND	5.0	ug/Kg	07/29/2002 11:28	
Phenanthrene	ND	5.0	ug/Kg	07/29/2002 11:28	
Anthracene	ND	5.0	ug/Kg	07/29/2002 11:28	
Fluoranthene	ND	5.0	ug/Kg	07/29/2002 11:28	
Pyrene	ND	5.0	ug/Kg	07/29/2002 11:28	
Benzo(a)anthracene	ND	5.0	ug/Kg	07/29/2002 11:28	
Chrysene	ND	5.0	ug/Kg	07/29/2002 11:28	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	07/29/2002 11:28	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	07/29/2002 11:28	
Benzo(a)pyrene	ND	5.0	ug/Kg	07/29/2002 11:28	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	07/29/2002 11:28	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	07/29/2002 11:28	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	07/29/2002 11:28	
Surrogates(s)					
2-Fluorobiphenyl	69.7	30-115	%	07/29/2002 11:28	
p-Terphenyl-d14	74.0	18-137	%	07/29/2002 11:28	

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Laboratory Control Spike **Soil** **QC Batch # 2002/07/29-02.40**

LCS 2002/07/29-02.40-007 Extracted: 07/29/2002 Analyzed: 07/29/2002 11:55
LCSD 2002/07/29-02.40-008 Extracted: 07/29/2002 Analyzed: 07/29/2002 12:22

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Acenaphthene	291	276	333	87.4	82.9	5.3	50-150	30		
Phenanthrene	302	286	333	90.7	85.9	5.4	50-150	30		
Pyrene	286	267	333	85.9	80.2	6.9	50-150	30		
Chrysene	297	287	333	89.2	86.2	3.4	50-150	30		
Benzo(a)pyrene	291	272	333	87.4	81.7	6.7	50-150	30		
Surrogates(s)										
2-Fluorobiphenyl	6.98	6.62	10	69.8	66.2		30-115			
p-Terphenyl-d14	7.35	7.04	10	73.5	70.4		18-137			

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/07/29-02.40**

PL-01-0.5 >> MS

Lab ID: 2002-07-0480 - 001

MS: 2002/07/29-02.40-017 Extracted: 07/29/2002

Analyzed: 07/29/2002 19:30

Dilution: 5.00

MSD: 2002/07/29-02.40-018 Extracted: 07/29/2002

Analyzed: 07/29/2002 19:57

Dilution: 5.00

Compound	Conc. ug/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	ug/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Acenaphthene	404	390	ND	333	121.3	117.1	3.5	50-150	30		
Phenanthrene	400	388	6.33	333	118.2	114.6	3.1	50-150	30		
Pyrene	488	472	ND	333	146.5	141.7	3.3	50-150	30		
Chrysene	467	445	92.1	333	112.6	106.0	6.0	50-150	30		
Benzo(a)pyrene	494	468	40.9	333	136.1	128.3	5.9	50-150	30		
Surrogate(s)											
2-Fluorobiphenyl	NA	NA		10	0.0	0.0		30-115		sd	sd
p-Terphenyl-d14	NA	NA		10	0.0	0.0		18-137		sd	sd

Submission #: 2002-07-0480

PNA analysis by 8270C/SIM GC/MS

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Project: 2770.005

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CA DHS ELAP# 2496

Legend and Notes

Analysis Flag

lrn

Reporting limits raised due to high level of non-target analyte materials.

sdo

Surrogate(s) diluted out

Result Flag

sd

Surrogate recovery not reportable due to required dilution.

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
PL-01-0.5	07/23/2002 09:40	Soil	1
PL-01-1.5	07/23/2002 09:45	Soil	2
PL-01-3.0	07/23/2002 09:55	Soil	3
PL-03-0.5	07/23/2002 10:00	Soil	4
PL-03-1.5	07/23/2002 10:10	Soil	5
PL-03-3.0	07/23/2002 10:15	Soil	6
PL-06-0.5	07/23/2002 10:30	Soil	7
PL-06-1.5	07/23/2002 10:40	Soil	8
PL-06-3.0	07/23/2002 10:50	Soil	9
PL-08-0.5	07/23/2002 11:00	Soil	10
PL-08-1.5	07/23/2002 11:10	Soil	11
PL-08-3.0	07/23/2002 11:15	Soil	12
PL-12-0.5	07/23/2002 11:25	Soil	13
PL-12-1.5	07/23/2002 11:30	Soil	14
PL-12-3.0	07/23/2002 11:40	Soil	15

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **PL-01-0.5**
Lab ID: 2002-07-0480 - 1
Sampled: 07/23/2002 09:40
Extracted: 7/25/2002 06:01
Matrix: Soil
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1400	100	mg/Kg	100.00	07/26/2002 21:30	ndp
Motor Oil	9100	5000	mg/Kg	100.00	07/26/2002 21:30	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	100.00	07/26/2002 21:30	sd

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA.DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **PL-01-1.5**
Sampled: 07/23/2002 09:45
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0480 - 2
Extracted: 7/25/2002 06:01
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	650	50	mg/Kg	50.00	07/29/2002 10:13	ndp
Motor Oil	4500	2500	mg/Kg	50.00	07/29/2002 10:13	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	50.00	07/29/2002 10:13	sd

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **PL-01-3.0**
Lab ID: 2002-07-0480 - 3
Sampled: 07/23/2002 09:55
Extracted: 7/25/2002 06:01
Matrix: Soil
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	470	20	mg/Kg	20.00	07/29/2002 20:46	ndp
Motor Oil	2800	1000	mg/Kg	20.00	07/29/2002 20:46	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	20.00	07/29/2002 20:46	sd

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **PL-03-0.5**
Sampled: 07/23/2002 10:00
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0480 - 4
Extracted: 7/25/2002 06:01
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	490	20	mg/Kg	20.00	07/29/2002 11:27	ndp
Motor Oil	1900	1000	mg/Kg	20.00	07/29/2002 11:27	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	20.00	07/29/2002 11:27	sd

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **PL-03-1.5**
Lab ID: 2002-07-0480 - 5
Sampled: 07/23/2002 10:10
Extracted: 7/25/2002 06:01
Matrix: Soil
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1.4	1.0	mg/Kg	1.00	07/26/2002 10:11	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/26/2002 10:11	
Surrogates(s)						
o-Terphenyl	85.7	60-130	%	1.00	07/26/2002 10:11	

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/24/2002 17:33

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **PL-03-3.0**
Lab ID: 2002-07-0480 - 6
Sampled: 07/23/2002 10:15
Extracted: 7/25/2002 06:01
Matrix: Soil
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/26/2002 09:12	
Motor Oil	ND	50	mg/Kg	1.00	07/26/2002 09:12	
Surrogates(s)						
o-Terphenyl	88.4	60-130	%	1.00	07/26/2002 09:12	

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **PL-06-0.5**
Sampled: 07/23/2002 10:30
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0480 - 7
Extracted: 7/25/2002 06:01
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	250	10	mg/Kg	10.00	07/30/2002 09:02	ndp
Motor Oil	1200	500	mg/Kg	10.00	07/30/2002 09:02	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	10.00	07/30/2002 09:02	sd

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **PL-06-1.5**
Lab ID: 2002-07-0480 - 8

Sampled: 07/23/2002 10:40
Extracted: 7/25/2002 06:01

Matrix: Soil
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	380	20	mg/Kg	20.00	07/29/2002 10:50	ndp
Motor Oil	1800	1000	mg/Kg	20.00	07/29/2002 10:50	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	20.00	07/29/2002 10:50	sd

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**PL-06-3.0**	Lab ID:	2002-07-0480 - 9
Sampled:	07/23/2002 10:50	Extracted:	7/25/2002 06:01
Matrix:	Soil	QC Batch#:	2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	280	20	mg/Kg	20.00	07/29/2002 11:27	ndp
Motor Oil	1500	1000	mg/Kg	20.00	07/29/2002 11:27	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	20.00	07/29/2002 11:27	sd

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **PL-08-0.5**
Sampled: 07/23/2002 11:00
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0480 - 10
Extracted: 7/25/2002 06:01
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	6.8	1.0	mg/Kg	1.00	07/26/2002 09:30	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/26/2002 09:30	
Surrogates(s)						
o-Terphenyl	87.5	60-130	%	1.00	07/26/2002 09:30	

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **PL-08-1.5**
Lab ID: 2002-07-0480 - 11

Sampled: 07/23/2002 11:10
Extracted: 7/25/2002 06:01

Matrix: Soil
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1.4	1.0	mg/Kg	1.00	07/29/2002 07:44	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/29/2002 07:44	
Surrogates(s)						
o-Terphenyl	92.8	60-130	%	1.00	07/29/2002 07:44	

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **PL-08-3.0**
Sampled: 07/23/2002 11:15
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0480 - 12
Extracted: 7/25/2002 06:01
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1.1	1.0	mg/Kg	1.00	07/26/2002 10:50	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/26/2002 10:50	
Surrogates(s)						
o-Terphenyl	83.6	60-130	%	1.00	07/26/2002 10:50	

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **PL-12-0.5**
Lab ID: 2002-07-0480 - 13
Sampled: 07/23/2002 11:25
Extracted: 7/25/2002 06:01
Matrix: Soil
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	630	50	mg/Kg	50.00	07/29/2002 09:35	ndp
Motor Oil	4100	2500	mg/Kg	50.00	07/29/2002 09:35	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	50.00	07/29/2002 09:35	sd

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **PL-12-1.5**
Lab ID: 2002-07-0480 - 14

Sampled: 07/23/2002 11:30
Extracted: 7/25/2002 06:01

Matrix: Soil
QC Batch#: 2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	610	20	mg/Kg	20.00	07/29/2002 09:10	ndp
Motor Oil	2900	1000	mg/Kg	20.00	07/29/2002 09:10	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	20.00	07/29/2002 09:10	sd

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**PL-12-3.0**	Lab ID:	2002-07-0480 - 15
Sampled:	07/23/2002 11:40	Extracted:	7/25/2002 06:01
Matrix:	Soil	QC Batch#:	2002/07/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1100	20	mg/Kg	20.00	07/30/2002 09:39	ndp
Motor Oil	2900	1000	mg/Kg	20.00	07/30/2002 09:39	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	20.00	07/30/2002 09:39	sd

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank
MB: 2002/07/25-03.10-001

Soil

Test(s): 8015M
QC Batch # 2002/07/25-03.10
Date Extracted: 07/25/2002 06:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	07/25/2002 16:09	
Motor Oil	ND	50	mg/Kg	07/25/2002 16:09	
Surrogates(s)					
o-Terphenyl	88.5	60-130	%	07/25/2002 16:09	

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/07/25-03.10**

LCS 2002/07/25-03.10-002 Extracted: 07/25/2002 Analyzed: 07/25/2002 14:54
LCSD 2002/07/25-03.10-003 Extracted: 07/25/2002 Analyzed: 07/25/2002 15:32

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	33.0	32.6	41.7	79.1	78.2	1.1	60-130	25		
Surrogates(s)										
o-Terphenyl	19.3	19.2	20.0	96.7	96.2		60-130	0		

Submission #: 2002-07-0480

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/07/25-03.10**

PL-01-0.5 >> MS

Lab ID: 2002-07-0480 - 001

MS: 2002/07/25-03.10-004 Extracted: 07/25/2002

Analyzed: 07/26/2002 22:08

Dilution: 100.00

MSD: 2002/07/25-03.10-005 Extracted: 07/25/2002

Analyzed: 07/26/2002 22:45

Dilution: 100.00

Compound	Conc. mg/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	1260	1270	1420	41.4	-386.5	-363.2	-6.2	60-130	25	msl	msl
Surrogate(s)											
o-Terphenyl	NA	NA		20.0	0.0	0.0		60-130	0	sd	sd

Submission #: 2002-07-0480

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

msl

Analyte MS/MSD recoveries were out of QC limits due to Parent sample target analyte concentration exceeding the spiked amount by greater than 4X.

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.

Chain-of Custody Record 2002-27-0480

26218 67404

Date: 7/23/02 Page 1 of 1

Project No.: 2770.005

Samplers (Signature:)

Brendan J. Mullholland

	Date	Time	Sample Number
1	7/23/02	0940	PL-01-0.5
2		0945	PL-01-1.5
3		0955	PL-01-3.0
4		1000	PL-03-0.5
5		1010	PL-03-1.5
6		1015	PL-03-3.0
7		1030	PL-06-0.5
8		1040	PL-06-1.5
9		1050	PL-06-3.0
10		1100	PL-08-0.5
11		1110	PL-08-1.5
12		1115	PL-08-3.0
13		1125	PL-12-0.5
14		1130	PL-12-1.5
15		1140	PL-12-3.0

ANALYSES

Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup	PNAs
PL-01-0.5								X	X		X
PL-01-1.5								X	X		X
PL-01-3.0								X	X		X
PL-03-0.5								X	X		X
PL-03-1.5								X	X		X
PL-03-3.0								X	X		X
PL-06-0.5								X	X		X
PL-06-1.5								X	X		X
PL-06-3.0								X	X		X
PL-08-0.5								X	X		X
PL-08-1.5								X	X		X
PL-08-3.0								X	X		X
PL-12-0.5								X	X		X
PL-12-1.5								X	X		X
PL-12-3.0								X	X		X

REMARKS

Sample Number	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
PL-01-0.5	S			✓	1	
PL-01-1.5	S			✓	1	
PL-01-3.0	S			✓	1	
PL-03-0.5	S			✓	1	
PL-03-1.5	S			✓	1	
PL-03-3.0	S			✓	1	
PL-06-0.5	S			✓	1	
PL-06-1.5	S			✓	1	
PL-06-3.0	S			✓	1	
PL-08-0.5	S			✓	1	
PL-08-1.5	S			✓	1	
PL-08-3.0	S			✓	1	
PL-12-0.5	S			✓	1	
PL-12-1.5	S			✓	1	
PL-12-3.0	S			✓	1	

Laboratory: STL

Turnaround Time: Standard

Results to: C. Rowe

Total No. of Containers: 15

Relinquished by (Signature): Brendan J. Mullholland	Date: 7/23/02	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Printed Name: Brendan J. Mullholland	Time: 19:30	Printed Name:	Time:	Printed Name:	Time:
Company: Geomatrix Consultants		Company:		Company:	
Received by:	Date:	Received by:	Date:	Received by: Denise Harrington	Date: 7/24/02
Printed Name:	Time:	Printed Name:	Time:	Printed Name: D. Harrington	Time: 1733
Company:		Company:		Company: STL - SF	

Method of Shipment: lab courier

Laboratory Comments and Log No.: Cooler rec'd sealed - DSH 5.1°C

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

016278

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 07 - 0480

Checklist completed by: (initials) CR Date: 07/25/02

Courier name: ☒ STL San Francisco ☐ Client _____

Custody seals intact on shipping container/samples	Yes ✓	No ____	Not Present ____
Chain of custody present?	Yes ✓	No ____	
Chain of custody signed when relinquished and received?	Yes ✓	No ____	
Chain of custody agrees with sample labels?	Yes ✓	No ____	
Samples in proper container/bottle?	Yes ✓	No ____	
Sample containers intact?	Yes ✓	No ____	
Sufficient sample volume for indicated test?	Yes ✓	No ____	
All samples received within holding time?	Yes ✓	No ____	
Container/Temp Blank temperature in compliance (4^0 C ± 2)?	Temp: 5.1 °C	Yes ✓	No ____
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes ____	No ____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - **pH acceptable upon receipt?** ☐ Yes ☐ No

☐ **pH adjusted**– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: _____

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ____/____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion: _____

Corrective Action (per PM/Client): _____

Submission #: 2002-06-0442

Date: July 2, 2002

SEVERN TRENT SERVICES

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CA DHS ELAP#2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn: Charles Rome

Attached is our report for your samples received on Monday June 24, 2002
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 8, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour
Project Manager

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/24/2002 16:30

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-76	06/24/2002 12:45	Water	19

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/24/2002 16:30

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CA DHS ELAP# 2496

Prep(s): 3510/8015M
Test(s): 8015M

Sample ID: **SRB-76**
Lab ID: 2002-06-0442 - 19

Sampled: 06/24/2002 12:45
Extracted: 6/26/2002 18:13

Matrix: Water
QC Batch#: 2002/06/26-05.10

Analysis Flag: rl (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	58	ug/L	1.16	07/09/2002 17:43	
Motor Oil	ND	580	ug/L	1.16	07/09/2002 17:43	
Surrogates(s)						
o-Terphenyl	88.9	60-130	%	1.16	07/09/2002 17:43	

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/24/2002 16:30

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M
Method Blank
MB: 2002/06/26-05.10-001

Water

Test(s): 8015M
QC Batch # 2002/06/26-05.10
Date Extracted: 06/26/2002 18:13

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/27/2002 09:00	
Motor Oil	ND	500	ug/L	06/27/2002 09:00	
Surrogates(s)					
o-Terphenyl	96.4	60-130	%	06/27/2002 09:00	

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2002/06/26-05.10**

LCS 2002/06/26-05.10-002 Extracted: 06/26/2002 Analyzed: 06/27/2002 07:46
LCSD 2002/06/26-05.10-003 Extracted: 06/26/2002 Analyzed: 06/27/2002 08:23

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	899	942	1250	71.9	75.4	4.8	60-130	25		
Surrogates(s)										
o-Terphenyl	18.2	19.2	20.0	90.8	96.2		60-130	0		

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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Project: 2770.005

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Legend and Notes

Analysis Flag

rl

Reporting limits raised due to reduced sample size.

Submission #: 2002-06-0442

Fuel Oxygenates by 8260B

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CA DHS ELAP#2496

Geomatrix Consultants	✉ 2101 Webster Street, 12th Floor Oakland, CA 94612
Attn: Charles Rome	Phone: (510) 663-4100 Fax: (510) 663-4141
2770.005	Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SRB-75-2.0	Soil	06/24/2002 13:25	20
SRB-75-5.0	Soil	06/24/2002 13:35	21
SRB-75-19.0	Soil	06/24/2002 14:30	27

Submission #: 2002-06-0442

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Fuel Oxygenates by 8260B

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8260B
Prep Method: 5030B

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CA DHS ELAP#2496

Sample ID:	**SRB-75-2.0**	Lab Sample ID:	2002-06-0442-020
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	06/26/2002 18:36
Sampled:	06/24/2002 13:25	QC-Batch:	2002/06/26-01.27
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/26/2002 18:36	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/26/2002 18:36	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 18:36	
Toluene	31	5.0	ug/Kg	1.00	06/26/2002 18:36	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/26/2002 18:36	
Total xylenes	7.6	5.0	ug/Kg	1.00	06/26/2002 18:36	
Surrogate(s)						
1,2-Dichloroethane-d4	105.6	70-121	%	1.00	06/26/2002 18:36	
Toluene-d8	102.3	81-117	%	1.00	06/26/2002 18:36	

Submission #: 2002-06-0442

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Fuel Oxygenates by 8260B

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8260B
Prep Method: 5030B

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CA DHS ELAP#2496

Sample ID:	**SRB-75-5.0**	Lab Sample ID:	2002-06-0442-021
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	06/26/2002 18:58
Sampled:	06/24/2002 13:35	QC-Batch:	2002/06/26-01.27
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/26/2002 18:58	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/26/2002 18:58	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 18:58	
Toluene	29	5.0	ug/Kg	1.00	06/26/2002 18:58	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/26/2002 18:58	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 18:58	
Surrogate(s)						
1,2-Dichloroethane-d4	103.8	70-121	%	1.00	06/26/2002 18:58	
Toluene-d8	104.7	81-117	%	1.00	06/26/2002 18:58	

Submission #: 2002-06-0442

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CA DHS ELAP#2496

Fuel Oxygenates by 8260B

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8260B
Prep Method: 5030B

Sample ID:	**SRB-75-19.0**	Lab Sample ID:	2002-06-0442-027
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	06/28/2002 12:15
Sampled:	06/24/2002 14:30	QC-Batch:	2002/06/28-01.27
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/28/2002 12:15	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/28/2002 12:15	
Benzene	ND	5.0	ug/Kg	1.00	06/28/2002 12:15	
Toluene	ND	5.0	ug/Kg	1.00	06/28/2002 12:15	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/28/2002 12:15	
Total xylenes	ND	5.0	ug/Kg	1.00	06/28/2002 12:15	
Surrogate(s)						
1,2-Dichloroethane-d4	131.7	70-121	%	1.00	06/28/2002 12:15	sh
Toluene-d8	97.6	81-117	%	1.00	06/28/2002 12:15	

Submission #: 2002-06-0442

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CA DHS ELAP#2496

Fuel Oxygenates by 8260B

Batch QC report

Test Method: 8260B Prep Method: 5030B

Method Blank	**Soil**	**QC Batch # 2002/06/28-01.27**
MB: 2002/06/28-01.27-007		Date Extracted: 06/28/2002 11:25

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/28/2002 11:25	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/28/2002 11:25	
Benzene	ND	5.0	ug/Kg	06/28/2002 11:25	
Toluene	ND	5.0	ug/Kg	06/28/2002 11:25	
Ethyl benzene	ND	5.0	ug/Kg	06/28/2002 11:25	
Total xylenes	ND	5.0	ug/Kg	06/28/2002 11:25	
Surrogate(s)					
1,2-Dichloroethane-d4	104.2	70-121	%	06/28/2002 11:25	
Toluene-d8	101.8	81-117	%	06/28/2002 11:25	

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CA DHS ELAP#2496

Fuel Oxygenates by 8260B

Batch QC report

Test Method: 8260B Prep Method: 5030B

Method Blank	**Soil**	**QC Batch # 2002/06/26-01.27**
MB: 2002/06/26-01.27-007		Date Extracted: 06/26/2002 11:21

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/26/2002 11:21	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzene	ND	5.0	ug/Kg	06/26/2002 11:21	
Toluene	ND	5.0	ug/Kg	06/26/2002 11:21	
Ethyl benzene	ND	5.0	ug/Kg	06/26/2002 11:21	
Total xylenes	ND	5.0	ug/Kg	06/26/2002 11:21	
Surrogate(s)					
1,2-Dichloroethane-d4	98.0	70-121	%	06/26/2002 11:21	
Toluene-d8	101.2	81-117	%	06/26/2002 11:21	

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Fuel Oxygenates by 8260B

Batch QC report

Test Method: 8260FAB Prep Method: 5030B

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/06/26-01.27**

LCS: 2002/06/26-01.27-003 Extracted: 06/26/2002 10:29 Analyzed: 06/26/2002 10:29

LCSD: 2002/06/26-01.27-004 Extracted: 06/26/2002 10:59 Analyzed: 06/26/2002 10:59

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Benzene	50.7	49.5	50.0	50.0	101.4	99.0	2.4	69-129	20		
Toluene	51.7	51.8	50.0	50.0	103.4	103.6	0.2	70-130	20		
Methyl tert-butyl ether	43.5	41.1	50.0	50.0	87.0	82.2	5.7	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	507	468	500	500	101.4	93.6		70-121			
Toluene-d8	512	516	500	500	102.4	103.2		81-117			

Submission #: 2002-06-0442

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Fuel Oxygenates by 8260B

Batch QC report

Test Method: 8260FAB Prep Method: 5030B

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/06/28-01.27**

LCS: 2002/06/28-01.27-003 Extracted: 06/28/2002 10:33 Analyzed: 06/28/2002 10:33

LCSD: 2002/06/28-01.27-006 Extracted: 06/28/2002 11:47 Analyzed: 06/28/2002 11:47

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Benzene	49.5	51.5	50.0	50.0	99.0	103.0	4.0	69-129	20		
Toluene	51.3	53.9	50.0	50.0	102.6	107.8	4.9	70-130	20		
Methyl tert-butyl ether	45.3	48.1	50.0	50.0	90.6	96.2	6.0	65-165	20		
Surrogate(s)											
1,2-Dichloroethane-d4	530	551	500	500	106.0	110.2		70-121			
Toluene-d8	516	510	500	500	103.2	102.0		81-117			

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Fuel Oxygenates by 8260B

Legend & Notes

Test Method: 8260B Prep Method: 5030B

Analyte Flags

sh

Surrogate recovery was higher than QC limit due to matrix interference.

Submission #: 2002-06-0442

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CA DHS ELAP#2496

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants	☒ 2101 Webster Street, 12th Floor Oakland, CA 94612
Attn: Charles Rome	Phone: (510) 663-4100 Fax: (510) 663-4141
2770.005	Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
PL-13	Soil	06/24/2002 14:05	29

Submission #: 2002-06-0442

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CA DHS ELAP#2496

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8260B
Prep Method: 5030B

Sample ID:	PL-13	Lab Sample ID:	2002-06-0442-029
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	07/01/2002 15:22
Sampled:	06/24/2002 14:05	QC-Batch:	2002/07/01-01.27
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	320000	50000	ug/Kg	1.00	07/01/2002 15:22	
Benzene	ND	500	ug/Kg	1.00	07/01/2002 15:22	
Toluene	1200	500	ug/Kg	1.00	07/01/2002 15:22	
Ethyl benzene	900	500	ug/Kg	1.00	07/01/2002 15:22	
Total xylenes	7400	500	ug/Kg	1.00	07/01/2002 15:22	
Surrogate(s)						
1,2-Dichloroethane-d4	114.7	70-121	%	1.00	07/01/2002 15:22	
Toluene-d8	99.4	81-117	%	1.00	07/01/2002 15:22	

Submission #: 2002-06-0442

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CA DHS ELAP#2496

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Batch QC report

Test Method: 8260B Prep Method: 5030B

Method Blank	**Soil**	**QC Batch # 2002/07/01-01.27**
MB: 2002/07/01-01.27-009		Date Extracted: 07/01/2002 12:12

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Gasoline	ND	50000	ug/Kg	07/01/2002 12:12	
Benzene	ND	500	ug/Kg	07/01/2002 12:12	
Toluene	ND	500	ug/Kg	07/01/2002 12:12	
Ethyl benzene	ND	500	ug/Kg	07/01/2002 12:12	
Total xylenes	ND	500	ug/Kg	07/01/2002 12:12	
Surrogate(s)					
1,2-Dichloroethane-d4	104.8	70-121	%	07/01/2002 12:12	
Toluene-d8	96.5	81-117	%	07/01/2002 12:12	

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CA DHS ELAP#2496

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Batch QC report

Test Method: 8260B Prep Method: 5030B

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/07/01-01.27**

LCS: 2002/07/01-01.27-007 Extracted: 07/01/2002 11:28 Analyzed: 07/01/2002 11:28

LCSD: 2002/07/01-01.27-008 Extracted: 07/01/2002 11:50 Analyzed: 07/01/2002 11:50

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Benzene	9250	9480	10000	10000	92.5	94.8	2.5	69-129	20		
Toluene	9570	9840	10000	10000	95.7	98.4	2.8	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	281	278	250	250	112.4	111.2		70-121			
Toluene-d8	243	246	250	250	97.2	98.4		81-117			

Submission #: 2002-06-0442

Fuel Oxygenates by 8260B

Geomatrix Consultants

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Project: 2770.005

Received: 06/24/2002 16:30

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-76	06/24/2002 12:45	Water	19

Submission #: 2002-06-0442

Fuel Oxygenates by 8260B

Geomatrix Consultants

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-76**
Lab ID: 2002-06-0442 - 19

Sampled: 06/24/2002 12:45
Extracted: 7/1/2002 13:26

Matrix: Water
QC Batch#: 2002/07/01-01.62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.50	ug/L	1.00	07/01/2002 13:26	
Benzene	ND	0.50	ug/L	1.00	07/01/2002 13:26	
Toluene	ND	0.50	ug/L	1.00	07/01/2002 13:26	
Ethylbenzene	ND	0.50	ug/L	1.00	07/01/2002 13:26	
Total xylenes	ND	1.0	ug/L	1.00	07/01/2002 13:26	
Surrogates(s)						
1,2-Dichloroethane-d4	82.6	76-114	%	1.00	07/01/2002 13:26	
Toluene-d8	101.4	88-110	%	1.00	07/01/2002 13:26	

Submission #: 2002-06-0442

Fuel Oxygenates by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/07/01-01.62-041

Water

Test(s): 8260B
QC Batch # 2002/07/01-01.62
Date Extracted: 07/01/2002 12:41

Compound	Conc.	RL	Unit	Analyzed	Flag
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	07/01/2002 12:41	
Benzene	ND	0.5	ug/L	07/01/2002 12:41	
Toluene	ND	0.5	ug/L	07/01/2002 12:41	
Ethylbenzene	ND	0.5	ug/L	07/01/2002 12:41	
Total xylenes	ND	1.0	ug/L	07/01/2002 12:41	
Surrogates(s)					
1,2-Dichloroethane-d4	86.3	76-114	%	07/01/2002 12:41	
Toluene-d8	101.0	88-110	%	07/01/2002 12:41	

Submission #: 2002-06-0442

Fuel Oxygenates by 8260B

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Project: 2770.005

Received: 06/24/2002 16:30

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike **Water** **QC Batch # 2002/07/01-01.62**

LCS 2002/07/01-01.62-056 Extracted: 07/01/2002 Analyzed: 07/01/2002 11:56

LCSD 2002/07/01-01.62-019 Extracted: 07/01/2002 Analyzed: 07/01/2002 12:19

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Methyl tert-butyl ether (MTBE)	26.4	27.2	25.0	105.6	108.8	3.0	65-165	20		
Benzene	25.6	23.6	25.0	102.4	94.4	8.1	69-129	20		
Toluene	26.2	25.0	25.0	104.8	100.0	4.7	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	485	481	500	97.0	96.2		76-114			
Toluene-d8	509	489	500	101.8	97.8		88-110			

Submission #: 2002-06-0442

Gasoline

Geomatrix Consultants

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Project: 2770.005

Received: 06/24/2002 16:30

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-76	06/24/2002 12:45	Water	19

Submission #: 2002-06-0442

Gasoline

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CA DHS ELAP# 2496

Prep(s): 5030 Test(s): 8015M

Sample ID: **SRB-76** Lab ID: 2002-06-0442 - 19

Sampled: 06/24/2002 12:45 Extracted: 6/25/2002 14:22

Matrix: Water QC Batch#: 2002/06/25-01.04

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/25/2002 14:22	
Surrogates(s)						
4-Bromofluorobenzene-FID	101.9	50-150	%	1.00	06/25/2002 14:22	

Submission #: 2002-06-0442

Gasoline

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030 Test(s): 8015M

Method Blank Water **QC Batch # 2002/06/25-01.04**

MB: 2002/06/25-01.04-008 Date Extracted: 06/25/2002 11:02

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/25/2002 11:02	
Surrogates(s)					
4-Bromofluorobenzene-FID	90.4	50-150	%	06/25/2002 11:02	

Submission #: 2002-06-0442

Gasoline

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030

Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2002/06/25-01.04**

LCS 2002/06/25-01.04-006 Extracted: 06/25/2002 Analyzed: 06/25/2002 10:08

LCSD 2002/06/25-01.04-007 Extracted: 06/25/2002 Analyzed: 06/25/2002 10:35

Compound	Conc. ug/L		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	509	482	500	101.8	96.4	5.4	75-125	20		
Surrogates(s)										
4-Bromofluorobenzene-FID	434	422	500	86.8	84.4		50-150			

Submission #: 2002-06-0442

PNA analysis by 8270C/SIM GC/MS

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Project: 2770.005

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
PL-13	06/24/2002 14:05	Soil	29

Submission #: 2002-06-0442

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: PL-13
Lab ID: 2002-06-0442 - 29
Sampled: 06/24/2002 14:05
Extracted: 6/25/2002 05:28
Matrix: Soil
QC Batch#: 2002/06/25-01.40
Analysis Flag: sdo (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	84000	1300	ug/Kg	250.00	06/26/2002 16:21	
Acenaphthylene	7700	1300	ug/Kg	250.00	06/26/2002 16:21	
Acenaphthene	27000	1300	ug/Kg	250.00	06/26/2002 16:21	
Fluorene	45000	1300	ug/Kg	250.00	06/26/2002 16:21	
Phenanthrene	120000	1300	ug/Kg	250.00	06/26/2002 16:21	
Anthracene	27000	1300	ug/Kg	250.00	06/26/2002 16:21	
Fluoranthene	9300	1300	ug/Kg	250.00	06/26/2002 16:21	
Pyrene	42000	1300	ug/Kg	250.00	06/26/2002 16:21	
Benzo(a)anthracene	13000	1300	ug/Kg	250.00	06/26/2002 16:21	
Chrysene	31000	1300	ug/Kg	250.00	06/26/2002 16:21	
Benzo(b)fluoranthene	5800	1300	ug/Kg	250.00	06/26/2002 16:21	
Benzo(k)fluoranthene	1500	1300	ug/Kg	250.00	06/26/2002 16:21	
Benzo(a)pyrene	8400	1300	ug/Kg	250.00	06/26/2002 16:21	
Indeno(1,2,3-c,d)pyrene	1600	1300	ug/Kg	250.00	06/26/2002 16:21	
Dibenzo(a,h)anthracene	1600	1300	ug/Kg	250.00	06/26/2002 16:21	
Benzo(g,h,i)perylene	3600	1300	ug/Kg	250.00	06/26/2002 16:21	
Surrogates(s)						
2-Fluorobiphenyl	NA	30-115	%	250.00	06/26/2002 16:21	
p-Terphenyl-d14	NA	18-137	%	250.00	06/26/2002 16:21	

Submission #: 2002-06-0442

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM
Method Blank
MB: 2002/06/25-01.40-003

Soil

Test(s): 8270C-SIM
QC Batch # 2002/06/25-01.40
Date Extracted: 06/25/2002 05:28

Compound	Conc.	RL	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	06/26/2002 11:21	
Acenaphthylene	ND	5.0	ug/Kg	06/26/2002 11:21	
Acenaphthene	ND	5.0	ug/Kg	06/26/2002 11:21	
Fluorene	ND	5.0	ug/Kg	06/26/2002 11:21	
Phenanthrene	ND	5.0	ug/Kg	06/26/2002 11:21	
Anthracene	ND	5.0	ug/Kg	06/26/2002 11:21	
Fluoranthene	ND	5.0	ug/Kg	06/26/2002 11:21	
Pyrene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(a)anthracene	ND	5.0	ug/Kg	06/26/2002 11:21	
Chrysene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(a)pyrene	ND	5.0	ug/Kg	06/26/2002 11:21	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	06/26/2002 11:21	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	06/26/2002 11:21	
Surrogates(s)					
2-Fluorobiphenyl	63.9	30-115	%	06/26/2002 11:21	
p-Terphenyl-d14	75.7	18-137	%	06/26/2002 11:21	

Submission #: 2002-06-0442

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Laboratory Control Spike **Soil** **QC Batch # 2002/06/25-01.40**

LCS 2002/06/25-01.40-004 Extracted: 06/25/2002 Analyzed: 06/26/2002 11:47

LCSD 2002/06/25-01.40-005 Extracted: 06/25/2002 Analyzed: 06/26/2002 12:14

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Acenaphthene	261	264	333	78.4	79.3	1.1	50-150	30		
Phenanthrene	263	266	333	79.0	79.9	1.1	50-150	30		
Pyrene	295	302	333	88.6	90.7	2.3	50-150	30		
Chrysene	271	270	333	81.4	81.1	0.4	50-150	30		
Benzo(a)pyrene	241	245	333	72.4	73.6	1.6	50-150	30		
Surrogates(s)										
2-Fluorobiphenyl	7.71	7.67	10	77.1	76.7		30-115			
p-Terphenyl-d14	8.96	9.00	10	89.6	90.0		18-137			

Submission #: 2002-06-0442

PNA analysis by 8270C/SIM GC/MS

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Project: 2770.005

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Legend and Notes

Analysis Flag

sdo — Surrogate(s) diluted out

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-75-2.0	06/24/2002 13:25	Soil	20
SRB-75-5.0	06/24/2002 13:35	Soil	21
SRB-75-19.0	06/24/2002 14:30	Soil	27
PL-13	06/24/2002 14:05	Soil	29

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-75-2.0**
Sampled: 06/24/2002 13:25
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0442 - 20
Extracted: 6/25/2002 14:03
QC Batch#: 2002/06/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	6.7	1.0	mg/Kg	1.00	07/05/2002 09:28	ndp
Motor Oil	54	50	mg/Kg	1.00	07/05/2002 09:28	
Surrogates(s)						
o-Terphenyl	100.6	60-130	%	1.00	07/05/2002 09:28	

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-75-5.0**
Lab ID: 2002-06-0442 - 21
Sampled: 06/24/2002 13:35
Extracted: 6/25/2002 14:03
Matrix: Soil
QC Batch#: 2002/06/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 21:58	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 21:58	
Surrogates(s)						
o-Terphenyl	89.7	60-130	%	1.00	07/03/2002 21:58	

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-75-19.0**
Lab ID: 2002-06-0442 - 27

Sampled: 06/24/2002 14:30
Extracted: 6/25/2002 14:03

Matrix: Soil
QC Batch#: 2002/06/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1200	10	mg/Kg	10.00	07/05/2002 11:20	ndp
Motor Oil	1200	500	mg/Kg	10.00	07/05/2002 11:20	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	10.00	07/05/2002 11:20	sd

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **PL-13**
Lab ID: 2002-06-0442 - 29
Sampled: 06/24/2002 14:05
Extracted: 6/25/2002 14:03
Matrix: Soil
QC Batch#: 2002/06/25-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	43000	200	mg/Kg	200.00	07/04/2002 05:14	ndp
Motor Oil	57000	10000	mg/Kg	200.00	07/04/2002 05:14	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	200.00	07/04/2002 05:14	sd

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank
MB: 2002/06/25-03.10-001

Soil

Test(s): 8015M
QC Batch # 2002/06/25-03.10
Date Extracted: 06/25/2002 14:03

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/26/2002 12:14	
Motor Oil	ND	50	mg/Kg	06/26/2002 12:14	
Surrogates(s)					
o-Terphenyl	91.8	60-130	%	06/26/2002 12:14	

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/25-03.10**

LCS 2002/06/25-03.10-002 Extracted: 06/25/2002 Analyzed: 06/26/2002 10:54

LCSD 2002/06/25-03.10-003 Extracted: 06/25/2002 Analyzed: 06/26/2002 11:34

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	36.6	36.7	41.7	87.8	88.0	0.2	60-130	25		
Surrogates(s)										
o-Terphenyl	20.7	20.3	20.0	103.6	101.3		60-130	0		

Submission #: 2002-06-0442

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.

Submission #: 2002-06-0442

TEPH w/ Silica Gel Clean-up

SEVERN TRENT SERVICES

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Pleasanton, CA 94566

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CA DHS ELAP#2496

Geomatrix Consultants	✉ 2101 Webster Street, 12th Floor Oakland, CA 94612
Attn: Charles Rome	Phone: (510) 663-4100 Fax: (510) 663-4141
2770.005	Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SRB-76	Water	06/24/2002 12:45	19
SRB-75-2.0	Soil	06/24/2002 13:25	20
SRB-75-5.0	Soil	06/24/2002 13:35	21
SRB-75-19.0	Soil	06/24/2002 14:30	27
PL-13	Soil	06/24/2002 14:05	29

Submission #: 2002-06-0442

SEVERN TRENT SERVICES

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8015M
Prep Method: 3510/8015M
3550/8015M

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CA DHS ELAP#2496

Sample ID:	**SRB-76**	Lab Sample ID:	2002-06-0442-019
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	06/26/2002 07:28
Sampled:	06/24/2002 12:45	QC-Batch:	2002/06/26-03.10
Matrix:	Water		

Sample/Analysis Flag: rl (See Legend & Note section)

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	ND	58	ug/L	1.16	06/27/2002 20:48	
Motor Oil	ND	580	ug/L	1.16	06/27/2002 20:48	
Surrogate(s)						
o-Terphenyl	89.1	60-130	%	1.16	06/27/2002 20:48	

Submission #: 2002-06-0442

SEVERN TRENT SERVICES

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8015M
Prep Method: 3510/8015M
3550/8015M

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1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Sample ID:	**SRB-75-2.0**	Lab Sample ID:	2002-06-0442-020
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	06/25/2002 10:47
Sampled:	06/24/2002 13:25	QC-Batch:	2002/06/25-02.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	6.7	1.0	mg/Kg	1.00	06/27/2002 22:03	ndp
Motor Oil	60	50	mg/Kg	1.00	06/27/2002 22:03	
Surrogate(s)						
o-Terphenyl	103.5	60-130	%	1.00	06/27/2002 22:03	

Submission #: 2002-06-0442

SEVERN TRENT SERVICES

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8015M
Prep Method: 3510/8015M
3550/8015M

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CA DHS ELAP#2496

Sample ID:	**SRB-75-5.0**	Lab Sample ID:	2002-06-0442-021
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	06/25/2002 10:47
Sampled:	06/24/2002 13:35	QC-Batch:	2002/06/25-02.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/26/2002 19:49	
Motor Oil	ND	50	mg/Kg	1.00	06/26/2002 19:49	
Surrogate(s)						
o-Terphenyl	85.2	60-130	%	1.00	06/26/2002 19:49	

Submission #: 2002-06-0442

SEVERN TRENT SERVICES

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8015M
Prep Method: 3510/8015M
3550/8015M

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CA DHS ELAP#2496

Sample ID:	**SRB-75-19.0**	Lab Sample ID:	2002-06-0442-027
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	06/25/2002 10:47
Sampled:	06/24/2002 14:30	QC-Batch:	2002/06/25-02.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	990	10	mg/Kg	10.00	06/27/2002 19:34	ndp
Motor Oil	840	500	mg/Kg	10.00	06/27/2002 19:34	
Surrogate(s)						
o-Terphenyl	NA	60-130	%	10.00	06/27/2002 19:34	sd

Submission #: 2002-06-0442

SEVERN TRENT SERVICES

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8015M
Prep Method: 3510/8015M
3550/8015M

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CA DHS ELAP#2496

Sample ID:	PL-13	Lab Sample ID:	2002-06-0442-029
Project:	2770.005	Received:	06/24/2002 16:30
		Extracted:	06/25/2002 10:47
Sampled:	06/24/2002 14:05	QC-Batch:	2002/06/25-02.10
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	8500	100	mg/Kg	100.00	06/27/2002 22:03	ndp
Motor Oil	9800	5000	mg/Kg	100.00	06/27/2002 22:03	
Surrogate(s)						
o-Terphenyl	NA	60-130	%	100.00	06/27/2002 22:03	sd

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CA DHS ELAP#2496

TEPH w/ Silica Gel Clean-up

Batch QC report

Test Method: 8015M

Prep Method: 3510/8015 M

Method Blank **Water** **QC Batch # 2002/06/26-03.10**

MB: 2002/06/26-03.10-001 Date Extracted: 06/26/2002 07:28

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/26/2002 12:54	
Motor Oil	ND	500	ug/L	06/26/2002 12:54	
Surrogate(s)					
o-Terphenyl	95.1	60-130	%	06/26/2002 12:54	

Submission #: 2002-06-0442

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CA DHS ELAP#2496

TEPH w/ Silica Gel Clean-up

Batch QC report

Test Method: 8015M

Prep Method: 3550/8015 M

Method Blank	**Soil**	**QC Batch # 2002/06/25-02.10**
MB: 2002/06/25-02.10-001		Date Extracted: 06/25/2002 10:47

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/27/2002 09:37	
Motor Oil	ND	50	mg/Kg	06/27/2002 09:37	
Surrogate(s)					
o-Terphenyl	81.3	60-130	%	06/27/2002 09:37	

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CA DHS ELAP#2496

TEPH w/ Silica Gel Clean-up

Batch QC report

Test Method: 8015M Prep Method: 3510/8015M

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2002/06/26-03.10**

LCS: 2002/06/26-03.10-002 Extracted: 06/26/2002 07:28 Analyzed: 06/26/2002 11:34

LCSD: 2002/06/26-03.10-003 Extracted: 06/26/2002 07:28 Analyzed: 06/26/2002 12:14

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Diesel	783	808	1250	1250	62.6	64.6	3.1	60-130	25		
Surrogate(s)											
o-Terphenyl	18.9	19.4	20.0	20.0	94.7	97.0		60-130	0		

Submission #: 2002-06-0442

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CA DHS ELAP#2496

TEPH w/ Silica Gel Clean-up

Batch QC report

Test Method: 8015M Prep Method: 3550/8015M

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/06/25-02.10**

LCS: 2002/06/25-02.10-002 Extracted: 06/25/2002 10:47 Analyzed: 06/27/2002 06:31

LCSD: 2002/06/25-02.10-003 Extracted: 06/25/2002 10:47 Analyzed: 06/27/2002 07:08

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Diesel	34.1	36.3	41.7	41.7	81.8	87.1	6.3	60-130	25		
Surrogate(s)											
o-Terphenyl	18.9	19.9	20.0	20.0	94.4	99.6		60-130	0		

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CA DHS ELAP#2496

TEPH w/ Silica Gel Clean-up

Legend & Notes

Test Method: 8015M

Prep Method: 3510/8015M
3550/8015M

Analysis Flags

rl

Reporting limits raised due to reduced sample size.

Analyte Flags

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

Analyte Flags

sd

Surrogate recovery not reportable due to required dilution.

Submission#: 2002-08-0073

August 09, 2002

SEVERN TRENT LABORATORY

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CA DHS ELAP#:2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn.: Charles Rome
Project#: 2770.005

Attached is our report for your samples received on 08/02/2002 17:29
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 09/16/2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour
Project Manager

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 08/02/2002 17:29

SEVERN TRENT LABORATORY

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
GMX-70-0.5	08/02/2002 10:25	Soil	1
GMX-70-3.0	08/02/2002 11:25	Soil	2
GMX-70-5.0	08/02/2002 11:50	Soil	3
GMX-71-0.5	08/02/2002 12:20	Soil	4
GMX-71-3.0	08/02/2002 13:10	Soil	5
GMX-71-5.0	08/02/2002 13:30	Soil	6

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

Geomatrix Consultants
Attn.: Charles Rome
2101 Webster Street, 12th Floor
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Project: 2770.005

Received: 08/02/2002 17:29

SEVERN TRENT LABORATORY
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CA DHS ELAP# 2496

Prep(s): 5030B
Sample ID: **GMX-70-0.5**
Sampled: 08/02/2002 10:25
Matrix: Soil

Test(s): 8260B
Lab ID: 2002-08-0073 - 1
Extracted: 8/5/2002 14:23
QC Batch#: 2002/08/05-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	08/05/2002 14:23	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	08/05/2002 14:23	
Benzene	ND	5.0	ug/Kg	1.00	08/05/2002 14:23	
Toluene	ND	5.0	ug/Kg	1.00	08/05/2002 14:23	
Ethyl benzene	ND	5.0	ug/Kg	1.00	08/05/2002 14:23	
Total xylenes	ND	5.0	ug/Kg	1.00	08/05/2002 14:23	
Surrogates(s)						
1,2-Dichloroethane-d4	168.5	70-121	%	1.00	08/05/2002 14:23	sh
Toluene-d8	84.1	81-117	%	1.00	08/05/2002 14:23	

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5030B
Sample ID: **GMX-70-3.0**
Sampled: 08/02/2002 11:25
Matrix: Soil

Test(s): 8260B
Lab ID: 2002-08-0073 - 2
Extracted: 8/5/2002 14:46
QC Batch#: 2002/08/05-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	08/05/2002 14:46	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	08/05/2002 14:46	
Benzene	ND	5.0	ug/Kg	1.00	08/05/2002 14:46	
Toluene	ND	5.0	ug/Kg	1.00	08/05/2002 14:46	
Ethyl benzene	ND	5.0	ug/Kg	1.00	08/05/2002 14:46	
Total xylenes	ND	5.0	ug/Kg	1.00	08/05/2002 14:46	
Surrogates(s)						
1,2-Dichloroethane-d4	134.6	70-121	%	1.00	08/05/2002 14:46	sh
Toluene-d8	96.8	81-117	%	1.00	08/05/2002 14:46	

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 08/02/2002 17:29

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CA DHS ELAP# 2496

Prep(s): 5030B
Sample ID: **GMX-70-5.0**
Sampled: 08/02/2002 11:50
Matrix: Soil

Test(s): 8260B
Lab ID: 2002-08-0073 - 3
Extracted: 8/5/2002 15:08
QC Batch#: 2002/08/05-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	08/05/2002 15:08	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	08/05/2002 15:08	
Benzene	ND	5.0	ug/Kg	1.00	08/05/2002 15:08	
Toluene	ND	5.0	ug/Kg	1.00	08/05/2002 15:08	
Ethyl benzene	ND	5.0	ug/Kg	1.00	08/05/2002 15:08	
Total xylenes	ND	5.0	ug/Kg	1.00	08/05/2002 15:08	
Surrogates(s)						
1,2-Dichloroethane-d4	154.6	70-121	%	1.00	08/05/2002 15:08	sh
Toluene-d8	93.6	81-117	%	1.00	08/05/2002 15:08	

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B
Sample ID: **GMX-71-0.5**
Lab ID: 2002-08-0073 - 4
Sampled: 08/02/2002 12:20
Extracted: 8/5/2002 15:30
Matrix: Soil
QC Batch#: 2002/08/05-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	08/05/2002 15:30	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	08/05/2002 15:30	
Benzene	ND	5.0	ug/Kg	1.00	08/05/2002 15:30	
Toluene	ND	5.0	ug/Kg	1.00	08/05/2002 15:30	
Ethyl benzene	ND	5.0	ug/Kg	1.00	08/05/2002 15:30	
Total xylenes	ND	5.0	ug/Kg	1.00	08/05/2002 15:30	
Surrogates(s)						
1,2-Dichloroethane-d4	137.8	70-121	%	1.00	08/05/2002 15:30	sh
Toluene-d8	92.4	81-117	%	1.00	08/05/2002 15:30	

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B
Sample ID: **GMX-71-3.0**
Lab ID: 2002-08-0073 - 5
Sampled: 08/02/2002 13:10
Extracted: 8/5/2002 15:52
Matrix: Soil
QC Batch#: 2002/08/05-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	08/05/2002 15:52	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	08/05/2002 15:52	
Benzene	ND	5.0	ug/Kg	1.00	08/05/2002 15:52	
Toluene	ND	5.0	ug/Kg	1.00	08/05/2002 15:52	
Ethyl benzene	ND	5.0	ug/Kg	1.00	08/05/2002 15:52	
Total xylenes	ND	5.0	ug/Kg	1.00	08/05/2002 15:52	
Surrogates(s)						
1,2-Dichloroethane-d4	146.5	70-121	%	1.00	08/05/2002 15:52	sh
Toluene-d8	96.5	81-117	%	1.00	08/05/2002 15:52	

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **GMX-71-5.0**
Lab ID: 2002-08-0073 - 6

Sampled: 08/02/2002 13:30
Extracted: 8/5/2002 16:15

Matrix: Soil
QC Batch#: 2002/08/05-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	08/05/2002 16:15	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	08/05/2002 16:15	
Benzene	ND	5.0	ug/Kg	1.00	08/05/2002 16:15	
Toluene	ND	5.0	ug/Kg	1.00	08/05/2002 16:15	
Ethyl benzene	ND	5.0	ug/Kg	1.00	08/05/2002 16:15	
Total xylenes	ND	5.0	ug/Kg	1.00	08/05/2002 16:15	
Surrogates(s)						
1,2-Dichloroethane-d4	157.5	70-121	%	1.00	08/05/2002 16:15	sh
Toluene-d8	91.3	81-117	%	1.00	08/05/2002 16:15	

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

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Project: 2770.005

Received: 08/02/2002 17:29

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B
Method Blank

Soil

Test(s): 8260B
QC Batch # 2002/08/05-02.27

MB: 2002/08/05-02.27-021

Date Extracted: 08/05/2002 13:11

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	08/05/2002 13:11	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	08/05/2002 13:11	
Benzene	ND	5.0	ug/Kg	08/05/2002 13:11	
Toluene	ND	5.0	ug/Kg	08/05/2002 13:11	
Ethyl benzene	ND	5.0	ug/Kg	08/05/2002 13:11	
Total xylenes	ND	5.0	ug/Kg	08/05/2002 13:11	
Surrogates(s)					
1,2-Dichloroethane-d4	108.6	70-121	%	08/05/2002 13:11	
Toluene-d8	102.4	81-117	%	08/05/2002 13:11	

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Charles Rome
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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 08/02/2002 17:29

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Soil** **QC Batch # 2002/08/05-02.27**

LCS 2002/08/05-02.27-006 Extracted: 08/05/2002 Analyzed: 08/05/2002 12:18

LCSD 2002/08/05-02.27-007 Extracted: 08/05/2002 Analyzed: 08/05/2002 12:49

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	48.5	51.8	50.0	97.0	103.6	6.6	69-129	20		
Toluene	51.3	54.9	50.0	102.6	109.8	1.3	70-130	20		
Methyl tert-butyl ether (MTBE)	54.6	57.7	50.0	109.2	115.4	5.2	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	558	563	500	111.6	112.6		70-121			
Toluene-d8	505	501	500	101.0	100.2		81-117			

Submission #: 2002-08-0073

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Charles Rome
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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 08/02/2002 17:29

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

sh

Surrogate recovery was higher than QC limit due to matrix interference.

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 08/02/2002 17:29

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
GMX-70-0.5	08/02/2002 10:25	Soil	1
GMX-70-3.0	08/02/2002 11:25	Soil	2
GMX-70-5.0	08/02/2002 11:50	Soil	3
GMX-71-0.5	08/02/2002 12:20	Soil	4
GMX-71-3.0	08/02/2002 13:10	Soil	5
GMX-71-5.0	08/02/2002 13:30	Soil	6

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **GMX-70-0.5**
Lab ID: 2002-08-0073 - 1
Sampled: 08/02/2002 10:25
Extracted: 8/7/2002 10:20
Matrix: Soil
QC Batch#: 2002/08/07-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1200	50	mg/Kg	50.00	08/08/2002 06:09	ndp
Motor Oil	5600	2500	mg/Kg	50.00	08/08/2002 06:09	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	50.00	08/08/2002 06:09	sd

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **GMX-70-3.0**
Sampled: 08/02/2002 11:25
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-08-0073 - 2
Extracted: 8/7/2002 10:20
QC Batch#: 2002/08/07-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	120	10	mg/Kg	10.00	08/07/2002 20:39	ndp
Motor Oil	510	500	mg/Kg	10.00	08/07/2002 20:39	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	10.00	08/07/2002 20:39	sd

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **GMX-70-5.0**
Lab ID: 2002-08-0073 - 3
Sampled: 08/02/2002 11:50
Extracted: 8/7/2002 10:20
Matrix: Soil
QC Batch#: 2002/08/07-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	08/07/2002 16:57	
Motor Oil	ND	50	mg/Kg	1.00	08/07/2002 16:57	
Surrogates(s)						
o-Terphenyl	75.7	60-130	%	1.00	08/07/2002 16:57	

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **GMX-71-0.5**
Lab ID: 2002-08-0073 - 4

Sampled: 08/02/2002 12:20
Extracted: 8/7/2002 10:20

Matrix: Soil
QC Batch#: 2002/08/07-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	270	10	mg/Kg	10.00	08/07/2002 21:18	ndp
Motor Oil	1300	500	mg/Kg	10.00	08/07/2002 21:18	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	10.00	08/07/2002 21:18	sd

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **GMX-71-3.0**
Sampled: 08/02/2002 13:10
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-08-0073 - 5
Extracted: 8/7/2002 10:20
QC Batch#: 2002/08/07-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	08/07/2002 17:36	
Motor Oil	ND	50	mg/Kg	1.00	08/07/2002 17:36	
Surrogates(s)						
o-Terphenyl	82.2	60-130	%	1.00	08/07/2002 17:36	

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **GMX-71-5.0**
Lab ID: 2002-08-0073 - 6
Sampled: 08/02/2002 13:30
Extracted: 8/7/2002 10:20
Matrix: Soil
QC Batch#: 2002/08/07-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	08/07/2002 18:15	
Motor Oil	ND	50	mg/Kg	1.00	08/07/2002 18:15	
Surrogates(s)						
o-Terphenyl	79.6	60-130	%	1.00	08/07/2002 18:15	

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank
MB: 2002/08/07-03.10-001

Soil

Test(s): 8015M
QC Batch # 2002/08/07-03.10
Date Extracted: 08/07/2002 10:20

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	08/07/2002 16:40	
Motor Oil	ND	50	mg/Kg	08/07/2002 16:40	
Surrogates(s)					
o-Terphenyl	84.5	60-130	%	08/07/2002 16:40	

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 08/02/2002 17:29

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/08/07-03.10**

LCS 2002/08/07-03.10-002 Extracted: 08/07/2002 Analyzed: 08/07/2002 15:20

LCSD 2002/08/07-03.10-003 Extracted: 08/07/2002 Analyzed: 08/07/2002 16:00

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	35.4	33.2	41.7	84.9	79.6	6.4	60-130	25		
Surrogates(s)										
o-Terphenyl	21.5	20.7	20.0	107.6	103.4		60-130	0		

Submission #: 2002-08-0073

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.

2002-08-0073

67943

Chain-of Custody Record

016373

Date: 8/2/02 Page 1 of 1

Project No.: 2770.005

Samplers (Signature:)

MMG

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup	BTEX, MTBE	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
8/2/02	1025	GMX-70-0.5							X	X	X		X	S	-	-	Y	4	Please analyze the 3 EnCore samples/location for BTEX and MTBE by 8260 and TPH gas 8015 3 EnCore, 1 Brass liner
	1125	GMX-70-3.0							X	X	X		X	S	-	-	Y	4	
	1150	GMX-70-5.0							X	X	X		X	S	-	-	Y	4	
	1220	GMX-71-0.5							X	X	X		X	S	-	-	Y	4	
	1310	GMX-71-3.0							X	X	X		X	S	-	-	Y	4	
	1330	GMX-71-5.0							X	X	X		X	S	-	-	Y	4	
		MPG																	

ANALYSES

REMARKS

Laboratory: STL SAN FRANCISCO

Turnaround Time:

Results to: Charlie Rome

Total No. of Containers: 24

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment:
MMG	8/2/02					LAB COURIER
Printed Name: MATT GOERZ	Time:	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix		Company:		Company:		Cooler received sealed - OSH 3.3°C
Received by:	Date:	Received by:	Date:	Received by: D. Harrington	Date: 8/2/02	
Printed Name:	Time:	Printed Name:	Time:	Printed Name: D. Harrington	Time: 1729	
Company:		Company:		Company: STL-SF		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

016373

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 08 - 0073

Checklist completed by: (initials) DSH Date: 08/03/02

Courier name: ☒ STL San Francisco ☐ Client _____

Custody seals intact on shipping container/samples	Yes ✓ No ___	Not Present ___
Chain of custody present?	Yes ✓ No ___	
Chain of custody signed when relinquished and received?	Yes ✓ No ___	
Chain of custody agrees with sample labels?	Yes ✓ No ___	
Samples in proper container/bottle?	Yes ✓ No ___	
Sample containers intact?	Yes ✓ No ___	
Sufficient sample volume for indicated test?	Yes ✓ No ___	
All samples received within holding time?	Yes ✓ No ___	
Container/Temp Blank temperature in compliance (4^{o} C ± 2)?	Temp: 3.3 °C Yes ✓ No ___	
Water - VOA vials have zero headspace?	No VOA vials submitted ✓ Yes ___ No ___	

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - **pH acceptable upon receipt?** ☐ Yes ☐ No

☐ **pH adjusted**– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: _____

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ____/____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion: _____

Corrective Action (per PM/Client): _____

Submission#: 2002-06-0377

June 28, 2002

SEVERN TRENT LABORATORY

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Pleasanton CA 94566

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Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#:2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn.: Charles Rome
Project#: 2770.005

Attached is our report for your samples received on 06/20/2002 17:25
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

The report contains a Case Narrative detailing sample receipt and analysis.

Please note that any unused portion of the samples will be discarded after 08/04/2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour
Project Manager

Submission#: 2002-06-0377 June 28, 2002

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn.: Charles Rome
Project#: 2770.005

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www.chromalab.com

CA DHS ELAP#:2496

Case Narrative

General and Sample Comments

We (STL San Francisco) received 26 Soil samples , on Thursday, June 20, 2002 5:25 PM.

Analysis Coments and Flags by QC Batch

TEPH w/ Silica Gel Clean-up	Soil	QC Batch#: 2002/06/21-04.10

SRB-95-0.5 >> MSD 2002/06/21-04.10-005
Compound Flag(s)
mso MS/MSD spike recoveries were out of QC limits due to matrix interference. Precision and Accuracy were verified by LCS/LCSD.

SRB-95-0.5 >> MSD 2002/06/21-04.10-005
Compound Flag(s)
rpd Analyte RPD was out of QC limits due to sample heterogeneity.

SRB-95-0.5 2002-06-0377-018
Compound Flag(s)
ndp Hydrocarbon reported does not match the pattern of our Diesel standard

SRB-95-0.5 2002-06-0377-018
Compound Flag(s)
sd Surrogate recovery not reportable due to required dilution.

SRB-95-3.0 2002-06-0377-019
Compound Flag(s)
sd Surrogate recovery not reportable due to required dilution.

SRB-95-3.0 2002-06-0377-019
Compound Flag(s)
ndp Hydrocarbon reported does not match the pattern of our Diesel standard

SRB-95-5.0 2002-06-0377-020
Compound Flag(s)
ndp Hydrocarbon reported does not match the pattern of our Diesel standard

SRB-96-0.5 2002-06-0377-021
Compound Flag(s)
sd Surrogate recovery not reportable due to required dilution.

SRB-96-0.5 2002-06-0377-021
Compound Flag(s)
ndp Hydrocarbon reported does not match the pattern of our Diesel standard

SRB-72-0.5 2002-06-0377-024
Compound Flag(s)
ndp Hydrocarbon reported does not match the pattern of our Diesel standard

SRB-72-3.0 2002-06-0377-025
Compound Flag(s)
sd Surrogate recovery not reportable due to required dilution.

SRB-72-3.0 2002-06-0377-025

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CA DHS ELAP#:2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn.: Charles Rome
Project#: 2770.005

Case Narrative

Compound Flag(s)
ndp Hydrocarbon reported does not match the pattern of our Diesel standard

SRB-72-5.0 2002-06-0377-026
Compound Flag(s)
ndp Hydrocarbon reported does not match the pattern of our Diesel standard

Fuel Oxygenates by 8260B (Selectable)	Soil	QC Batch#: 2002/06/26-01.27

SRB-95-0.5 2002-06-0377-018
Compound Flag(s)
sh Surrogate recovery was higher than QC limit due to matrix interference.

SRB-95-3.0 2002-06-0377-019
Compound Flag(s)
sh Surrogate recovery was higher than QC limit due to matrix interference.

SRB-95-5.0 2002-06-0377-020
Compound Flag(s)
sh Surrogate recovery was higher than QC limit due to matrix interference.

SRB-96-5.0 2002-06-0377-023
Compound Flag(s)
sh Surrogate recovery was higher than QC limit due to matrix interference.

SRB-72-3.0 2002-06-0377-025
Compound Flag(s)
sh Surrogate recovery was higher than QC limit due to matrix interference.

SRB-72-5.0 2002-06-0377-026
Compound Flag(s)
sh Surrogate recovery was higher than QC limit due to matrix interference.

Submission #: 2002-06-0377

Fuel Oxygenates by 8260B

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
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Project: 2770.005

Received: 06/20/2002 17:25

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CA DHS ELAP# 1094

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-95-0.5	06/20/2002 12:50	Soil	18
SRB-95-3.0	06/20/2002 13:08	Soil	19
SRB-95-5.0	06/20/2002 13:15	Soil	20
SRB-96-0.5	06/20/2002 13:20	Soil	21
SRB-96-3.0	06/20/2002 13:27	Soil	22
SRB-96-5.0	06/20/2002 13:40	Soil	23
SRB-72-0.5	06/20/2002 14:00	Soil	24
SRB-72-3.0	06/20/2002 14:32	Soil	25
SRB-72-5.0	06/20/2002 14:42	Soil	26

Submission #: 2002-06-0377

Fuel Oxygenates by 8260B

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CA DHS ELAP# 1094

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-95-0.5**
Lab ID: 2002-06-0377 - 18

Sampled: 06/20/2002 12:50
Extracted: 6/26/2002 11:47

Matrix: Soil
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/26/2002 11:47	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/26/2002 11:47	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 11:47	
Toluene	ND	5.0	ug/Kg	1.00	06/26/2002 11:47	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/26/2002 11:47	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 11:47	
Surrogates(s)						
1,2-Dichloroethane-d4	124.3	70-121	%	1.00	06/26/2002 11:47	sh
Toluene-d8	99.4	81-117	%	1.00	06/26/2002 11:47	

Submission #: 2002-06-0377

Fuel Oxygenates by 8260B

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Project: 2770.005

Received: 06/20/2002 17:25

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www.chromalab.com

CA DHS ELAP# 1094

Prep(s): 5030B
Sample ID: **SRB-95-3.0**
Sampled: 06/20/2002 13:08
Matrix: Soil

Test(s): 8260B
Lab ID: 2002-06-0377 - 19
Extracted: 6/26/2002 12:18
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	2500	1000	ug/Kg	1.00	06/26/2002 12:18	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/26/2002 12:18	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 12:18	
Toluene	ND	5.0	ug/Kg	1.00	06/26/2002 12:18	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/26/2002 12:18	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 12:18	
Surrogates(s)						
1,2-Dichloroethane-d4	137.2	70-121	%	1.00	06/26/2002 12:18	sh
Toluene-d8	95.0	81-117	%	1.00	06/26/2002 12:18	

Submission #: 2002-06-0377

Fuel Oxygenates by 8260B

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

SEVERN TRENT LABORATORY

STL San Francisco
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www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 1094

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-95-5.0**
Lab ID: 2002-06-0377 - 20

Sampled: 06/20/2002 13:15
Extracted: 6/26/2002 12:40

Matrix: Soil
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1900	ug/Kg	1.88	06/26/2002 12:40	
Methyl tert-butyl ether (MTBE)	ND	9.4	ug/Kg	1.88	06/26/2002 12:40	
Benzene	ND	9.4	ug/Kg	1.88	06/26/2002 12:40	
Toluene	ND	9.4	ug/Kg	1.88	06/26/2002 12:40	
Ethyl benzene	ND	9.4	ug/Kg	1.88	06/26/2002 12:40	
Total xylenes	ND	9.4	ug/Kg	1.88	06/26/2002 12:40	
Surrogates(s)						
1,2-Dichloroethane-d4	121.1	70-121	%	1.88	06/26/2002 12:40	sh
Toluene-d8	102.4	81-117	%	1.88	06/26/2002 12:40	

Submission #: 2002-06-0377

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CA DHS ELAP# 1094

Prep(s):	5030B	Test(s):	8260B
Sample ID:	**SRB-96-0.5**	Lab ID:	2002-06-0377 - 21
Sampled:	06/20/2002 13:20	Extracted:	6/27/2002 13:36
Matrix:	Soil	QC Batch#:	2002/06/27-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	13000	1100	ug/Kg	1.06	06/27/2002 13:36	
Methyl tert-butyl ether (MTBE)	ND	5.3	ug/Kg	1.06	06/27/2002 13:36	
Benzene	ND	5.3	ug/Kg	1.06	06/27/2002 13:36	
Toluene	ND	5.3	ug/Kg	1.06	06/27/2002 13:36	
Ethyl benzene	ND	5.3	ug/Kg	1.06	06/27/2002 13:36	
Total xylenes	ND	5.3	ug/Kg	1.06	06/27/2002 13:36	
Surrogates(s)						
1,2-Dichloroethane-d4	112.7	70-121	%	1.06	06/27/2002 13:36	
Toluene-d8	96.1	81-117	%	1.06	06/27/2002 13:36	

Submission #: 2002-06-0377

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CA DHS ELAP# 1094

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-96-3.0**
Lab ID: 2002-06-0377 - 22

Sampled: 06/20/2002 13:27
Extracted: 6/27/2002 14:05

Matrix: Soil
QC Batch#: 2002/06/27-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/27/2002 14:05	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/27/2002 14:05	
Benzene	ND	5.0	ug/Kg	1.00	06/27/2002 14:05	
Toluene	ND	5.0	ug/Kg	1.00	06/27/2002 14:05	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/27/2002 14:05	
Total xylenes	ND	5.0	ug/Kg	1.00	06/27/2002 14:05	
Surrogates(s)						
1,2-Dichloroethane-d4	103.4	70-121	%	1.00	06/27/2002 14:05	
Toluene-d8	100.4	81-117	%	1.00	06/27/2002 14:05	

Submission #: 2002-06-0377

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CA DHS ELAP# 1094

Prep(s): 5030B
Test(s): 8260B
Sample ID: **SRB-96-5.0**
Lab ID: 2002-06-0377 - 23
Sampled: 06/20/2002 13:40
Extracted: 6/26/2002 13:47
Matrix: Soil
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/26/2002 13:47	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/26/2002 13:47	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 13:47	
Toluene	ND	5.0	ug/Kg	1.00	06/26/2002 13:47	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/26/2002 13:47	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 13:47	
Surrogates(s)						
1,2-Dichloroethane-d4	127.4	70-121	%	1.00	06/26/2002 13:47	sh
Toluene-d8	101.6	81-117	%	1.00	06/26/2002 13:47	

Submission #: 2002-06-0377

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Project: 2770.005

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CA DHS ELAP# 1094

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-72-0.5**
Lab ID: 2002-06-0377 - 24

Sampled: 06/20/2002 14:00
Extracted: 6/26/2002 14:09

Matrix: Soil
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/26/2002 14:09	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/26/2002 14:09	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 14:09	
Toluene	ND	5.0	ug/Kg	1.00	06/26/2002 14:09	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/26/2002 14:09	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 14:09	
Surrogates(s)						
1,2-Dichloroethane-d4	118.8	70-121	%	1.00	06/26/2002 14:09	
Toluene-d8	92.7	81-117	%	1.00	06/26/2002 14:09	

Submission #: 2002-06-0377

Fuel Oxygenates by 8260B

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Project: 2770.005

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CA DHS ELAP# 1094

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-72-3.0**
Lab ID: 2002-06-0377 - 25

Sampled: 06/20/2002 14:32
Extracted: 6/26/2002 14:31

Matrix: Soil
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1300	ug/Kg	1.30	06/26/2002 14:31	
Methyl tert-butyl ether (MTBE)	ND	6.5	ug/Kg	1.30	06/26/2002 14:31	
Benzene	ND	6.5	ug/Kg	1.30	06/26/2002 14:31	
Toluene	ND	6.5	ug/Kg	1.30	06/26/2002 14:31	
Ethyl benzene	ND	6.5	ug/Kg	1.30	06/26/2002 14:31	
Total xylenes	ND	6.5	ug/Kg	1.30	06/26/2002 14:31	
Surrogates(s)						
1,2-Dichloroethane-d4	122.0	70-121	%	1.30	06/26/2002 14:31	sh
Toluene-d8	95.2	81-117	%	1.30	06/26/2002 14:31	

Submission #: 2002-06-0377

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CA DHS ELAP# 1094

Prep(s): 5030B
Test(s): 8260B
Sample ID: **SRB-72-5.0**
Lab ID: 2002-06-0377 - 26
Sampled: 06/20/2002 14:42
Extracted: 6/26/2002 14:53
Matrix: Soil
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	1.00	06/26/2002 14:53	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	1.00	06/26/2002 14:53	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 14:53	
Toluene	ND	5.0	ug/Kg	1.00	06/26/2002 14:53	
Ethyl benzene	ND	5.0	ug/Kg	1.00	06/26/2002 14:53	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 14:53	
Surrogates(s)						
1,2-Dichloroethane-d4	123.0	70-121	%	1.00	06/26/2002 14:53	sh
Toluene-d8	98.0	81-117	%	1.00	06/26/2002 14:53	

Submission #: 2002-06-0377

Fuel Oxygenates by 8260B

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CA DHS ELAP# 1094

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/06/26-01.27-005

Soil

Test(s): 8260FAB
QC Batch # 2002/06/26-01.27
Date Extracted: 06/26/2002 11:21

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/26/2002 11:21	
Benzene	ND	5.0	ug/Kg	06/26/2002 11:21	
Toluene	ND	5.0	ug/Kg	06/26/2002 11:21	
Ethyl benzene	ND	5.0	ug/Kg	06/26/2002 11:21	
Total xylenes	ND	5.0	ug/Kg	06/26/2002 11:21	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/26/2002 11:21	
Surrogates(s)					
1,2-Dichloroethane-d4	97.9	70-121	%	06/26/2002 11:21	
Toluene-d8	101.2	81-117	%	06/26/2002 11:21	

Submission #: 2002-06-0377

Fuel Oxygenates by 8260B

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Project: 2770.005

Received: 06/20/2002 17:25

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CA DHS ELAP# 1094

Batch QC Report

Prep(s): 5030B
Method Blank
MB: 2002/06/27-01.27-007

Soil

Test(s): 8260FAB
QC Batch # 2002/06/27-01.27
Date Extracted: 06/27/2002 13:01

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	1000	ug/Kg	06/27/2002 13:01	
Benzene	ND	5.0	ug/Kg	06/27/2002 13:01	
Toluene	ND	5.0	ug/Kg	06/27/2002 13:01	
Ethyl benzene	ND	5.0	ug/Kg	06/27/2002 13:01	
Total xylenes	ND	5.0	ug/Kg	06/27/2002 13:01	
Methyl tert-butyl ether (MTBE)	ND	5.0	ug/Kg	06/27/2002 13:01	
Surrogates(s)					
1,2-Dichloroethane-d4	99.2	70-121	%	06/27/2002 13:01	
Toluene-d8	101.9	81-117	%	06/27/2002 13:01	

Submission #: 2002-06-0377

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CA DHS ELAP# 1094

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Soil** **QC Batch # 2002/06/26-01.27**

LCS 2002/06/26-01.27-003 Extracted: 06/26/2002 Analyzed: 06/26/2002 10:29

LCSD 2002/06/26-01.27-004 Extracted: 06/26/2002 Analyzed: 06/26/2002 10:59

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	50.7	49.5	50.0	101.4	99.0	2.4	69-129	20		
Toluene	51.7	51.8	50.0	103.4	103.6	0.2	70-130	20		
Methyl tert-butyl ether (MTBE)	43.5	41.1	50.0	87.0	82.2	5.7	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	507	468	500	101.4	93.6		70-121			
Toluene-d8	512	516	500	102.4	103.2		81-117			

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CA DHS ELAP# 1094

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Soil** **QC Batch # 2002/06/27-01.27**

LCS 2002/06/27-01.27-005 Extracted: 06/27/2002 Analyzed: 06/27/2002 12:09
LCSD 2002/06/27-01.27-006 Extracted: 06/27/2002 Analyzed: 06/27/2002 12:39

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	52.7	50.8	50.0	105.4	101.6	3.7	69-129	20		
Toluene	54.3	51.8	50.0	108.6	103.6	4.7	70-130	20		
Methyl tert-butyl ether (MTBE)	45.1	38.3	50.0	90.2	76.6	16.3	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	526	476	500	105.2	95.2		70-121			
Toluene-d8	514	511	500	102.8	102.2		81-117			

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CA DHS ELAP# 1094

Legend and Notes

Result Flag

sh

Surrogate recovery was higher than QC limit due to matrix interference.

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-95-0.5	06/20/2002 12:50	Soil	18
SRB-95-3.0	06/20/2002 13:08	Soil	19
SRB-95-5.0	06/20/2002 13:15	Soil	20
SRB-96-0.5	06/20/2002 13:20	Soil	21
SRB-96-3.0	06/20/2002 13:27	Soil	22
SRB-96-5.0	06/20/2002 13:40	Soil	23
SRB-72-0.5	06/20/2002 14:00	Soil	24
SRB-72-3.0	06/20/2002 14:32	Soil	25
SRB-72-5.0	06/20/2002 14:42	Soil	26

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

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Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-95-0.5**
Lab ID: 2002-06-0377 - 18

Sampled: 06/20/2002 12:50
Extracted: 6/21/2002 13:48

Matrix: Soil
QC Batch#: 2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	120	5.0	mg/Kg	5.00	06/26/2002 06:11	ndp
Motor Oil	260	250	mg/Kg	5.00	06/26/2002 06:11	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	5.00	06/26/2002 06:11	sd

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

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Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**SRB-95-3.0**	Lab ID:	2002-06-0377 - 19
Sampled:	06/20/2002 13:08	Extracted:	6/21/2002 13:48
Matrix:	Soil	QC Batch#:	2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	410	5.0	mg/Kg	5.00	06/26/2002 06:11	ndp
Motor Oil	570	250	mg/Kg	5.00	06/26/2002 06:11	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	5.00	06/26/2002 06:11	sd

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

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Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-95-5.0**
Lab ID: 2002-06-0377 - 20

Sampled: 06/20/2002 13:15
Extracted: 6/21/2002 13:48

Matrix: Soil
QC Batch#: 2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	8.8	1.0	mg/Kg	1.00	06/25/2002 16:02	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/25/2002 16:02	
Surrogates(s)						
o-Terphenyl	91.3	60-130	%	1.00	06/25/2002 16:02	

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

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Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**SRB-96-0.5**	Lab ID:	2002-06-0377 - 21
Sampled:	06/20/2002 13:20	Extracted:	6/21/2002 13:48
Matrix:	Soil	QC Batch#:	2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	2400	50	mg/Kg	50.00	06/25/2002 19:09	ndp
Motor Oil	2800	2500	mg/Kg	50.00	06/25/2002 19:09	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	50.00	06/25/2002 19:09	sd

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**SRB-96-3.0**	Lab ID:	2002-06-0377 - 22
Sampled:	06/20/2002 13:27	Extracted:	6/21/2002 13:48
Matrix:	Soil	QC Batch#:	2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/25/2002 06:59	
Motor Oil	ND	50	mg/Kg	1.00	06/25/2002 06:59	
Surrogates(s)						
o-Terphenyl	89.3	60-130	%	1.00	06/25/2002 06:59	

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

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Project: 2770.005

Received: 06/20/2002 17:25

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Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-96-5.0**
Lab ID: 2002-06-0377 - 23
Sampled: 06/20/2002 13:40
Extracted: 6/21/2002 13:48
Matrix: Soil
QC Batch#: 2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/25/2002 07:39	
Motor Oil	ND	50	mg/Kg	1.00	06/25/2002 07:39	
Surrogates(s)						
o-Terphenyl	83.3	60-130	%	1.00	06/25/2002 07:39	

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants
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Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

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www.stl-inc.com
www.chromalab.com

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**SRB-72-0.5**	Lab ID:	2002-06-0377 - 24
Sampled:	06/20/2002 14:00	Extracted:	6/21/2002 13:48
Matrix:	Soil	QC Batch#:	2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	6.8	1.0	mg/Kg	1.00	06/25/2002 08:19	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/25/2002 08:19	
Surrogates(s)						
o-Terphenyl	88.2	60-130	%	1.00	06/25/2002 08:19	

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

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Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**SRB-72-3.0**	Lab ID:	2002-06-0377 - 25
Sampled:	06/20/2002 14:32	Extracted:	6/21/2002 13:48
Matrix:	Soil	QC Batch#:	2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	170	5.0	mg/Kg	5.00	06/26/2002 06:48	ndp
Motor Oil	260	250	mg/Kg	5.00	06/26/2002 06:48	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	5.00	06/26/2002 06:48	sd

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants
Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
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www.chromalab.com

Prep(s): 3550/8015M
Sample ID: **SRB-72-5.0**
Sampled: 06/20/2002 14:42
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0377 - 26
Extracted: 6/21/2002 13:48
QC Batch#: 2002/06/21-04.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1.0	1.0	mg/Kg	1.00	06/26/2002 06:48	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/26/2002 06:48	
Surrogates(s)						
o-Terphenyl	81.9	60-130	%	1.00	06/26/2002 06:48	

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

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1220 Quarry Lane
Pleasanton, CA 94566

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www.chromalab.com

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Method Blank

Soil

QC Batch # 2002/06/21-04.10

MB: 2002/06/21-04.10-001

Date Extracted: 06/21/2002 13:48

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/25/2002 04:50	
Motor Oil	ND	50	mg/Kg	06/25/2002 04:50	
Surrogates(s)					
o-Terphenyl	79.8	60-130	%	06/25/2002 04:50	

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

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Project: 2770.005

Received: 06/20/2002 17:25

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www.chromalab.com

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/21-04.10**

LCS 2002/06/21-04.10-002 Extracted: 06/21/2002 Analyzed: 06/25/2002 03:36

LCSD 2002/06/21-04.10-003 Extracted: 06/21/2002 Analyzed: 06/25/2002 04:13

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	32.3	32.6	41.7	77.5	78.2	0.9	60-130	25		
Surrogates(s)										
o-Terphenyl	17.8	18.0	20.0	88.8	89.8		60-130	0		

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

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Project: 2770.005

Received: 06/20/2002 17:25

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www.chromalab.com

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/06/21-04.10**

SRB-95-0.5 >> MS

Lab ID: 2002-06-0377 - 018

MS: 2002/06/21-04.10-004 Extracted: 06/21/2002 Analized: 06/25/2002 10:27
Dilution: 1.00

MSD: 2002/06/21-04.10-005 Extracted: 06/21/2002 Analized: 06/25/2002 11:04
Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	163	191	121	41.3	101.7	171.6	51.2	60-130	25		mso,rpd
Surrogate(s)											
o-Terphenyl	18.0	19.2		20.0	90.1	95.8		60-130	0		

Submission #: 2002-06-0377

TEPH w/ Silica Gel Clean-up

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

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www.chromalab.com

Legend and Notes

Result Flag

mso

MS/MSD spike recoveries were out of QC limits due to matrix interference. Precision and Acc verified by LCS/LCSD.

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

rpd

Analyte RPD was out of QC limits due to sample heterogeneity.

sd

Surrogate recovery not reportable due to required dilution.

2002-06-0377

67032

Chain-of Custody Record

016286

Date: 6/19/02 | Page 1 of 2

Project No.: 2770.005

Samplers (Signature:)

Sarah Mearon

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup					HOLD	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
	ANALYSES																		REMARKS					* Call Susan Gallardo at 510-663-4137 for analytical requirements.
1	6/19/02	1620	SRB-92-4.5															X	S			X	1	6"x15/8" metal sleeves
2	6/19/02	1622	SRB-92-8.0															X	S			X	1	
3	6/19/02	1624	SRB-92-11.0															X	S			X	1	
4	6/19/02	1626	SRB-92-14.0															X	S			X	1	
5	6/19/02	1628	SRB-92-17.0															X	S			X	1	
6	6/19/02	1630	SRB-92-19.0															X	S			X	1	
7	6/20/02	0827	SRB-93-1.5															X	S			X	1	
8	6/20/02	0830	SRB-93-5.0															X	S			X	1	
9	6/20/02	0900	SRB-93-14.0															X	S			X	1	
10	6/20/02	0905	SRB-93-15.5															X	S			X	1	
11	6/20/02	0915	SRB-93-17.0															X	S			X	1	
12	6/20/02	0920	SRB-93-18.0															X	S			X	1	
13	6/20/02	0950	SRB-94-2.0															X	S			X	1	
14	6/20/02	0952	SRB-94-5.0															X	S			X	1	
15	6/20/02	0954	SRB-94-8.0															X	S			X	1	

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rome

Total No. of Containers: 15

Relinquished by (Signature): Sarah Mearon	Date: 6/20/02	Relinquished by (Signature):	Date: 6/20	Relinquished by (Signature):	Date:	Method of Shipment: lab courier	
Printed Name: Sarah Mearon	Time: 1530	Printed Name: VAN SPALL	Time: 17:25	Printed Name:	Time:	Laboratory Comments and Log No.: World Courier	
Company: Geomatrix		Company: World Courier		Company:			
Received by:	Date: 6/20	Received by:	Date:	Received by: Dennis Harrington	Date: 6/20/02	4.0°C	
Printed Name: VAN SPALL	Time:	Printed Name:	Time:	Printed Name: D Harrington	Time: 1725		
Company: World Courier		Company:		Company: STL-SF			

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 51[illegible]4141

2002-06-0377

67 32

Chain-of Custody Record

u16287

Date: 6/20/02 | Page: 2 of 2

Project No.: 2770.005

Samplers (Signature): Sarah Mearon

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 BTEX and MTBE	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup (3630)	HOLD	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
16	6/20/02	0956	SRB-94-11.0											X	S			X	1	6"x 15/8" metal sleeves
17	6/20/02	1040	SRB-94-16.5											X	S			X	1	↓
18	6/20/02	1250	SRB-95-0.5				X			X	X	X	X		S			X	4	1 6"x 2" brass sleeve, 3 Encore
19	6/20/02	1308	SRB-95-3.0				X			X	X	X	X		S			X	4	↓
20	6/20/02	1315	SRB-95-5.0				X			X	X	X	X		S			X	4	
21	6/20/02	1320	SRB-96-0.5				X			X	X	X	X		S			X	4	
22	6/20/02	1327	SRB-96-3.0				X			X	X	X	X		S			X	4	
23	6/20/02	1340	SRB-96-5.0				X			X	X	X	X		S			X	4	
24	6/20/02	1400	SRB-72-0.5				X			X	X	X	X		S			X	4	
25	6/20/02	1432	SRB-72-3.0				X			X	X	X	X		S			X	4	
26	6/20/02	1442	SRB-72-5.0				X			X	X	X	X		S			X	4	↓
																				* Encore samples must be preserved or analyzed within 48 hours of sample collection.
																			38	

SM 6/20/02

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rome

Total No. of Containers: 38

Additional Comments: * Call Susan Gallardo at 510-663-4137 for analytical requirements for hold samples.

Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time
Sarah Mearon	6/20/02	1530		6/20	17:25			
Printed Name: Sarah Mearon			Printed Name: VAN SPACL			Printed Name:		
Company: Geomatrix			Company: World Courier 5016			Company:		
Received by:	Date: 6/2		Received by:	Date:		Received by: Denise Harrington	Date: 6/20/02	
Printed Name: VAN SPACL WC 501	Time:		Printed Name:	Time:		Printed Name: D. Harrington	Time: 1725	
Company: Courier 502			Company:			Company: STL-SF		

Method of Shipment: lab courier

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

67032

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 06 - 0377

Checklist completed by: (initials) CR Date: 06/21/02

Courier name: ☐ STL San Francisco ☐ Client World

Custody seals intact on shipping container/samples (no seals)	Yes____ No____	Not Present ✓
Chain of custody present?	Yes ✓ No____	
Chain of custody signed when relinquished and received?	Yes ✓ No____	
Chain of custody agrees with sample labels?	Yes ✓ No____	
Samples in proper container/bottle?	Yes ✓ No____	
Sample containers intact?	Yes ✓ No____	
Sufficient sample volume for indicated test?	Yes ✓ No____	
All samples received within holding time?	Yes ✓ No____	
Container/Temp Blank temperature in compliance (4^{o} C ± 2)?	Temp: 4.0 °C	Yes ✓ No____
Water - VOA vials have zero headspace?	No VOA vials submitted ✓	Yes____ No____

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - pH acceptable upon receipt? ☐ Yes ☐ No

☐ pH adjusted– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ____/____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Geomatrix Consultants	✉ 2101 Webster Street, 12th Floor Oakland, CA 94612
Attn: Susan Gallardo	Phone: (510) 663-4100 Fax: (510) 663-4141
2770.005	Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SRB-79-12.5	Soil	06/18/2002 09:25	10
SRB-83-14	Soil	06/18/2002 15:00	50
SRB-83-11.0	Soil	06/18/2002 15:00	51

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

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www.chromalab.com

CA DHS ELAP#2496

Geomatrix Consultants
Attn: Susan Gallardo

Test Method: 8270C-SIM
Prep Method: 3550B/8270C-SIM

Sample ID:	**SRB-79-12.5**	Lab Sample ID:	2002-06-0351-010
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/28/2002 05:27
Sampled:	06/18/2002 09:25	QC-Batch:	2002/06/28-01.40
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Naphthalene	ND	10	ug/Kg	2.00	07/01/2002 14:31	
Acenaphthylene	24	10	ug/Kg	2.00	07/01/2002 14:31	
Acenaphthene	51	10	ug/Kg	2.00	07/01/2002 14:31	
Fluorene	16	10	ug/Kg	2.00	07/01/2002 14:31	
Phenanthrene	220	10	ug/Kg	2.00	07/01/2002 14:31	
Anthracene	150	10	ug/Kg	2.00	07/01/2002 14:31	
Fluoranthene	19	10	ug/Kg	2.00	07/01/2002 14:31	
Pyrene	230	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(a)anthracene	33	10	ug/Kg	2.00	07/01/2002 14:31	
Chrysene	97	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(b)fluoranthene	20	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(k)fluoranthene	ND	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(a)pyrene	25	10	ug/Kg	2.00	07/01/2002 14:31	
Indeno(1,2,3-c,d)pyrene	ND	10	ug/Kg	2.00	07/01/2002 14:31	
Dibenzo(a,h)anthracene	ND	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(g,h,i)perylene	11	10	ug/Kg	2.00	07/01/2002 14:31	
Surrogate(s)						
2-Fluorobiphenyl	78.2	30-115	%	2.00	07/01/2002 14:31	
p-Terphenyl-d14	96.8	18-137	%	2.00	07/01/2002 14:31	

Submission #: 2002-06-0351

SEVERN TRENT SERVICES

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants
Attn: Susan Gallardo

Test Method: 8270C-SIM
Prep Method: 3550B/8270C-SIM

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1220 Quarry Lane
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www.chromalab.com

CA DHS ELAP#2496

Sample ID:	**SRB-83-14**	Lab Sample ID:	2002-06-0351-050
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/28/2002 05:27
Sampled:	06/18/2002 15:00	QC-Batch:	2002/06/28-01.40
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Naphthalene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Acenaphthylene	39	25	ug/Kg	5.00	07/01/2002 13:11	
Acenaphthene	32	25	ug/Kg	5.00	07/01/2002 13:11	
Fluorene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Phenanthrene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Anthracene	330	25	ug/Kg	5.00	07/01/2002 13:11	
Fluoranthene	74	25	ug/Kg	5.00	07/01/2002 13:11	
Pyrene	460	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(a)anthracene	89	25	ug/Kg	5.00	07/01/2002 13:11	
Chrysene	220	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(b)fluoranthene	41	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(k)fluoranthene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(a)pyrene	52	25	ug/Kg	5.00	07/01/2002 13:11	
Indeno(1,2,3-c,d)pyrene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Dibenzo(a,h)anthracene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(g,h,i)perylene	25	25	ug/Kg	5.00	07/01/2002 13:11	
Surrogate(s)						
2-Fluorobiphenyl	93.3	30-115	%	5.00	07/01/2002 13:11	
p-Terphenyl-d14	95.1	18-137	%	5.00	07/01/2002 13:11	

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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Pleasanton, CA 94566

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Fax 925 484 1096
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www.chromalab.com

CA DHS ELAP#2496

Geomatrix Consultants
Attn: Susan Gallardo

Test Method: 8270C-SIM
Prep Method: 3550B/8270C-SIM

Sample ID:	SRB-83-11.0	Lab Sample ID:	2002-06-0351-051
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/28/2002 05:27
Sampled:	06/18/2002 15:00	QC-Batch:	2002/06/28-01.40
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Fluorene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Anthracene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Pyrene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Chrysene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Surrogate(s)						
2-Fluorobiphenyl	67.0	30-115	%	1.00	07/01/2002 12:44	
p-Terphenyl-d14	92.7	18-137	%	1.00	07/01/2002 12:44	

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CA DHS ELAP#2496

PNA analysis by 8270C/SIM GC/MS

Batch QC report

Test Method: 8270C-SIM

Prep Method: 3550B/8270C-SIM

Method Blank | **Soil** | **QC Batch # 2002/06/28-01.40**

MB: 2002/06/28-01.40-003 | Date Extracted: 06/28/2002 05:27

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	07/01/2002 11:18	
Acenaphthylene	ND	5.0	ug/Kg	07/01/2002 11:18	
Acenaphthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Fluorene	ND	5.0	ug/Kg	07/01/2002 11:18	
Phenanthrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(a)anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Chrysene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(a)pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	07/01/2002 11:18	
Surrogate(s)					
2-Fluorobiphenyl	64.8	30-115	%	07/01/2002 11:18	
p-Terphenyl-d14	88.0	18-137	%	07/01/2002 11:18	

Submission #: 2002-06-0351

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PNA analysis by 8270C/SIM GC/MS

Batch QC report

Test Method: 8270C-SIM

Prep Method: 3550B/8270C -SIM

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/06/28-01.40**

LCS: 2002/06/28-01.40-004 Extracted: 06/28/2002 05:27 Analyzed: 07/01/2002 11:45

LCSD: 2002/06/28-01.40-005 Extracted: 06/28/2002 05:27 Analyzed: 07/01/2002 12:12

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Acenaphthene	229	259	332	333	69.0	77.8	12.0	50-150	30		
Phenanthrene	240	272	332	333	72.3	81.7	12.2	50-150	30		
Pyrene	290	324	332	333	87.3	97.3	10.8	50-150	30		
Chrysene	248	280	332	333	74.7	84.1	11.8	50-150	30		
Benzo(a)pyrene	204	245	332	333	61.4	73.6	18.1	50-150	30		
Surrogate(s)											
2-Fluorobiphenyl	5.83	7.01	10	10	58.3	70.1		30-115			
p-Terphenyl-d14	8.52	9.47	10	10	85.2	94.7		18-137			

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CA DHS ELAP#2496

PNA analysis by 8270C/SIM GC/MS

Batch QC Report

Test Method: 8270C-SIM

Prep Method: 3550B/8270C-SIM

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/06/28-01.40**

Sample ID: **SRB-83-14 >> MS** Lab ID: 2002-06-0351-050

MS: 2002/06/28-01.40-008 Extracted: 06/28/2002 05:27 Analyzed: 07/01/2002 13:38
Dilution: 5

MSD: 2002/06/28-01.40-009 Extracted: 06/28/2002 05:27 Analyzed: 07/01/2002 14:05
Dilution: 5

Compound	Conc. [ug/Kg]			Exp.Conc.		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Acenaphthene	311	313	31.9	331	331	84.3	84.9	0.7	50-150	30		
Phenanthrene	320	303	8.38	331	331	94.1	89.0	5.6	50-150	30		
Pyrene	739	669	463	331	331	83.4	62.2	29.1	50-150	30		
Chrysene	439	379	222	331	331	65.6	47.4	32.2	50-150	30		rpd
Benzo(a)pyrene	316	297	52.0	331	331	79.8	74.0	7.5	50-150	30		
Surrogate(s)												
2-Fluorobiphenyl	8.32	8.14		10	10	83.2	81.4		30-115			
p-Terphenyl-d14	9.22	9.22		10	10	92.2	92.2		18-137			

Submission #: 2002-06-0351

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CA DHS ELAP#2496

PNA analysis by 8270C/SIM GC/MS

Legend & Notes

Test Method: 8270C-SIM

Prep Method: 3550B/8270C-SIM

QC Compound Flags

rpd

Analyte RPD was out of QC limits due to sample heterogeneity.

Submission #: 2002-06-0351

Date: July 9, 2002

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CA DHS ELAP#2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn: Ms. Susan Gallardo

Dear Ms. Gallardo,

Attached is our report for your samples received on Wednesday June 19, 2002
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 3, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour
Project Manager

Submission #: 2002-06-0351

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants

Attn.: Susan Gallardo
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/19/2002 19:30

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www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-79-12.5	06/18/2002 09:25	Soil	10

Submission #: 2002-06-0351

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants

Attn.: Susan Gallardo
2101 Webster Street, 12th Floor
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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Prep(s): 5030B
Test(s): 8260B

Sample ID: **SRB-79-12.5**
Lab ID: 2002-06-0351 - 10

Sampled: 06/18/2002 09:25
Extracted: 7/2/2002 16:14

Matrix: Soil
QC Batch#: 2002/07/01-02.60

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Benzene	ND	250	ug/Kg	1.00	07/02/2002 16:14	
Toluene	ND	250	ug/Kg	1.00	07/02/2002 16:14	
Ethyl benzene	ND	250	ug/Kg	1.00	07/02/2002 16:14	
Total xylenes	ND	500	ug/Kg	1.00	07/02/2002 16:14	
Surrogates(s)						
1,2-Dichloroethane-d4	85.5	70-121	%	1.00	07/02/2002 16:14	
Toluene-d8	80.5	81-117	%	1.00	07/02/2002 16:14	sl

Submission #: 2002-06-0351

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5035
Method Blank
MB: 2002/07/01-02.60-054

Soil

Test(s): 8260B
QC Batch # 2002/07/01-02.60
Date Extracted: 07/02/2002 09:54

Compound	Conc.	RL	Unit	Analyzed	Flag
Benzene	ND	250	ug/Kg	07/02/2002 09:54	
Ethylbenzene	ND	250	ug/Kg	07/02/2002 09:54	
Toluene	ND	250	ug/Kg	07/02/2002 09:54	
Total xylenes	ND	500	ug/Kg	07/02/2002 09:54	
Surrogates(s)					
1,2-Dichloroethane-d4	84.3	70-121	%	07/02/2002 09:54	
Toluene-d8	92.6	81-117	%	07/02/2002 09:54	

Submission #: 2002-06-0351

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants
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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5035

Test(s): 8260B

Laboratory Control Spike **Soil** **QC Batch # 2002/07/01-02.60**

LCS 2002/07/01-02.60-047 Extracted: 07/02/2002 Analyzed: 07/02/2002 08:47
LCSD 2002/07/01-02.60-021 Extracted: 07/02/2002 Analyzed: 07/02/2002 09:21

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	9890	9580	10000	98.9	95.8	3.2	69-129	20		
Toluene	10400	10100	10000	104.0	101.0	2.9	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	226	229	250	90.4	91.6		70-121			
Toluene-d8	257	258	250	102.8	103.2		81-117			

Submission #: 2002-06-0351

Gas/BTEXFuel Oxygenates by 8260B (High Level)

Geomatrix Consultants

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Project: 2770.005

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Legend and Notes

Result Flag

sl

Surrogate recoveries were lower than QC limit due to matrix interference, confirmed by reanal

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

Geomatrix Consultants

Attn.: Susan Gallardo
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Project: 2770.005

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-81-8.5	06/18/2002 11:30	Soil	15
SRB-81-15.5	06/18/2002 11:35	Soil	16
SRB-81-22.0	06/18/2002 11:55	Soil	18
SRB-88-21.0	06/19/2002 11:05	Soil	33
SRB-91-14.0	06/19/2002 15:07	Soil	43
SRB-91-11.0	06/19/2002 15:00	Soil	47

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

Geomatrix Consultants

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CA DHS ELAP# 2496

Prep(s): 5035
Test(s): 8260B

Sample ID: **SRB-81-8.5**
Lab ID: 2002-06-0351 - 15

Sampled: 06/18/2002 11:30
Extracted: 6/26/2002 15:16

Matrix: Soil
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/Kg	1.00	06/26/2002 15:16	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 15:16	
Toluene	15	5.0	ug/Kg	1.00	06/26/2002 15:16	
Ethylbenzene	ND	5.0	ug/Kg	1.00	06/26/2002 15:16	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 15:16	
Surrogates(s)						
4-Bromofluorobenzene	97.8	74-121	%	1.00	06/26/2002 15:16	
1,2-Dichloroethane-d4	93.2	70-121	%	1.00	06/26/2002 15:16	
Toluene-d8	98.8	81-117	%	1.00	06/26/2002 15:16	

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

Geomatrix Consultants

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Prep(s): 5035 Test(s): 8260B

Sample ID: **SRB-81-15.5** Lab ID: 2002-06-0351 - 16

Sampled: 06/18/2002 11:35 Extracted: 6/26/2002 16:22

Matrix: Soil QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/Kg	1.00	06/26/2002 16:22	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 16:22	
Toluene	16	5.0	ug/Kg	1.00	06/26/2002 16:22	
Ethylbenzene	ND	5.0	ug/Kg	1.00	06/26/2002 16:22	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 16:22	
Surrogates(s)						
4-Bromofluorobenzene	93.4	74-121	%	1.00	06/26/2002 16:22	
1,2-Dichloroethane-d4	104.7	70-121	%	1.00	06/26/2002 16:22	
Toluene-d8	96.2	81-117	%	1.00	06/26/2002 16:22	

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

Geomatrix Consultants

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5035
Sample ID: **SRB-81-22.0**
Sampled: 06/18/2002 11:55
Matrix: Soil

Test(s): 8260B
Lab ID: 2002-06-0351 - 18
Extracted: 6/26/2002 16:45
QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/Kg	1.00	06/26/2002 16:45	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 16:45	
Toluene	ND	5.0	ug/Kg	1.00	06/26/2002 16:45	
Ethylbenzene	ND	5.0	ug/Kg	1.00	06/26/2002 16:45	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 16:45	
Surrogates(s)						
4-Bromofluorobenzene	101.0	74-121	%	1.00	06/26/2002 16:45	
1,2-Dichloroethane-d4	120.6	70-121	%	1.00	06/26/2002 16:45	
Toluene-d8	104.1	81-117	%	1.00	06/26/2002 16:45	

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

Geomatrix Consultants

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Prep(s): 5035 Test(s): 8260B

Sample ID: **SRB-88-21.0** Lab ID: 2002-06-0351 - 33

Sampled: 06/19/2002 11:05 Extracted: 6/26/2002 17:07

Matrix: Soil QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/Kg	1.00	06/26/2002 17:07	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 17:07	
Toluene	20	5.0	ug/Kg	1.00	06/26/2002 17:07	
Ethylbenzene	ND	5.0	ug/Kg	1.00	06/26/2002 17:07	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 17:07	
Surrogates(s)						
4-Bromofluorobenzene	91.4	74-121	%	1.00	06/26/2002 17:07	
1,2-Dichloroethane-d4	102.8	70-121	%	1.00	06/26/2002 17:07	
Toluene-d8	102.4	81-117	%	1.00	06/26/2002 17:07	

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

Geomatrix Consultants

Attn.: Susan Gallardo
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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Prep(s): 5035 Test(s): 8260B

Sample ID: **SRB-91-14.0** Lab ID: 2002-06-0351 - 43

Sampled: 06/19/2002 15:07 Extracted: 6/26/2002 17:29

Matrix: Soil QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/Kg	1.00	06/26/2002 17:29	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 17:29	
Toluene	25	5.0	ug/Kg	1.00	06/26/2002 17:29	
Ethylbenzene	ND	5.0	ug/Kg	1.00	06/26/2002 17:29	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 17:29	
Surrogates(s)						
4-Bromofluorobenzene	95.8	74-121	%	1.00	06/26/2002 17:29	
1,2-Dichloroethane-d4	107.7	70-121	%	1.00	06/26/2002 17:29	
Toluene-d8	100.9	81-117	%	1.00	06/26/2002 17:29	

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 5035 Test(s): 8260B

Sample ID: **SRB-91-11.0** Lab ID: 2002-06-0351 - 47

Sampled: 06/19/2002 15:00 Extracted: 6/26/2002 17:52

Matrix: Soil QC Batch#: 2002/06/26-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
MTBE	ND	5.0	ug/Kg	1.00	06/26/2002 17:52	
Benzene	ND	5.0	ug/Kg	1.00	06/26/2002 17:52	
Toluene	21	5.0	ug/Kg	1.00	06/26/2002 17:52	
Ethylbenzene	ND	5.0	ug/Kg	1.00	06/26/2002 17:52	
Total xylenes	ND	5.0	ug/Kg	1.00	06/26/2002 17:52	
Surrogates(s)						
4-Bromofluorobenzene	95.5	74-121	%	1.00	06/26/2002 17:52	
1,2-Dichloroethane-d4	102.4	70-121	%	1.00	06/26/2002 17:52	
Toluene-d8	99.9	81-117	%	1.00	06/26/2002 17:52	

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5035 | Test(s): 8260B

Method Blank | Soil | **QC Batch # 2002/06/26-01.27**

MB: 2002/06/26-01.27-006 | Date Extracted: 06/26/2002 11:21

Compound	Conc.	RL	Unit	Analyzed	Flag
MTBE	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzene	ND	5.0	ug/Kg	06/26/2002 11:21	
Ethylbenzene	ND	5.0	ug/Kg	06/26/2002 11:21	
Toluene	ND	5.0	ug/Kg	06/26/2002 11:21	
Total xylenes	ND	5.0	ug/Kg	06/26/2002 11:21	
Surrogates(s)					
4-Bromofluorobenzene	90.4	74-121	%	06/26/2002 11:21	
1,2-Dichloroethane-d4	98.0	70-121	%	06/26/2002 11:21	
Toluene-d8	101.2	81-117	%	06/26/2002 11:21	

Submission #: 2002-06-0351

MTBE+BTEX by 8260B

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Soil** **QC Batch # 2002/06/26-01.27**

LCS 2002/06/26-01.27-003 Extracted: 06/26/2002 Analyzed: 06/26/2002 10:29
LCSD 2002/06/26-01.27-004 Extracted: 06/26/2002 Analyzed: 06/26/2002 10:59

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	50.7	49.5	50.0	101.4	99.0	2.4	69-129	20		
Toluene	51.7	51.8	50.0	103.4	103.6	0.2	70-130	20		
Methyl tert-butyl ether (MTBE)	43.5	41.1	50.0	87.0	82.2	5.7	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	507	468	500	101.4	93.6		70-121			
Toluene-d8	512	516	500	102.4	103.2		81-117			

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-81-8.5	06/18/2002 11:30	Soil	15
SRB-81-15.5	06/18/2002 11:35	Soil	16
SRB-81-22.0	06/18/2002 11:55	Soil	18
SRB-88-21.0	06/19/2002 11:05	Soil	33
SRB-91-14.0	06/19/2002 15:07	Soil	43
SRB-91-11.0	06/19/2002 15:00	Soil	47

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-81-8.5**
Lab ID: 2002-06-0351 - 15
Sampled: 06/18/2002 11:30
Extracted: 6/25/2002 05:28
Matrix: Soil
QC Batch#: 2002/06/25-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Acenaphthylene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Acenaphthene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Fluorene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Phenanthrene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Chrysene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	06/26/2002 14:34	
Surrogates(s)						
2-Fluorobiphenyl	79.2	30-115	%	1.00	06/26/2002 14:34	
p-Terphenyl-d14	100.5	18-137	%	1.00	06/26/2002 14:34	

Submission #: 2002-06-0351

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Sample ID: **SRB-81-15.5**
Sampled: 06/18/2002 11:35
Matrix: Soil

Test(s): 8270C-SIM
Lab ID: 2002-06-0351 - 16
Extracted: 6/25/2002 05:28
QC Batch#: 2002/06/25-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Acenaphthylene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Acenaphthene	43	25	ug/Kg	5.00	06/26/2002 15:28	
Fluorene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Phenanthrene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Anthracene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Fluoranthene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Pyrene	110	25	ug/Kg	5.00	06/26/2002 15:28	
Benzo(a)anthracene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Chrysene	55	25	ug/Kg	5.00	06/26/2002 15:28	
Benzo(b)fluoranthene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Benzo(k)fluoranthene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Benzo(a)pyrene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Indeno(1,2,3-c,d)pyrene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Dibenzo(a,h)anthracene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Benzo(g,h,i)perylene	ND	25	ug/Kg	5.00	06/26/2002 15:28	
Surrogates(s)						
2-Fluorobiphenyl	86.9	30-115	%	5.00	06/26/2002 15:28	
p-Terphenyl-d14	104.5	18-137	%	5.00	06/26/2002 15:28	

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-81-22.0**
Lab ID: 2002-06-0351 - 18
Sampled: 06/18/2002 11:55
Extracted: 6/25/2002 05:28
Matrix: Soil
QC Batch#: 2002/06/25-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Acenaphthylene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Acenaphthene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Fluorene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Phenanthrene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Chrysene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	06/26/2002 12:41	
Surrogates(s)						
2-Fluorobiphenyl	77.6	30-115	%	1.00	06/26/2002 12:41	
p-Terphenyl-d14	98.3	18-137	%	1.00	06/26/2002 12:41	

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-88-21.0**
Lab ID: 2002-06-0351 - 33
Sampled: 06/19/2002 11:05
Extracted: 6/25/2002 05:28
Matrix: Soil
QC Batch#: 2002/06/25-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Acenaphthylene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Acenaphthene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Fluorene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Phenanthrene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Pyrene	5.4	5.0	ug/Kg	1.00	06/26/2002 15:54	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Chrysene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	06/26/2002 15:54	
Surrogates(s)						
2-Fluorobiphenyl	76.9	30-115	%	1.00	06/26/2002 15:54	
p-Terphenyl-d14	98.9	18-137	%	1.00	06/26/2002 15:54	

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-91-14.0**
Lab ID: 2002-06-0351 - 43
Sampled: 06/19/2002 15:07
Extracted: 6/25/2002 05:28
Matrix: Soil
QC Batch#: 2002/06/25-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Acenaphthylene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Acenaphthene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Fluorene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Phenanthrene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Fluoranthene	6.7	5.0	ug/Kg	1.00	06/26/2002 14:01	
Pyrene	42	5.0	ug/Kg	1.00	06/26/2002 14:01	
Benzo(a)anthracene	6.9	5.0	ug/Kg	1.00	06/26/2002 14:01	
Chrysene	20	5.0	ug/Kg	1.00	06/26/2002 14:01	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Benzo(a)pyrene	5.0	5.0	ug/Kg	1.00	06/26/2002 14:01	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	06/26/2002 14:01	
Surrogates(s)						
2-Fluorobiphenyl	79.3	30-115	%	1.00	06/26/2002 14:01	
p-Terphenyl-d14	91.1	18-137	%	1.00	06/26/2002 14:01	

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-91-11.0**
Lab ID: 2002-06-0351 - 47
Sampled: 06/19/2002 15:00
Extracted: 6/25/2002 05:28
Matrix: Soil
QC Batch#: 2002/06/25-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Acenaphthylene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Acenaphthene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Fluorene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Phenanthrene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Chrysene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	06/26/2002 15:01	
Surrogates(s)						
2-Fluorobiphenyl	81.8	30-115	%	1.00	06/26/2002 15:01	
p-Terphenyl-d14	102.8	18-137	%	1.00	06/26/2002 15:01	

Submission #: 2002-06-0351

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM
Method Blank

Soil

Test(s): 8270C-SIM
QC Batch # 2002/06/25-01.40

MB: 2002/06/25-01.40-003

Date Extracted: 06/25/2002 05:28

Compound	Conc.	RL	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	06/26/2002 11:21	
Acenaphthylene	ND	5.0	ug/Kg	06/26/2002 11:21	
Acenaphthene	ND	5.0	ug/Kg	06/26/2002 11:21	
Fluorene	ND	5.0	ug/Kg	06/26/2002 11:21	
Phenanthrene	ND	5.0	ug/Kg	06/26/2002 11:21	
Anthracene	ND	5.0	ug/Kg	06/26/2002 11:21	
Fluoranthene	ND	5.0	ug/Kg	06/26/2002 11:21	
Pyrene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(a)anthracene	ND	5.0	ug/Kg	06/26/2002 11:21	
Chrysene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(a)pyrene	ND	5.0	ug/Kg	06/26/2002 11:21	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	06/26/2002 11:21	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	06/26/2002 11:21	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	06/26/2002 11:21	
Surrogates(s)					
2-Fluorobiphenyl	63.9	30-115	%	06/26/2002 11:21	
p-Terphenyl-d14	75.7	18-137	%	06/26/2002 11:21	

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Laboratory Control Spike **Soil** **QC Batch # 2002/06/25-01.40**

LCS 2002/06/25-01.40-004 Extracted: 06/25/2002 Analyzed: 06/26/2002 11:47

LCSD 2002/06/25-01.40-005 Extracted: 06/25/2002 Analyzed: 06/26/2002 12:14

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Acenaphthene	261	264	333	78.4	79.3	1.1	50-150	30		
Phenanthrene	263	266	333	79.0	79.9	1.1	50-150	30		
Pyrene	295	302	333	88.6	90.7	2.3	50-150	30		
Chrysene	271	270	333	81.4	81.1	0.4	50-150	30		
Benzo(a)pyrene	241	245	333	72.4	73.6	1.6	50-150	30		
Surrogates(s)										
2-Fluorobiphenyl	7.71	7.67	10	77.1	76.7		30-115			
p-Terphenyl-d14	8.96	9.00	10	89.6	90.0		18-137			

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/06/25-01.40**

SRB-81-22.0 >> MS

Lab ID: 2002-06-0351 - 018

MS: 2002/06/25-01.40-007 Extracted: 06/25/2002 Analized: 06/26/2002 13:07

Dilution: 1.00

MSD: 2002/06/25-01.40-008 Extracted: 06/25/2002 Analized: 06/26/2002 13:34

Dilution: 1.00

Compound	Conc. ug/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	ug/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Acenaphthene	277	274	ND	330	83.9	82.8	1.3	50-150	30		
Phenanthrene	280	277	ND	330	84.8	83.7	1.3	50-150	30		
Pyrene	329	323	ND	330	99.7	97.6	2.1	50-150	30		
Chrysene	283	284	ND	330	85.8	85.8	0.0	50-150	30		
Benzo(a)pyrene	257	268	ND	330	77.9	81.0	3.9	50-150	30		
Surrogate(s)											
2-Fluorobiphenyl	7.52	7.52		10	75.2	75.2		30-115			
p-Terphenyl-d14	9.70	9.66		10	97.0	96.6		18-137			

Submission #: 2002-06-0351

Volatile Organic Compounds by 8260B

Geomatrix Consultants

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-83-14	06/18/2002 15:00	Soil	50
SRB-83-11.0	06/18/2002 15:00	Soil	51

Submission #: 2002-06-0351

Volatile Organic Compounds by 8260B

Geomatrix Consultants

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Prep(s):	5035	Test(s):	8260B
Sample ID:	**SRB-83-14**	Lab ID:	2002-06-0351 - 50
Sampled:	06/18/2002 15:00	Extracted:	7/2/2002 13:26
Matrix:	Soil	QC Batch#:	2002/07/02-01.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Benzene	ND	5.0	ug/Kg	1.00	07/02/2002 13:26	
Ethylbenzene	ND	5.0	ug/Kg	1.00	07/02/2002 13:26	
Toluene	19	5.0	ug/Kg	1.00	07/02/2002 13:26	
Total xylenes	ND	5.0	ug/Kg	1.00	07/02/2002 13:26	
Surrogates(s)						
4-Bromofluorobenzene	93.9	74-121	%	1.00	07/02/2002 13:26	
1,2-Dichloroethane-d4	102.8	70-121	%	1.00	07/02/2002 13:26	
Toluene-d8	99.7	81-117	%	1.00	07/02/2002 13:26	

Submission #: 2002-06-0351

Volatile Organic Compounds by 8260B

Geomatrix Consultants
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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Prep(s): 5035 Test(s): 8260B

Sample ID: **SRB-83-11.0** Lab ID: 2002-06-0351 - 51

Sampled: 06/18/2002 15:00 Extracted: 7/1/2002 16:54

Matrix: Soil QC Batch#: 2002/07/01-02.27

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Benzene	ND	5.0	ug/Kg	1.00	07/01/2002 16:54	
Ethylbenzene	ND	5.0	ug/Kg	1.00	07/01/2002 16:54	
Toluene	ND	5.0	ug/Kg	1.00	07/01/2002 16:54	
Total xylenes	ND	5.0	ug/Kg	1.00	07/01/2002 16:54	
Surrogates(s)						
4-Bromofluorobenzene	91.9	74-121	%	1.00	07/01/2002 16:54	
1,2-Dichloroethane-d4	112.8	70-121	%	1.00	07/01/2002 16:54	
Toluene-d8	102.1	81-117	%	1.00	07/01/2002 16:54	

Submission #: 2002-06-0351

Volatile Organic Compounds by 8260B

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B
Method Blank

Soil

Test(s): 8260FAB
QC Batch # 2002/07/01-02.27

MB: 2002/07/01-02.27-001

Date Extracted: 07/01/2002 14:49

Compound	Conc.	RL	Unit	Analyzed	Flag
Benzene	ND	5.0	ug/Kg	07/01/2002 14:49	
Toluene	ND	5.0	ug/Kg	07/01/2002 14:49	
Ethyl benzene	ND	5.0	ug/Kg	07/01/2002 14:49	
Total xylenes	ND	5.0	ug/Kg	07/01/2002 14:49	
Surrogates(s)					
1,2-Dichloroethane-d4	108.2	70-121	%	07/01/2002 14:49	
Toluene-d8	101.2	81-117	%	07/01/2002 14:49	

Submission #: 2002-06-0351

Volatile Organic Compounds by 8260B

Geomatrix Consultants
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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B — Test(s): 8260B

Method Blank — Soil — **QC Batch # 2002/07/01-02.27**

MB: 2002/07/01-02.27-004 — Date Extracted: 07/01/2002 14:49

Compound	Conc.	RL	Unit	Analyzed	Flag
Benzene	ND	5.0	ug/Kg	07/01/2002 14:49	
Toluene	ND	5.0	ug/Kg	07/01/2002 14:49	
Ethyl benzene	ND	5.0	ug/Kg	07/01/2002 14:49	
Total xylenes	ND	5.0	ug/Kg	07/01/2002 14:49	
Surrogates(s)					
1,2-Dichloroethane-d4	108.2	70-121	%	07/01/2002 14:49	
Toluene-d8	101.2	81-117	%	07/01/2002 14:49	

Submission #: 2002-06-0351

Volatile Organic Compounds by 8260B

Geomatrix Consultants

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 5030B

Test(s): 8260FAB

Laboratory Control Spike **Soil** **QC Batch # 2002/07/01-02.27**

LCS 2002/07/01-02.27-002 Extracted: 07/01/2002 Analyzed: 07/01/2002 14:04
LCSD 2002/07/01-02.27-003 Extracted: 07/01/2002 Analyzed: 07/01/2002 14:26

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	47.9	50.9	50.0	95.8	101.8	6.1	69-129	20		
Toluene	50.2	53.9	50.0	100.4	107.8	7.1	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	530	547	500	106.0	109.4		70-121	0		
Toluene-d8	514	509	500	102.8	101.8		81-117	0		

Submission #: 2002-06-0351

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP#2496

Geomatrix Consultants	✉ 2101 Webster Street, 12th Floor Oakland, CA 94612
Attn: Susan Gallardo	Phone: (510) 663-4100 Fax: (510) 663-4141
2770.005	Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SRB-79-12.5	Soil	06/18/2002 09:25	10
SRB-83-14	Soil	06/18/2002 15:00	50
SRB-83-11.0	Soil	06/18/2002 15:00	51

Submission #: 2002-06-0351

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PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants
Attn: Susan Gallardo

Test Method: 8270C-SIM
Prep Method: 3550B/8270C-SIM

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CA DHS ELAP#2496

Sample ID:	**SRB-79-12.5**	Lab Sample ID:	2002-06-0351-010
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/28/2002 05:27
Sampled:	06/18/2002 09:25	QC-Batch:	2002/06/28-01.40
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Naphthalene	ND	10	ug/Kg	2.00	07/01/2002 14:31	
Acenaphthylene	24	10	ug/Kg	2.00	07/01/2002 14:31	
Acenaphthene	51	10	ug/Kg	2.00	07/01/2002 14:31	
Fluorene	16	10	ug/Kg	2.00	07/01/2002 14:31	
Phenanthrene	220	10	ug/Kg	2.00	07/01/2002 14:31	
Anthracene	150	10	ug/Kg	2.00	07/01/2002 14:31	
Fluoranthene	19	10	ug/Kg	2.00	07/01/2002 14:31	
Pyrene	230	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(a)anthracene	33	10	ug/Kg	2.00	07/01/2002 14:31	
Chrysene	97	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(b)fluoranthene	20	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(k)fluoranthene	ND	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(a)pyrene	25	10	ug/Kg	2.00	07/01/2002 14:31	
Indeno(1,2,3-c,d)pyrene	ND	10	ug/Kg	2.00	07/01/2002 14:31	
Dibenzo(a,h)anthracene	ND	10	ug/Kg	2.00	07/01/2002 14:31	
Benzo(g,h,i)perylene	11	10	ug/Kg	2.00	07/01/2002 14:31	
Surrogate(s)						
2-Fluorobiphenyl	78.2	30-115	%	2.00	07/01/2002 14:31	
p-Terphenyl-d14	96.8	18-137	%	2.00	07/01/2002 14:31	

Submission #: 2002-06-0351

SEVERN TRENT SERVICES

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants
Attn: Susan Gallardo

Test Method: 8270C-SIM
Prep Method: 3550B/8270C-SIM

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CA DHS ELAP#2496

Sample ID:	**SRB-83-14**	Lab Sample ID:	2002-06-0351-050
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/28/2002 05:27
Sampled:	06/18/2002 15:00	QC-Batch:	2002/06/28-01.40
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Naphthalene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Acenaphthylene	39	25	ug/Kg	5.00	07/01/2002 13:11	
Acenaphthene	32	25	ug/Kg	5.00	07/01/2002 13:11	
Fluorene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Phenanthrene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Anthracene	330	25	ug/Kg	5.00	07/01/2002 13:11	
Fluoranthene	74	25	ug/Kg	5.00	07/01/2002 13:11	
Pyrene	460	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(a)anthracene	89	25	ug/Kg	5.00	07/01/2002 13:11	
Chrysene	220	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(b)fluoranthene	41	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(k)fluoranthene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(a)pyrene	52	25	ug/Kg	5.00	07/01/2002 13:11	
Indeno(1,2,3-c,d)pyrene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Dibenzo(a,h)anthracene	ND	25	ug/Kg	5.00	07/01/2002 13:11	
Benzo(g,h,i)perylene	25	25	ug/Kg	5.00	07/01/2002 13:11	
Surrogate(s)						
2-Fluorobiphenyl	93.3	30-115	%	5.00	07/01/2002 13:11	
p-Terphenyl-d14	95.1	18-137	%	5.00	07/01/2002 13:11	

Submission #: 2002-06-0351

SEVERN TRENT SERVICES

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants
Attn: Susan Gallardo

Test Method: 8270C-SIM
Prep Method: 3550B/8270C-SIM

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CA DHS ELAP#2496

Sample ID:	**SRB-83-11.0**	Lab Sample ID:	2002-06-0351-051
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/28/2002 05:27
Sampled:	06/18/2002 15:00	QC-Batch:	2002/06/28-01.40
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Fluorene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Anthracene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Pyrene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Chrysene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/01/2002 12:44	
Surrogate(s)						
2-Fluorobiphenyl	67.0	30-115	%	1.00	07/01/2002 12:44	
p-Terphenyl-d14	92.7	18-137	%	1.00	07/01/2002 12:44	

Submission #: 2002-06-0351

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CA DHS ELAP#2496

PNA analysis by 8270C/SIM GC/MS

Batch QC report

Test Method: 8270C-SIM

Prep Method: 3550B/8270C-SIM

Method Blank | **Soil** | **QC Batch # 2002/06/28-01.40**

MB: 2002/06/28-01.40-003 | Date Extracted: 06/28/2002 05:27

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	07/01/2002 11:18	
Acenaphthylene	ND	5.0	ug/Kg	07/01/2002 11:18	
Acenaphthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Fluorene	ND	5.0	ug/Kg	07/01/2002 11:18	
Phenanthrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(a)anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Chrysene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(a)pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	07/01/2002 11:18	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	07/01/2002 11:18	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	07/01/2002 11:18	
Surrogate(s)					
2-Fluorobiphenyl	64.8	30-115	%	07/01/2002 11:18	
p-Terphenyl-d14	88.0	18-137	%	07/01/2002 11:18	

Submission #: 2002-06-0351

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PNA analysis by 8270C/SIM GC/MS

Batch QC report

Test Method: 8270C-SIM

Prep Method: 3550B/8270C -SIM

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/06/28-01.40**

LCS: 2002/06/28-01.40-004 Extracted: 06/28/2002 05:27 Analyzed: 07/01/2002 11:45

LCSD: 2002/06/28-01.40-005 Extracted: 06/28/2002 05:27 Analyzed: 07/01/2002 12:12

Compound	Conc. [ug/Kg]		Exp.Conc. [ug/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Acenaphthene	229	259	332	333	69.0	77.8	12.0	50-150	30		
Phenanthrene	240	272	332	333	72.3	81.7	12.2	50-150	30		
Pyrene	290	324	332	333	87.3	97.3	10.8	50-150	30		
Chrysene	248	280	332	333	74.7	84.1	11.8	50-150	30		
Benzo(a)pyrene	204	245	332	333	61.4	73.6	18.1	50-150	30		
Surrogate(s)											
2-Fluorobiphenyl	5.83	7.01	10	10	58.3	70.1		30-115			
p-Terphenyl-d14	8.52	9.47	10	10	85.2	94.7		18-137			

Submission #: 2002-06-0351

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

PNA analysis by 8270C/SIM GC/MS

Batch QC Report

Test Method: 8270C-SIM

Prep Method: 3550B/8270C-SIM

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/06/28-01.40**

Sample ID: **SRB-83-14 >> MS** Lab ID: 2002-06-0351-050

MS: 2002/06/28-01.40-008 Extracted: 06/28/2002 05:27 Analyzed: 07/01/2002 13:38
Dilution: 5

MSD: 2002/06/28-01.40-009 Extracted: 06/28/2002 05:27 Analyzed: 07/01/2002 14:05
Dilution: 5

Compound	Conc. [ug/Kg]			Exp.Conc.		Recovery [%]		RPD	Ctrl.Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Acenaphthene	311	313	31.9	331	331	84.3	84.9	0.7	50-150	30		
Phenanthrene	320	303	8.38	331	331	94.1	89.0	5.6	50-150	30		
Pyrene	739	669	463	331	331	83.4	62.2	29.1	50-150	30		
Chrysene	439	379	222	331	331	65.6	47.4	32.2	50-150	30		rpd
Benzo(a)pyrene	316	297	52.0	331	331	79.8	74.0	7.5	50-150	30		
Surrogate(s)												
2-Fluorobiphenyl	8.32	8.14		10	10	83.2	81.4		30-115			
p-Terphenyl-d14	9.22	9.22		10	10	92.2	92.2		18-137			

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CA DHS ELAP#2496

PNA analysis by 8270C/SIM GC/MS

Legend & Notes

Test Method: 8270C-SIM

Prep Method: 3550B/8270C-SIM

QC Compound Flags

rpd

Analyte RPD was out of QC limits due to sample heterogeneity.

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Susan Gallardo
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/19/2002 19:30

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www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-81-8.5	06/18/2002 11:30	Soil	15
SRB-81-15.5	06/18/2002 11:35	Soil	16
SRB-81-22.0	06/18/2002 11:55	Soil	18
SRB-88-21.0	06/19/2002 11:05	Soil	33
SRB-91-14.0	06/19/2002 15:07	Soil	43
SRB-91-11.0	06/19/2002 15:00	Soil	47

Submission #: 2002-06-0351

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Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 06/19/2002 19:30

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-81-8.5**
Lab ID: 2002-06-0351 - 15
Sampled: 06/18/2002 11:30
Extracted: 6/24/2002 12:48
Matrix: Soil
QC Batch#: 2002/06/24-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/25/2002 10:18	
Motor Oil	ND	50	mg/Kg	1.00	06/25/2002 10:18	
Bunker-C	ND	50	mg/Kg	1.00	06/25/2002 10:18	
Surrogates(s)						
o-Terphenyl	88.6	60-130	%	1.00	06/25/2002 10:18	

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-81-15.5**
Lab ID: 2002-06-0351 - 16

Sampled: 06/18/2002 11:35
Extracted: 6/24/2002 12:48

Matrix: Soil
QC Batch#: 2002/06/24-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	160	2.0	mg/Kg	2.00	06/26/2002 06:51	ndp
Motor Oil	230	100	mg/Kg	2.00	06/26/2002 06:51	
Bunker-C	ND	100	mg/Kg	2.00	06/26/2002 06:51	
Surrogates(s)						
o-Terphenyl	97.6	60-130	%	2.00	06/26/2002 06:51	

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-81-22.0**
Lab ID: 2002-06-0351 - 18
Sampled: 06/18/2002 11:55
Extracted: 6/24/2002 12:48
Matrix: Soil
QC Batch#: 2002/06/24-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	06/25/2002 10:58	
Motor Oil	ND	50	mg/Kg	1.00	06/25/2002 10:58	
Bunker-C	ND	50	mg/Kg	1.00	06/25/2002 10:58	
Surrogates(s)						
o-Terphenyl	92.1	60-130	%	1.00	06/25/2002 10:58	

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-88-21.0**
Lab ID: 2002-06-0351 - 33
Sampled: 06/19/2002 11:05
Extracted: 6/24/2002 12:48
Matrix: Soil
QC Batch#: 2002/06/24-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	4.0	1.0	mg/Kg	1.00	06/25/2002 09:11	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/25/2002 09:11	
Bunker-C	ND	50	mg/Kg	1.00	06/25/2002 09:11	
Surrogates(s)						
o-Terphenyl	89.2	60-130	%	1.00	06/25/2002 09:11	

Submission #: 2002-06-0351

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-91-14.0**
Sampled: 06/19/2002 15:07
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0351 - 43
Extracted: 6/24/2002 12:48
QC Batch#: 2002/06/24-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	73	1.0	mg/Kg	1.00	06/25/2002 09:11	ndp
Motor Oil	91	50	mg/Kg	1.00	06/25/2002 09:11	
Bunker-C	ND	50	mg/Kg	1.00	06/25/2002 09:11	
Surrogates(s)						
o-Terphenyl	87.1	60-130	%	1.00	06/25/2002 09:11	

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-91-11.0**
Lab ID: 2002-06-0351 - 47

Sampled: 06/19/2002 15:00
Extracted: 6/24/2002 12:48

Matrix: Soil
QC Batch#: 2002/06/24-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	8.8	1.0	mg/Kg	1.00	06/25/2002 09:48	ndp
Motor Oil	ND	50	mg/Kg	1.00	06/25/2002 09:48	
Bunker-C	ND	50	mg/Kg	1.00	06/25/2002 09:48	
Surrogates(s)						
o-Terphenyl	94.8	60-130	%	1.00	06/25/2002 09:48	

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Test(s): 8015M

Method Blank **Soil** **QC Batch # 2002/06/24-03.10**

MB: 2002/06/24-03.10-001
Date Extracted: 06/24/2002 12:48

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	06/25/2002 04:50	
Motor Oil	ND	50	mg/Kg	06/25/2002 04:50	
Bunker-C	ND	50	mg/Kg	06/25/2002 04:50	
Surrogates(s)					
o-Terphenyl	78.7	60-130	%	06/25/2002 04:50	

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/24-03.10**

LCS 2002/06/24-03.10-002 Extracted: 06/24/2002 Analyzed: 06/25/2002 03:36
LCSD 2002/06/24-03.10-003 Extracted: 06/24/2002 Analyzed: 06/25/2002 04:13

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	35.8	36.4	41.7	85.9	87.3	1.6	60-130	25		
Surrogates(s)										
o-Terphenyl	18.1	18.3	20.0	90.3	91.6		60-130	0		

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 06/19/2002 19:30

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/06/24-03.10**

SRB-81-8.5 >> MS

Lab ID: 2002-06-0351 - 015

MS: 2002/06/24-03.10-004 Extracted: 06/24/2002 Analized: 06/25/2002 09:48

Dilution: 1.00

MSD: 2002/06/24-03.10-005 Extracted: 06/24/2002 Analized: 06/25/2002 10:25

Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	32.7	36.0	ND	41.3	79.2	87.2	9.6	60-130	25		
Surrogate(s)											
o-Terphenyl	16.5	17.3		20.0	82.3	86.4		60-130	0		

Submission #: 2002-06-0351

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/19/2002 19:30

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

2002-06-0351

67005

Chain-of Custody Record

016252

Date: 6/17/2002 | Page 1 of 5

Project No.: 2770.005

Samplers (Signature):
Chuck Rome
Sarah Meaver

	Date	Time	Sample Number
1	6/17/02	1000	SRB-63-7.0
2	6/17/02	1115	SRB-64-7.0
3	6/17/02	1255	SRB-65-7.0
4	6/17/02	1300	SRB-65-16.0
5	6/17/02	1305	SRB-65-19.0
6	6/17/02	1625	SRB-67-6.5
7	6/18/02	0830	SRB-78-2.0
8	6/18/02	0915	SRB-79-2.5
9	6/18/02	0920	SRB-79-5.5
10	6/18/02	0925	SRB-79-12.5
11	6/18/02	1020	SRB-80-6.5
12	6/18/02	1030	SRB-80-9.5
13	6/18/02	1040	SRB-80-16.0
14	6/18/02	1045	SRB-80-21.5
15	6/18/02	1130	SRB-81-8.5

ANALYSES

Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup	HOLD
1											X
2											X
3											X
4											X
5											X
6											X
7											X
8											X
9											X
10											X
11											X
12											X
13											X
14											X
15											X

REMARKS

Sample Number	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers
1	S			X	1
2	S			X	1
3	S			X	1
4	S			X	1
5	S			X	1
6	S			X	1
7	S			X	1
8	S			X	1
9	S			X	1
10	S			X	1
11	S			X	1
12	S			X	1
13	S			X	1
14	S			X	1
15	S			X	1

Additional Comments

*Call Susan Gallardo at 510-663-4137 for analytical requirements.

6"x15/8" metal sleeves

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rome

Total No. of Containers: 15

Relinquished by (Signature): Chuck Rome	Date: 6/19/02	Relinquished by (Signature): R Coss	Date: 6/19/02	Relinquished by (Signature):	Date:
Printed Name: Charles Rome	Time: 1555	Printed Name: R COSS	Time: 1930	Printed Name:	Time:
Company: Geomatrix		Company: World courier		Company:	
Received by: R Coss	Date: 6/19/02	Received by:	Date:	Received by: W. Harrington	Date: 6/19/02
Printed Name: R Coss	Time: 1600	Printed Name:	Time:	Printed Name: W. Harrington	Time: 1930
Company: World Courier		Company:		Company: STL-SF	

Method of Shipment: lab courier

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 51 -4141

2002-06-0351

Chain-of Custody Record

u16253

Date: 6/18/2002 | Page 2 of 5

Project No.: 2770.005

Samplers (Signature:)
Chuck Rome
Sarah Meanor

ANALYSES

REMARKS

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup					Hold		Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
6	6/18/02	1135	SRB-81-15.5															X		S			X	1	* Call Susan Gallardo at 510-663-4137 for analytical requirements 6"x 15/8" metal sleeves
7	6/18/02	1150	SRB-81-18.0															X		S			X	1	
8	6/18/02	1155	SRB-81-22.0															X		S			X	1	
9	6/18/02	1330	SRB-82-13.0															X		S			X	1	
20	6/18/02	1340	SRB-82-19.0															X		S			X	1	
21	6/18/02	1345	SRB-82-21.0															X		S			X	1	
22	6/18/02	1500	SRB-83-9.0															X		S			X	1	
23	6/18/02	1500	SRB-83-21.0															X		S			X	1	
	6/18/02	1600	SRB-84-9.5															X		S			X	1	
	6/18/02	1610	SRB-84-18.5															X		S			X	1	
	6/18/02	1644	SRB-85-9.5															X		S			X	1	
	6/18/02	1652	SRB-85-18.5															X		S			X	1	
	6/19/02	0830	SRB-86-7.5															X		S			X	1	
	6/19/02	0840	SRB-86-20.5															X		S			X	1	
	6/19/02	0940	SRB-87-7.0															X		S			X	1	

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rome

Total No. of Containers: 15

Relinquished by (Signature): Chuck Rome	Date: 6/19/02	Relinquished by (Signature): R Coss	Date: 6/19/02	Relinquished by (Signature):	Date:	Method of Shipment: lab courier	
Printed Name: Charles Rome	Time: 1555	Printed Name: R COSS	Time: 1930	Printed Name:	Time:	Laboratory Comments and Log No.:	
Company: Geomatrix		Company: world courier		Company:			
Received by:	Date: 6/19/02	Received by:	Date:	Received by: D. Harrington	Date: 6/19/02		
Printed Name: R. COSS	Time: 1600	Printed Name:	Time:	Printed Name: D. Harrington	Time: 1930		
Company: world courier		Company:		Company: STL-SF			

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2002-06-0351

Chain-of Custody Record

016293

Date: 6/19/2002 | Page 3 of 5

Project No.: 2770.005

Samplers (Signature:) Charles Rome, Sarah Mearon

ANALYSES

REMARKS

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup					HOLD	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
24	6/19/02	0950	SRB-87-21.0															X	S			X	1	6"x 5/8" metal sleeves
25	6/19/02	1100	SRB-88-5.0															X	S			X	1	
26	6/19/02	1105	SRB-88-21.0															X	S			X	1	
27	6/19/02	1210	SRB-89-18.0															X	S			X	1	
28	6/19/02	1420	SRB-90-2.0															X	S			X	1	
29	6/19/02	1422	SRB-90-5.0															X	S			X	1	
30	6/19/02	1424	SRB-90-8.0															X	S			X	1	
31	6/19/02	1426	SRB-90-11.0															X	S			X	1	
32	6/19/02	1428	SRB-90-14.0															X	S			X	1	
33	6/19/02	1430	SRB-90-17.0															X	S			X	1	
34	6/19/02																							
35	6/19/02																							
36	6/19/02																							
37	6/19/02																							
38	6/19/02																							

*Call Susan Gallardo at 510-663-4137 for analytical requirements.

SM 6/19/02

Laboratory: STL San Francisco

Turnaround Time: Standard

Results to: C. Rome

Total No. of Containers: 10

Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time
Charles Rome	6/14/02	1555	R Coss	6/19/02	1930			
Printed Name: Geomatrix			Printed Name: R Coss			Printed Name:		
Company: Charles Rome			Company: World Courier			Company:		
Received by: R Coss	Date: 6/14/02		Received by:	Date:		Received by: D. Harrington	Date: 6/19/02	
Printed Name: R Coss	Time:	1600	Printed Name:	Time:		Printed Name: D. Harrington	Time:	1930
Company: World Courier			Company:			Company: STL-SF		

Method of Shipment: lab courier

Laboratory Comments and Log No.:

Geometrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 5[illegible]-4141

2007 06-0351

Chain-of Custody Record

v16285

Date: 6/18/02 | Page 4 of 5

Project No.: 2770.005

Samplers (Signature:)
Chris Rome
Sarah Mearon

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup					HOLD		Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
	6/18/02	~~1648~~	~~SRB-85-14.0~~																	S			X	1	6"x 15/8" metal sleeves
	6/18/02	~~1650~~	~~SRB-85-17.0~~																	S			X	1	
39	6/19/02	1420	SRB-90-2.0															X		S			X	1	
40	6/19/02	1422	SRB-90-5.0															X		S			X	1	
41	6/19/02	1424	SRB-90-8.0															X		S			X	1	
42	6/19/02	1426	SRB-90-11.0															X		S			X	1	
43	6/19/02	1428	SRB-90-14.0															X		S			X	1	
44	6/19/02	1430	SRB-90-17.0															X		S			X	1	
45	6/19/02	1510	SRB-91-17.0															X		S			X	1	
46	6/19/02	1507	SRB-91-14.0															X		S			X	1	
47	6/19/02	1450	SRB-91-1.5															X		S			X	1	
48	6/19/02	1452	SRB-91-5.0															X		S			X	1	
49	6/19/02	1457	SRB-91-8.5															X		S			X	1	
50	6/19/02	1500	SRB-91-11.0															X		S			X	1	
																								12	

* Call Susan Gallardo at 510-663-4137 for analytical requirements.

Laboratory: STL San Francisco

Turnaround Time: Standard

Results to: C. Rome

Total No. of Containers: 12

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Chris Rome	6/19/02	L Coss	6/19/02		
Printed Name: Charles Rome	Time: 1555	Printed Name: L Coss	Time: 1930	Printed Name:	Time:
Company: Geomatrix		Company: World Courier		Company:	
Received by:	Date:	Received by:	Date:	Received by: N. Harrington	Date: 6/19/02
Printed Name: L. Coss	Time: 1600	Printed Name:	Time:	Printed Name: D. Harrington	Time: 1930
Company: World Courier		Company:		Company: STL-SF	

Method of Shipment: lab courier

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

2002-06-0351

Chain-of Custody Record

016292

Date: 6/18/02 | Page 5 of 5

Project No.: 2770.005

Samplers (Signature:)
Charles Rome
Sarah Mearow

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup					HOLD		Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
–	6/18/02	1500	SRB-83-20.0 •															X		S			X	1	* Call Susan Gallardo at 510-663-4137 for analytical requirements. 6"x15/8" metal sleeves
–	~~6/18/02~~	~~1500~~	~~SRB-83-17.0~~																	S			X	1	
1 –	6/18/02	1500	SRB-83-8.0 •															X		S			X	1	
2 –	6/18/02	1500	SRB-83-14.0 •															X		S			X	1	
3 –	6/18/02	1500	SRB-83-11.0 •															X		S			X	1	
4 –	6/18/02	1500	SRB-83-5.0 •															X		S			X	1	
5 –	6/18/02	1500	SRB-83-1.5 •															X		S			X	1	
6 –	6/18/02	1550	SRB-84-1.5 •															X		S			X	1	
7 –	6/18/02	1555	SRB-84-8.0 •															X		S			X	1	
58	6/18/02	1602	SRB-84-11.0 •															X		S			X	1	
59 –	6/18/02	1605	SRB-84-14.0 •															X		S			X	1	
60	6/18/02	1607	SRB-84-17.0 •															X		S			X	1	↓
x	~~6/18/02~~	~~1640~~	~~SRB-85-5.0~~																	S			X	1	
x	6/18/02	1642	SRB-85-8.0																	S			X	1	
x	6/18/02	1646	SRB-85-11.0																	S			X	1	

Laboratory: STL San Francisco

Turnaround Time: Standard

Results to: C. Rome

Total No. of Containers: 11

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Charles Rome	6/19/02	K Coss	6/19/02		
Printed Name: Charles Rome	Time: 1555	Printed Name: K Coss	Time: 1930	Printed Name:	Time:
Company: Geomatrix		Company: world courier		Company:	
Received by:	Date:	Received by:	Date:	Received by: D. Harrington	Date: 6/19/02
Printed Name: K Coss	Time: 1600	Printed Name:	Time:	Printed Name: D. Harrington	Time: 1930
Company: world courier		Company:		Company: STL-SF	

Method of Shipment: lab courier

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 06 - 0351

Checklist completed by: (initials) NH Date: 06/20/02

Courier name: ☐ STL San Francisco ☐ Client World

Custody seals intact on shipping container/samples	Yes____ No____	Not Present ✓
Chain of custody present?	Yes ✓ No____	
Chain of custody signed when relinquished and received?	Yes ✓ No____	
Chain of custody agrees with sample labels?	Yes____ No ✓	
Samples in proper container/bottle?	Yes ✓ No____	
Sample containers intact?	Yes ✓ No____	
Sufficient sample volume for indicated test?	Yes ✓ No____	
All samples received within holding time?	Yes ✓ No____	
Container/Temp Blank temperature in compliance (4^{o} C ± 2)?	Temp: 5.0 °C Yes ✓ No____	
Water - VOA vials have zero headspace?	No VOA vials submitted ✓ Yes____ No____	

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - pH acceptable upon receipt? ☐ Yes ☐ No

☐ pH adjusted– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments: ID: SRB-90-2.0, SRB-90-7, SRB-90-5.0, SRB-90-8.0, and SRB-90-11.0 are listed twice on COC. Received no sample for ID; SRB-84-15, SRB-84-8.0, SRB-84-11, SRB-84-14 and SRB-84-17

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ____/____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

Submission #: 2002-07-0044

Date: July 10, 2002

SEVERN TRENT SERVICES

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com
CA DHS ELAP#2496

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Attn: Charles Rome

Attached is our report for your samples received on Tuesday July 2, 2002
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 16, 2002 unless you have requested otherwise.
We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919.
You can also contact me via email. My email address is: asalimpour@chromalab.com

Sincerely,

Afsaneh Salimpour

Afsaneh Salimpour
Project Manager

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/02/2002

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-75-17	06/24/2002	Soil	1
SRB-75-20	06/24/2002	Soil	2
SRB-80-16.0	06/18/2002	Soil	3
SRB-80-21.5	06/18/2002	Soil	4
SRB-83-9	06/18/2002	Soil	5
SRB-83-21	06/18/2002	Soil	6
SRB-90-14	06/19/2002	Soil	7
SRB-90-1.7	06/19/2002	Soil	8
SRB-99-17	06/25/2002	Soil	9
SRB-100-20	06/26/2002	Soil	11
SRB-99-23	06/26/2002	Soil	12
SRB-93-14	06/20/2002	Soil	13
SRB-93-18	06/20/2002	Soil	14
SRB-100-11.0	06/20/2002	Soil	15

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/02/2002

SEVERN TRENT LABORATORY

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1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **SRB-75-17**
Lab ID: 2002-07-0044 - 1

Sampled: 06/24/2002
Extracted: 7/2/2002 13:38

Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Fluorene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Chrysene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/03/2002 20:20	
Surrogates(s)						
2-Fluorobiphenyl	74.5	30-115	%	1.00	07/03/2002 20:20	
p-Terphenyl-d14	74.1	18-137	%	1.00	07/03/2002 20:20	

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/02/2002

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-75-20**
Lab ID: 2002-07-0044 - 2
Sampled: 06/24/2002
Extracted: 7/2/2002 13:38
Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Fluorene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Chrysene	6.5	5.0	ug/Kg	1.00	07/03/2002 20:46	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/03/2002 20:46	
Surrogates(s)						
2-Fluorobiphenyl	72.4	30-115	%	1.00	07/03/2002 20:46	
p-Terphenyl-d14	85.3	18-137	%	1.00	07/03/2002 20:46	

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/02/2002

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-80-16.0**
Lab ID: 2002-07-0044 - 3
Sampled: 06/18/2002
Extracted: 7/2/2002 13:38
Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Fluorene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Chrysene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/03/2002 21:13	
Surrogates(s)						
2-Fluorobiphenyl	72.3	30-115	%	1.00	07/03/2002 21:13	
p-Terphenyl-d14	75.5	18-137	%	1.00	07/03/2002 21:13	

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/02/2002

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-80-21.5**
Lab ID: 2002-07-0044 - 4
Sampled: 06/18/2002
Extracted: 7/2/2002 13:38
Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Fluorene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Chrysene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/03/2002 21:40	
Surrogates(s)						
2-Fluorobiphenyl	71.0	30-115	%	1.00	07/03/2002 21:40	
p-Terphenyl-d14	84.5	18-137	%	1.00	07/03/2002 21:40	

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/02/2002

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **SRB-83-9**
Lab ID: 2002-07-0044 - 5

Sampled: 06/18/2002
Extracted: 7/2/2002 13:38

Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Fluorene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Chrysene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/03/2002 22:06	
Surrogates(s)						
2-Fluorobiphenyl	70.0	30-115	%	1.00	07/03/2002 22:06	
p-Terphenyl-d14	70.9	18-137	%	1.00	07/03/2002 22:06	

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-83-21**
Lab ID: 2002-07-0044 - 6
Sampled: 06/18/2002
Extracted: 7/2/2002 13:38
Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Fluorene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Chrysene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/03/2002 23:26	
Surrogates(s)						
2-Fluorobiphenyl	74.4	30-115	%	1.00	07/03/2002 23:26	
p-Terphenyl-d14	73.3	18-137	%	1.00	07/03/2002 23:26	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **SRB-90-14**
Lab ID: 2002-07-0044 - 7

Sampled: 06/19/2002
Extracted: 7/2/2002 13:38

Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Fluorene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Pyrene	25	5.0	ug/Kg	1.00	07/03/2002 23:53	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Chrysene	9.4	5.0	ug/Kg	1.00	07/03/2002 23:53	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/03/2002 23:53	
Surrogates(s)						
2-Fluorobiphenyl	71.6	30-115	%	1.00	07/03/2002 23:53	
p-Terphenyl-d14	69.5	18-137	%	1.00	07/03/2002 23:53	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-90-1.7**
Lab ID: 2002-07-0044 - 8
Sampled: 06/19/2002
Extracted: 7/2/2002 13:38
Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/04/2002 00:20	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/04/2002 00:20	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/04/2002 00:20	
Fluorene	ND	5.0	ug/Kg	1.00	07/04/2002 00:20	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/04/2002 00:20	
Anthracene	62	5.0	ug/Kg	1.00	07/04/2002 00:20	
Fluoranthene	18	5.0	ug/Kg	1.00	07/04/2002 00:20	
Pyrene	76	5.0	ug/Kg	1.00	07/04/2002 00:20	
Benzo(a)anthracene	35	5.0	ug/Kg	1.00	07/04/2002 00:20	
Chrysene	48	5.0	ug/Kg	1.00	07/04/2002 00:20	
Benzo(b)fluoranthene	9.1	5.0	ug/Kg	1.00	07/04/2002 00:20	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 00:20	
Benzo(a)pyrene	14	5.0	ug/Kg	1.00	07/04/2002 00:20	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 00:20	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 00:20	
Benzo(g,h,i)perylene	7.3	5.0	ug/Kg	1.00	07/04/2002 00:20	
Surrogates(s)						
2-Fluorobiphenyl	71.8	30-115	%	1.00	07/04/2002 00:20	
p-Terphenyl-d14	71.6	18-137	%	1.00	07/04/2002 00:20	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **SRB-99-17**
Lab ID: 2002-07-0044 - 9

Sampled: 06/25/2002
Extracted: 7/2/2002 13:38

Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Fluorene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Anthracene	8.2	5.0	ug/Kg	1.00	07/04/2002 00:46	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Chrysene	11	5.0	ug/Kg	1.00	07/04/2002 00:46	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/04/2002 00:46	
Surrogates(s)						
2-Fluorobiphenyl	75.5	30-115	%	1.00	07/04/2002 00:46	
p-Terphenyl-d14	76.4	18-137	%	1.00	07/04/2002 00:46	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Sample ID: **SRB-100-20**
Sampled: 06/26/2002
Matrix: Soil

Test(s): 8270C-SIM
Lab ID: 2002-07-0044 - 11
Extracted: 7/2/2002 13:38
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Fluorene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Chrysene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/04/2002 01:13	
Surrogates(s)						
2-Fluorobiphenyl	75.7	30-115	%	1.00	07/04/2002 01:13	
p-Terphenyl-d14	75.4	18-137	%	1.00	07/04/2002 01:13	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-99-23**
Lab ID: 2002-07-0044 - 12
Sampled: 06/26/2002
Extracted: 7/2/2002 13:38
Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Fluorene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Chrysene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/04/2002 01:40	
Surrogates(s)						
2-Fluorobiphenyl	74.4	30-115	%	1.00	07/04/2002 01:40	
p-Terphenyl-d14	75.1	18-137	%	1.00	07/04/2002 01:40	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: **SRB-93-14**
Lab ID: 2002-07-0044 - 13
Sampled: 06/20/2002
Extracted: 7/2/2002 13:38
Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Fluorene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Pyrene	10	5.0	ug/Kg	1.00	07/04/2002 02:06	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Chrysene	10	5.0	ug/Kg	1.00	07/04/2002 02:06	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/04/2002 02:06	
Surrogates(s)						
2-Fluorobiphenyl	77.0	30-115	%	1.00	07/04/2002 02:06	
p-Terphenyl-d14	76.9	18-137	%	1.00	07/04/2002 02:06	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM

Sample ID: **SRB-93-18**
Lab ID: 2002-07-0044 - 14

Sampled: 06/20/2002
Extracted: 7/2/2002 13:38

Matrix: Soil
QC Batch#: 2002/07/02-01.40

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Acenaphthylene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Acenaphthene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Fluorene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Phenanthrene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Anthracene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Fluoranthene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Pyrene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Benzo(a)anthracene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Chrysene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Benzo(a)pyrene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	1.00	07/05/2002 11:43	
Surrogates(s)						
2-Fluorobiphenyl	72.1	30-115	%	1.00	07/05/2002 11:43	
p-Terphenyl-d14	78.3	18-137	%	1.00	07/05/2002 11:43	

Submission #: 2002-07-0044

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Prep(s): 3550B/8270C-SIM
Test(s): 8270C-SIM
Sample ID: SRB-100-11.0
Lab ID: 2002-07-0044 - 15
Sampled: 06/20/2002
Extracted: 7/2/2002 13:38
Matrix: Soil
QC Batch#: 2002/07/02-01.40
Analysis Flag: lrn (See Legent and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Naphthalene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Acenaphthylene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Acenaphthene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Fluorene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Phenanthrene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Anthracene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Fluoranthene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Pyrene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Benzo(a)anthracene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Chrysene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Benzo(b)fluoranthene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Benzo(k)fluoranthene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Benzo(a)pyrene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Indeno(1,2,3-c,d)pyrene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Dibenzo(a,h)anthracene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Benzo(g,h,i)perylene	ND	25	ug/Kg	5.00	07/05/2002 12:09	
Surrogates(s)						
2-Fluorobiphenyl	94.3	30-115	%	5.00	07/05/2002 12:09	
p-Terphenyl-d14	100.6	18-137	%	5.00	07/05/2002 12:09	

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM
Method Blank
MB: 2002/07/02-01.40-014

Soil

Test(s): 8270C-SIM
QC Batch # 2002/07/02-01.40
Date Extracted: 07/02/2002 13:38

Compound	Conc.	RL	Unit	Analyzed	Flag
Naphthalene	ND	5.0	ug/Kg	07/02/2002 16:13	
Acenaphthylene	ND	5.0	ug/Kg	07/02/2002 16:13	
Acenaphthene	ND	5.0	ug/Kg	07/02/2002 16:13	
Fluorene	ND	5.0	ug/Kg	07/02/2002 16:13	
Phenanthrene	ND	5.0	ug/Kg	07/02/2002 16:13	
Anthracene	ND	5.0	ug/Kg	07/02/2002 16:13	
Fluoranthene	ND	5.0	ug/Kg	07/02/2002 16:13	
Pyrene	ND	5.0	ug/Kg	07/02/2002 16:13	
Benzo(a)anthracene	ND	5.0	ug/Kg	07/02/2002 16:13	
Chrysene	ND	5.0	ug/Kg	07/02/2002 16:13	
Benzo(b)fluoranthene	ND	5.0	ug/Kg	07/02/2002 16:13	
Benzo(k)fluoranthene	ND	5.0	ug/Kg	07/02/2002 16:13	
Benzo(a)pyrene	ND	5.0	ug/Kg	07/02/2002 16:13	
Indeno(1,2,3-c,d)pyrene	ND	5.0	ug/Kg	07/02/2002 16:13	
Dibenzo(a,h)anthracene	ND	5.0	ug/Kg	07/02/2002 16:13	
Benzo(g,h,i)perylene	ND	5.0	ug/Kg	07/02/2002 16:13	
Surrogates(s)					
2-Fluorobiphenyl	75.6	30-115	%	07/02/2002 16:13	
p-Terphenyl-d14	95.2	18-137	%	07/02/2002 16:13	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Laboratory Control Spike **Soil** **QC Batch # 2002/07/02-01.40**

LCS 2002/07/02-01.40-015 Extracted: 07/02/2002 Analyzed: 07/02/2002 16:40

LCSD 2002/07/02-01.40-016 Extracted: 07/02/2002 Analyzed: 07/02/2002 17:07

Compound	Conc. ug/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Acenaphthene	269	274	332	81.0	82.3	1.6	50-150	30		
Phenanthrene	269	273	332	81.0	82.0	1.2	50-150	30		
Pyrene	392	418	332	118.1	125.5	6.1	50-150	30		
Chrysene	286	283	332	86.1	85.0	1.3	50-150	30		
Benzo(a)pyrene	265	264	332	79.8	79.3	0.6	50-150	30		
Surrogates(s)										
2-Fluorobiphenyl	7.44	7.48	10	74.4	74.8		30-115			
p-Terphenyl-d14	11.2	11.8	10	112.0	118.1		18-137			

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550B/8270C-SIM

Test(s): 8270C-SIM

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/07/02-01.40**

SRB-83-9 >> MS

Lab ID: 2002-07-0044 - 005

MS: 2002/07/02-01.40-026 Extracted: 07/02/2002 Analyzed: 07/03/2002 22:33

Dilution: 1.00

MSD: 2002/07/02-01.40-027 Extracted: 07/02/2002 Analyzed: 07/03/2002 23:00

Dilution: 1.00

Compound	Conc. ug/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	ug/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Acenaphthene	273	274	ND	332	82.2	82.5	0.4	50-150	30		
Phenanthrene	285	283	ND	332	85.8	85.2	0.7	50-150	30		
Pyrene	257	266	ND	332	77.4	80.1	3.4	50-150	30		
Chrysene	284	290	ND	332	85.5	87.3	2.1	50-150	30		
Benzo(a)pyrene	281	283	ND	332	84.6	85.2	0.7	50-150	30		
Surrogate(s)											
2-Fluorobiphenyl	7.06	7.39		10	70.6	73.9		30-115			
p-Terphenyl-d14	7.29	7.59		10	72.9	75.9		18-137			

Submission #: 2002-07-0044

PNA analysis by 8270C/SIM GC/MS

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CA DHS ELAP# 2496

Legend and Notes

Analysis Flag

lrn

Reporting limits raised due to high level of non-target analyte materials.

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-75-17	06/24/2002	Soil	1
SRB-75-20	06/24/2002	Soil	2
SRB-80-16.0	06/18/2002	Soil	3
SRB-80-21.5	06/18/2002	Soil	4
SRB-83-9	06/18/2002	Soil	5
SRB-83-21	06/18/2002	Soil	6
SRB-90-14	06/19/2002	Soil	7
SRB-90-1.7	06/19/2002	Soil	8
SRB-99-17	06/25/2002	Soil	9
SRB-100-20	06/26/2002	Soil	11
SRB-99-23	06/26/2002	Soil	12
SRB-93-14	06/20/2002	Soil	13
SRB-93-18	06/20/2002	Soil	14
SRB-100-11.0	06/20/2002	Soil	15

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-75-17**
Lab ID: 2002-07-0044 - 1
Sampled: 06/24/2002
Extracted: 7/2/2002 11:39
Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 18:39	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 18:39	
Surrogates(s)						
o-Terphenyl	87.6	60-130	%	1.00	07/03/2002 18:39	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-75-20**
Lab ID: 2002-07-0044 - 2

Sampled: 06/24/2002
Extracted: 7/2/2002 11:39

Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	310	1.0	mg/Kg	1.00	07/03/2002 17:20	ndp
Motor Oil	340	50	mg/Kg	1.00	07/03/2002 17:20	
Surrogates(s)						
o-Terphenyl	101.5	60-130	%	1.00	07/03/2002 17:20	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-80-16.0**
Lab ID: 2002-07-0044 - 3

Sampled: 06/18/2002
Extracted: 7/2/2002 11:39

Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 17:30	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 17:30	
Surrogates(s)						
o-Terphenyl	91.1	60-130	%	1.00	07/03/2002 17:30	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s):	3550/8015M	Test(s):	8015M
Sample ID:	**SRB-80-21.5**	Lab ID:	2002-07-0044 - 4
Sampled:	06/18/2002	Extracted:	7/2/2002 11:39
Matrix:	Soil	QC Batch#:	2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 16:16	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 16:16	
Surrogates(s)						
o-Terphenyl	88.5	60-130	%	1.00	07/03/2002 16:16	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: SRB-83-9
Sampled: 06/18/2002
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0044 - 5
Extracted: 7/2/2002 11:39
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 13:20	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 13:20	
Surrogates(s)						
o-Terphenyl	82.9	60-130	%	1.00	07/03/2002 13:20	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-83-21**
Lab ID: 2002-07-0044 - 6
Sampled: 06/18/2002
Extracted: 7/2/2002 11:39
Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	4.9	1.0	mg/Kg	1.00	07/03/2002 18:08	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 18:08	
Surrogates(s)						
o-Terphenyl	97.9	60-130	%	1.00	07/03/2002 18:08	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-90-14**
Lab ID: 2002-07-0044 - 7
Sampled: 06/19/2002
Extracted: 7/2/2002 11:39
Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	21	1.0	mg/Kg	1.00	07/03/2002 18:08	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 18:08	
Surrogates(s)						
o-Terphenyl	101.3	60-130	%	1.00	07/03/2002 18:08	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-90-1.7**
Lab ID: 2002-07-0044 - 8

Sampled: 06/19/2002
Extracted: 7/2/2002 11:39

Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	150	1.0	mg/Kg	1.00	07/03/2002 17:59	ndp
Motor Oil	210	50	mg/Kg	1.00	07/03/2002 17:59	
Surrogates(s)						
o-Terphenyl	89.5	60-130	%	1.00	07/03/2002 17:59	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-99-17**
Sampled: 06/25/2002
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0044 - 9
Extracted: 7/2/2002 11:39
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	120	1.0	mg/Kg	1.00	07/03/2002 16:00	ndp
Motor Oil	130	50	mg/Kg	1.00	07/03/2002 16:00	
Surrogates(s)						
o-Terphenyl	96.4	60-130	%	1.00	07/03/2002 16:00	

Submission #: 2002-07-0044

SEVERN TRENT LABORATORY

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-100-20**
Lab ID: 2002-07-0044 - 11

Sampled: 06/26/2002
Extracted: 7/2/2002 11:39

Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	51	1.0	mg/Kg	1.00	07/03/2002 15:20	ndp
Motor Oil	59	50	mg/Kg	1.00	07/03/2002 15:20	
Surrogates(s)						
o-Terphenyl	94.4	60-130	%	1.00	07/03/2002 15:20	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-99-23**
Lab ID: 2002-07-0044 - 12
Sampled: 06/26/2002
Extracted: 7/2/2002 11:39
Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 12:41	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 12:41	
Surrogates(s)						
o-Terphenyl	91.2	60-130	%	1.00	07/03/2002 12:41	

Submission #: 2002-07-0044

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-93-14**
Sampled: 06/20/2002
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-07-0044 - 13
Extracted: 7/2/2002 11:39
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	87	1.0	mg/Kg	1.00	07/03/2002 16:40	ndp
Motor Oil	130	50	mg/Kg	1.00	07/03/2002 16:40	
Surrogates(s)						
o-Terphenyl	93.2	60-130	%	1.00	07/03/2002 16:40	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants
Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 07/02/2002

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-93-18**
Lab ID: 2002-07-0044 - 14
Sampled: 06/20/2002
Extracted: 7/2/2002 11:39
Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 14:00	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 14:00	
Surrogates(s)						
o-Terphenyl	86.3	60-130	%	1.00	07/03/2002 14:00	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-100-11.0**
Lab ID: 2002-07-0044 - 15
Sampled: 06/20/2002
Extracted: 7/2/2002 11:39
Matrix: Soil
QC Batch#: 2002/07/02-03.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	96	5.0	mg/Kg	5.00	07/05/2002 10:42	ndp
Motor Oil	520	250	mg/Kg	5.00	07/05/2002 10:42	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	5.00	07/05/2002 10:42	sd

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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www.chromalab.com

CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Method Blank

Soil

QC Batch # 2002/07/02-03.10

MB: 2002/07/02-03.10-001

Date Extracted: 07/02/2002 11:39

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	07/02/2002 18:54	
Motor Oil	ND	50	mg/Kg	07/02/2002 18:54	
Surrogates(s)					
o-Terphenyl	83.8	60-130	%	07/02/2002 18:54	

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/07/02-03.10**

LCS 2002/07/02-03.10-002 Extracted: 07/02/2002 Analyzed: 07/02/2002 17:40
LCSD 2002/07/02-03.10-003 Extracted: 07/02/2002 Analyzed: 07/02/2002 18:17

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	34.7	35.3	41.7	83.2	84.7	1.8	60-130	25		
Surrogates(s)										
o-Terphenyl	19.5	20.0	20.0	97.5	99.9		60-130	0		

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/07/02-03.10**

SRB-100-20 >> MS

Lab ID: 2002-07-0044 - 011

MS: 2002/07/02-03.10-004 Extracted: 07/02/2002 Analyzed: 07/03/2002 16:53

Dilution: 1.00

MSD: 2002/07/02-03.10-005 Extracted: 07/02/2002 Analyzed: 07/03/2002 17:30

Dilution: 1.00

Compound	Conc. mg/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	164	69.7	51.3	41.6	270.9	44.4	143.	60-130	25	mso	mso,rpd
Surrogate(s)											
o-Terphenyl	19.6	19.1		20.0	97.8	95.7		60-130	0		

Submission #: 2002-07-0044

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 07/02/2002

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

mso

MS/MSD spike recoveries were out of QC limits due to matrix interference. Precision and Accuracy were verified by LCS/LCSD.

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

rpd

Analyte RPD was out of QC limits due to sample heterogeneity.

sd

Surrogate recovery not reportable due to required dilution.

SEVERN TRENT SERVICES

STL ChromaLab

ADD ON/CHANGE ORDER

New Submission No.: _____

Reference No.: 67259

ORIGINAL SUBMISSION INFORMATION

Name of Caller: Charlie Call Date: _____

Client Name: Geomatrix

Add on Due Date: 5 day

Project Mgr.: Charles Rome

Comments: 2002-07-0044 RUSH

Project Name: _____

Project No.: 2770.005

PO#: _____

Date Received: _____

Submission No.: ~~2002~~

	Sample ID	Date	Time	Matrix	Prev. Spl. #	TPH (EPA 8015, 8020/8021) ☐ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX (EPA 8020/8021)	TEPH (EPA 8015M) ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	Fuel Oxygenates (8260B): ☐ DCA, EDB ☐ Full Oxygenate List ☐ MTBE ☐ BTEX	Purgeable Halocarbons (HVOCs) (EPA 8010/8021)	Volatile Organics GC/MS (VOCs) (EPA 8260A/8260B)	Semivolatiles GC/MS (EPA 8270)	Oil & Grease ☐ Petrol (EPA 1664) ☐ Total	☐ Pesticides (EPA 8081) ☐ PCBs (EPA 8082)	PNAs by ☐ 8270 ☐ 8310	CAM 17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other: ___	☐ W.E.T. (STLC) ☐ TCLP	☐ Hexavalent Chromium ☐ pH (24 hr. hold time for H_2O)	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ TDS	Anions: ☐ Br ☐ NO_2 ☐ PO_4 ☐ F ☐ Cl ☐ SO_4 ☐ NO_3	TEPH H/D+MO	PAN 6/8270-SIM SIMS			NUMBER OF CONTAINERS
1	SRB-75-17	6/24	2002-06-		442	-24																X	X			
2	SRB-75-20	↓			↓	-26																X	X			
3	SRB-8@16.0	6/18	2002-06-		0351	-13																X	X			
4	SRB-8@21.5	↓			↓	-14																X	X			
5	SRB-83-9	6/18			↓	-22																X	X			
6	SRB-83-21	↓			↓	-23																X	X			
7	SRB-90-14	6/19	2002-06-		0351	-40																X	X			
8	SRB-90-19	↓				-42																X	X			
9	SRB-99-17	6/25	2002-06-		0471	-33																X	X			
10	SRB-10~~0~~-14	6/26	2002-06-		0507	-5																X	X			
11	SRB-100-20	6/26	2002-06-		0507	-2																X	X			

RUSH

*T'D NOT RECEIVE

Rev 05/01

SEVERN TRENT SERVICES

STL ChromaLab

ADD ON/CHANGE ORDER

New Submission No.:_____

Reference No.: 67259

ORIGINAL SUBMISSION INFORMATION

Name of Caller:_____ Call Date:_____

Client Name:_____

Add on Due Date:_____

Project Mgr.:_____

Comments: 2002-07-0044

Project Name:_____

Project No.:_____

PO#:_____

Date Received:_____

Submission No.:_____

	Sample ID	Date	Time	Matrix	Prev. Spl. #	TPH (EPA 8015, 8020/8021) ☐ Gas w/ ☐ BTEX ☐ MTBE	Purgeable Aromatics BTEX (EPA 8020/8021)	TEPH (EPA 8015M) ☐ Silica Gel ☐ Diesel ☐ Motor Oil ☐ Other ___	Fuel Oxygenates (8260B): ☐ DCA, EDB ☐ Full Oxygenate List ☐ MTBE ☐ BTEX	Purgeable Halocarbons (HVOCs) (EPA 8010/8021)	Volatile Organics GC/MS (VOCs) (EPA 8260A/8260B)	Semivolatiles GC/MS (EPA 8270)	Oil & Grease ☐ Petrol (EPA 1664) ☐ Total	☐ Pesticides (EPA 8081) ☐ PCBs (EPA 8082)	PNAs by ☐ 8270 ☐ 8310	CAM 17 Metals (EPA 6010/7470/7471)	Metals: ☐ Lead ☐ LUFT ☐ RCRA ☐ Other:____	☐ W.E.T. (STLC) ☐ TCLP	☐ Hexavalent Chromium ☐ pH (24 hr. hold time for H_2O)	☐ Spec. Cond. ☐ Alkalinity ☐ TSS ☐ TDS	Anions: ☐ Br ☐ NO_2 ☐ PO_4 ☐ F ☐ Cl ☐ SO_4 ☐ NO_3	TEPH D+MO	PNA /SIMC			NUMBER OF CONTAINERS
2	SRB-99-23	6/26			2002-06-0907-8																		X	X			
13	SRB-93-14	6/20			2002-06-0377-9																		X	X			
14	SRB-93-18	↓			↓				-12														X	X			
	SRB-100-11.0																						X	X			

Rev 05/01

FAX

from **Geomatrix Consultants, Inc.**
2101 Webster Street, 12th Floor, Oakland, CA 94612
www.geomatrix.com

GEOMATRIX

627259

Date: July 2, 2002

Number of pages including cover sheet: 1

The information in this telecopy is intended for the named recipient(s) only. It may contain privileged and confidential matter. If you have received this telecopy in error, please notify the sender immediately. Thank you.

To: Afsaneh Salimpour
STL San Francisco

Fax Phone: **925-484-1096**
Phone: **925-484-1919**
cc:

From: Charlie Rome

Fax Phone: **510-663-4141**
Phone: **510-663-4100**
Direct dial: 510-663-4273
Email: Crome@geomatrix.com
Project No.: 2770.005
Project Name: Santa Rosa Station

02-07-0044

REMARKS:

☐ Hard copy to follow ☒ Urgent ☐ For your review ☐ Reply ASAP ☐ Please comment

Afsaneh:

Please analyze the following samples that were submitted to the laboratory for Geomatrix project 2770.005. Please note that the holding time for samples SRB-80 and 83 expire today:

SRB-75-17, SRB-75-20;
SRB-80-16.0, SRB-80-21.5;
SRB-83-9, SRB-83-14, SRB-83-21;
SRB-90-14, SRB-90-17;
SRB-93-14, SRB-93-18;
SRB-99-14, SRB-99-17, SRB-99-23; and,
SRB-100-7.5, SRB-100-14, SRB-100-20.

Please analyze each sample for:

- TPH as Diesel and TPH as Motor Oil by EPA method 8015M
- Polynuclear aromatic hydrocarbons using EPA Method 8270 SIM.

Thank you,

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

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www.chromalab.com

CA DHS ELAP# 2496

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
SRB-95-0.5	06/20/2002 12:50	Soil	18
SRB-95-3.0	06/20/2002 13:08	Soil	19
SRB-95-5.0	06/20/2002 13:15	Soil	20
SRB-96-0.5	06/20/2002 13:20	Soil	21
SRB-96-3.0	06/20/2002 13:27	Soil	22
SRB-96-5.0	06/20/2002 13:40	Soil	23
SRB-72-0.5	06/20/2002 14:00	Soil	24
SRB-72-3.0	06/20/2002 14:32	Soil	25
SRB-72-5.0	06/20/2002 14:42	Soil	26

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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Project: 2770.005

Received: 06/20/2002 17:25

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Sample ID: **SRB-95-0.5**
Sampled: 06/20/2002 12:50
Matrix: Soil

Test(s): 8015M
Lab ID: 2002-06-0377 - 18
Extracted: 7/3/2002 10:15
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	180	5.0	mg/Kg	5.00	07/05/2002 10:05	ndp
Motor Oil	360	250	mg/Kg	5.00	07/05/2002 10:05	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	5.00	07/05/2002 10:05	sd

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-95-3.0**
Lab ID: 2002-06-0377 - 19

Sampled: 06/20/2002 13:08
Extracted: 7/3/2002 10:15

Matrix: Soil
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	440	5.0	mg/Kg	5.00	07/04/2002 03:54	ndp
Motor Oil	610	250	mg/Kg	5.00	07/04/2002 03:54	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	5.00	07/04/2002 03:54	sd

Submission #: 2002-06-0377

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: SRB-95-5.0
Lab ID: 2002-06-0377 - 20
Sampled: 06/20/2002 13:15
Extracted: 7/3/2002 10:15
Matrix: Soil
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	11	1.0	mg/Kg	1.00	07/03/2002 23:05	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 23:05	
Surrogates(s)						
o-Terphenyl	101.1	60-130	%	1.00	07/03/2002 23:05	

Submission #: 2002-06-0377

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Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-96-0.5**
Lab ID: 2002-06-0377 - 21
Sampled: 06/20/2002 13:20
Extracted: 7/3/2002 10:15
Matrix: Soil
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	2700	50	mg/Kg	50.00	07/05/2002 11:20	ndp
Motor Oil	3300	2500	mg/Kg	50.00	07/05/2002 11:20	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	50.00	07/05/2002 11:20	sd

Submission #: 2002-06-0377

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: SRB-96-3.0
Lab ID: 2002-06-0377 - 22
Sampled: 06/20/2002 13:27
Extracted: 7/3/2002 10:15
Matrix: Soil
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 22:28	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 22:28	
Surrogates(s)						
o-Terphenyl	90.3	60-130	%	1.00	07/03/2002 22:28	

Submission #: 2002-06-0377

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-96-5.0**
Lab ID: 2002-06-0377 - 23
Sampled: 06/20/2002 13:40
Extracted: 7/3/2002 10:15
Matrix: Soil
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/03/2002 22:28	
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 22:28	
Surrogates(s)						
o-Terphenyl	82.7	60-130	%	1.00	07/03/2002 22:28	

Submission #: 2002-06-0377

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CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-72-0.5**
Lab ID: 2002-06-0377 - 24
Sampled: 06/20/2002 14:00
Extracted: 7/3/2002 10:15
Matrix: Soil
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	10	1.0	mg/Kg	1.00	07/03/2002 23:42	ndp
Motor Oil	ND	50	mg/Kg	1.00	07/03/2002 23:42	
Surrogates(s)						
o-Terphenyl	94.7	60-130	%	1.00	07/03/2002 23:42	

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 06/20/2002 17:25

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www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M

Sample ID: **SRB-72-3.0**
Lab ID: 2002-06-0377 - 25

Sampled: 06/20/2002 14:32
Extracted: 7/3/2002 10:15

Matrix: Soil
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	130	5.0	mg/Kg	5.00	07/04/2002 02:35	ndp
Motor Oil	350	250	mg/Kg	5.00	07/04/2002 02:35	
Surrogates(s)						
o-Terphenyl	NA	60-130	%	5.00	07/04/2002 02:35	sd

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

SEVERN TRENT LABORATORY

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel: (925) 484-1919
Fax: (925) 484-1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP# 2496

Prep(s): 3550/8015M
Test(s): 8015M
Sample ID: **SRB-72-5.0**
Lab ID: 2002-06-0377 - 26
Sampled: 06/20/2002 14:42
Extracted: 7/3/2002 10:15
Matrix: Soil
QC Batch#: 2002/06/21-05.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	ND	1.0	mg/Kg	1.00	07/05/2002 13:12	
Motor Oil	ND	50	mg/Kg	1.00	07/05/2002 13:12	
Surrogates(s)						
o-Terphenyl	88.9	60-130	%	1.00	07/05/2002 13:12	

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 06/20/2002 17:25

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M
Method Blank

Soil

Test(s): 8015M
QC Batch # 2002/06/21-05.10

MB: 2002/06/21-05.10-001

Date Extracted: 07/03/2002 10:15

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	1	mg/Kg	07/05/2002 12:34	
Motor Oil	ND	50	mg/Kg	07/05/2002 12:34	
Surrogates(s)					
o-Terphenyl	88.0	60-130	%	07/05/2002 12:34	

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants
Attn.: Charles Rome
2101 Webster Street, 12th Floor
Oakland, CA 94612
Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Laboratory Control Spike **Soil** **QC Batch # 2002/06/21-05.10**

LCS 2002/06/21-05.10-002 Extracted: 07/03/2002 Analyzed: 07/03/2002 15:38
LCSD 2002/06/21-05.10-003 Extracted: 07/03/2002 Analyzed: 07/03/2002 16:16

Compound	Conc. mg/Kg		Exp.Conc.	Recovery		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Diesel	36.4	35.5	41.7	87.3	85.1	2.6	60-130	25		
Surrogates(s)										
o-Terphenyl	19.8	19.7	20.0	98.9	98.5		60-130	0		

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

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Project: 2770.005

Received: 06/20/2002 17:25

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CA DHS ELAP# 2496

Batch QC Report

Prep(s): 3550/8015M

Test(s): 8015M

Matrix Spike (MS / MSD) **Soil** **QC Batch # 2002/06/21-05.10**

SRB-95-0.5 >> MS

Lab ID: 2002-06-0377 - 018

MS: 2002/06/21-05.10-004 Extracted: 07/03/2002 Analyzed: 07/04/2002 01:16
Dilution: 5.00

MSD: 2002/06/21-05.10-005 Extracted: 07/03/2002 Analyzed: 07/04/2002 01:55
Dilution: 5.00

Compound	Conc. mg/Kg			Spk.Level	Recovery			Limits %		Flags	
	MS	MSD	Sample	mg/Kg	MS	MSD	RPD	Rec.	RPD	MS	MSD
Diesel	172	206	181	41.3	-21.8	61.3	420.	60-130	25	mso	mso
Surrogate(s)											
o-Terphenyl	ND	ND		20.0	0.0	0.0		60-130	0	sd	sd

Submission #: 2002-06-0377

Total Extractable Petroleum Hydrocarbons (TEPH)

Geomatrix Consultants

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2101 Webster Street, 12th Floor
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Phone: (510) 663-4100 Fax: (510) 663-4141

Project: 2770.005

Received: 06/20/2002 17:25

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CA DHS ELAP# 2496

Legend and Notes

Result Flag

mso

MS/MSD spike recoveries were out of QC limits due to matrix interference. Precision and Accuracy were verified by LCS/LCSD.

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.

2002-06-0377

67032

Chain-of Custody Record

016286

Date: 6/19/02

Page 1 of 2

Project No.: 2770.005

Samplers (Signature:)

Sarah Mearon

ANALYSES

REMARKS

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup					HOLD		Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
1	6/19/02	1620	SRB-92-4.5															X		S			X	1	* Call Susan Gallardo at 510-663-4137 for analytical requirements. 6"x15/8" metal sleeves
2	6/19/02	1622	SRB-92-8.0															X		S			X	1	
3	6/19/02	1624	SRB-92-11.0															X		S			X	1	
4	6/19/02	1626	SRB-92-14.0															X		S			X	1	
5	6/19/02	1628	SRB-92-17.0															X		S			X	1	
6	6/19/02	1630	SRB-92-19.0															X		S			X	1	
7	6/20/02	0827	SRB-93-1.5															X		S			X	1	
8	6/20/02	0830	SRB-93-5.0															X		S			X	1	
9	6/20/02	0900	SRB-93-14.0															X		S			X	1	
10	6/20/02	0905	SRB-93-15.5															X		S			X	1	
11	6/20/02	0915	SRB-93-17.0															X		S			X	1	
12	6/20/02	0920	SRB-93-18.0															X		S			X	1	
13	6/20/02	0950	SRB-94-2.0															X		S			X	1	
14	6/20/02	0952	SRB-94-5.0															X		S			X	1	
15	6/20/02	0954	SRB-94-8.0															X		S			X	1	

Laboratory: STL San Francisco

Turnaround Time: standard

Results to: C. Rome

Total No. of Containers: 15

Relinquished by (Signature): Sarah Mearon	Date: 6/20/02	Relinquished by (Signature):	Date: 6/20	Relinquished by (Signature):	Date:	Method of Shipment: lab courier	
Printed Name: Sarah Mearon	Time: 1530	Printed Name: Van Spall	Time: 17:25	Printed Name:	Time:	Laboratory Comments and Log No.: World Courier	
Company: Geomatrix		Company: World Courier		Company:			
Received by:	Date: 6/20	Received by:	Date:	Received by: Denise Harrington	Date: 6/20/02	4.0°C	
Printed Name: Van Spall	Time: 1530	Printed Name:	Time:	Printed Name: D. Harrington	Time: 1725		
Company: World Courier		Company:		Company: STL-SF			

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

2002-06-0377

6-32

Chain-of Custody Record

J16287

Date: 6/20/02 | Page 2 of 2

Project No.: 2770.005

Samplers (Signature): Sarah Mearon

	Date	Time	Sample Number
16	6/20/02	0956	SRB-94-11.0
17	6/20/02	1040	SRB-94-16.5
18	6/20/02	1250	SRB-95-0.5
19	6/20/02	1308	SRB-95-3.0
20	6/20/02	1315	SRB-95-5.0
21	6/20/02	1320	SRB-96-0.5
22	6/20/02	1327	SRB-96-3.0
23	6/20/02	1340	SRB-96-5.0
24	6/20/02	1400	SRB-72-0.5
25	6/20/02	1432	SRB-72-3.0
26	6/20/02	1442	SRB-72-5.0

ANALYSES

Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 BTEX and MTBE	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup (3630)	HOLD
SRB-94-11.0											X
SRB-94-16.5											X
SRB-95-0.5				X			X	X	X	X	
SRB-95-3.0				X			X	X	X	X	
SRB-95-5.0				X			X	X	X	X	
SRB-96-0.5				X			X	X	X	X	
SRB-96-3.0				X			X	X	X	X	
SRB-96-5.0				X			X	X	X	X	
SRB-72-0.5				X			X	X	X	X	
SRB-72-3.0				X			X	X	X	X	
SRB-72-5.0				X			X	X	X	X	

SM 6/20/02

REMARKS

Sample Number	Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers
SRB-94-11.0	S			X	1
SRB-94-16.5	S			X	1
SRB-95-0.5	S			X	4
SRB-95-3.0	S			X	4
SRB-95-5.0	S			X	4
SRB-96-0.5	S			X	4
SRB-96-3.0	S			X	4
SRB-96-5.0	S			X	4
SRB-72-0.5	S			X	4
SRB-72-3.0	S			X	4
SRB-72-5.0	S			X	4
Total No. of Containers					38

Additional Comments

*Call Susan Gallardo at 510-663-4137 for analytical requirements for hold samples.

6"x 15/8" metal sleeves

1 6"x 2" brass sleeve, 3 Encore

*Encore samples must be preserved or analyzed within 48 hours of sample collection.

Laboratory: STL San Francisco

Turnaround Time: Standard

Results to: C. Rome

Relinquished by (Signature): Sarah Mearon	Date: 6/20/02	Relinquished by (Signature):	Date: 6/20	Relinquished by (Signature):	Date:	Method of Shipment: lab courier
Printed Name: Sarah Mearon	Time: 1530	Printed Name: VAN SPALL	Time: 17:25	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix		Company: World Courier 5016		Company:		
Received by:	Date: 6/2	Received by:	Date:	Received by: Denise Harrington	Date: 6/20/02	
Printed Name: VAN SPALL WC 501	Time:	Printed Name:	Time:	Printed Name: D. Harrington	Time: 1725	
Company: World Courier 502		Company:		Company: STL-SF		

Geometrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 Fax: 510-663-4141

67032

SEVERN TRENT SERVICES

STL San Francisco

Sample Receipt Checklist

Submission #: 2002- 06 - 0377

Checklist completed by: (initials) CR Date: 06/21/02

Courier name: ☐ STL San Francisco ☐ Client World

Custody seals intact on shipping container/samples (no seals)	Yes____ No____	Not Present ✓
Chain of custody present?	Yes ✓ No____	
Chain of custody signed when relinquished and received?	Yes ✓ No____	
Chain of custody agrees with sample labels?	Yes ✓ No____	
Samples in proper container/bottle?	Yes ✓ No____	
Sample containers intact?	Yes ✓ No____	
Sufficient sample volume for indicated test?	Yes ✓ No____	
All samples received within holding time?	Yes ✓ No____	
Container/Temp Blank temperature in compliance (4^{o} C ± 2)?	Temp: 4.0 °C Yes ✓ No____	
Water - VOA vials have zero headspace?	No VOA vials submitted ✓ Yes____ No____	

(if bubble is present, refer to approximate bubble size and itemize in comments as S (small ~O), M (medium ~ O) or L (large ~ O)

Water - pH acceptable upon receipt? ☐ Yes ☐ No

☐ pH adjusted– Preservative used: ☐ HNO_3 ☐ HCl ☐ H_2SO_4 ☐ NaOH ☐ ZnOAc

For any item check-listed "No", provided detail of discrepancy in comment section below:

Comments:

Project Management [Routing for instruction of indicated discrepancy(ies)]

Project Manager: (initials) _____ Date: ____/____/02

Client contacted: ☐ Yes ☐ No

Summary of discussion:

Corrective Action (per PM/Client):

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
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www.chromalab.com

CA DHS ELAP#2496

Geomatrix Consultants	2101 Webster Street, 12th Floor Oakland, CA 94612
Attn: Charles Rome	Phone: (510) 663-4100 Fax: (510) 663-4141
2770.005	Project:

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
PL-01	Soil	06/19/2002 07:56	1
PL-02	Soil	06/19/2002 08:15	2
PL-03	Soil	06/19/2002 08:35	3
PL-04	Soil	06/19/2002 08:45	4
PL-05	Soil	06/19/2002 09:00	5
PL-06	Soil	06/19/2002 09:10	6
PL-07	Soil	06/19/2002 09:30	7
PL-08	Soil	06/19/2002 09:45	8
PL-09	Soil	06/19/2002 10:10	9
PL-10	Soil	06/19/2002 10:30	10
PL-11	Soil	06/19/2002 11:00	11
PL-12	Soil	06/19/2002 11:40	12
SPOB-1	Soil	06/19/2002 12:30	13
SPTS-1	Soil	06/19/2002 13:00	14

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

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Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Sample ID:	**PL-01**	Lab Sample ID:	2002-06-0345-001
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/21/2002 10:30
Sampled:	06/19/2002 07:56	QC-Batch:	2002/06/21-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0052	mg/Kg	1.03	06/21/2002 10:30	
Toluene	ND	0.0052	mg/Kg	1.03	06/21/2002 10:30	
Ethyl benzene	ND	0.0052	mg/Kg	1.03	06/21/2002 10:30	
Xylene(s)	ND	0.0052	mg/Kg	1.03	06/21/2002 10:30	
Surrogate(s)						
Trifluorotoluene	66.8	53-125	%	1.03	06/21/2002 10:30	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

Sample ID:	PL-02	Lab Sample ID:	2002-06-0345-002
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/21/2002 11:01
Sampled:	06/19/2002 08:15	QC-Batch:	2002/06/21-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0058	mg/Kg	1.17	06/21/2002 11:01	
Toluene	ND	0.0058	mg/Kg	1.17	06/21/2002 11:01	
Ethyl benzene	ND	0.0058	mg/Kg	1.17	06/21/2002 11:01	
Xylene(s)	ND	0.0058	mg/Kg	1.17	06/21/2002 11:01	
Surrogate(s)						
Trifluorotoluene	72.9	53-125	%	1.17	06/21/2002 11:01	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

Sample ID:	**PL-03**	Lab Sample ID:	2002-06-0345-003
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/21/2002 11:32
Sampled:	06/19/2002 08:35	QC-Batch:	2002/06/21-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0056	mg/Kg	1.11	06/21/2002 11:32	
Toluene	ND	0.0056	mg/Kg	1.11	06/21/2002 11:32	
Ethyl benzene	ND	0.0056	mg/Kg	1.11	06/21/2002 11:32	
Xylene(s)	ND	0.0056	mg/Kg	1.11	06/21/2002 11:32	
Surrogate(s)						
Trifluorotoluene	69.9	53-125	%	1.11	06/21/2002 11:32	

Submission #: 2002-06-0345

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www.chromalab.com

CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

Sample ID:	**PL-04**	Lab Sample ID:	2002-06-0345-004
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/21/2002 12:02
Sampled:	06/19/2002 08:45	QC-Batch:	2002/06/21-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0052	mg/Kg	1.05	06/21/2002 12:02	
Toluene	ND	0.0052	mg/Kg	1.05	06/21/2002 12:02	
Ethyl benzene	ND	0.0052	mg/Kg	1.05	06/21/2002 12:02	
Xylene(s)	ND	0.0052	mg/Kg	1.05	06/21/2002 12:02	
Surrogate(s)						
Trifluorotoluene	83.0	53-125	%	1.05	06/21/2002 12:02	

Submission #: 2002-06-0345

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www.chromalab.com

CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

Sample ID:	**PL-05**	Lab Sample ID:	2002-06-0345-005
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/21/2002 12:33
Sampled:	06/19/2002 09:00	QC-Batch:	2002/06/21-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0059	mg/Kg	1.17	06/21/2002 12:33	
Toluene	ND	0.0059	mg/Kg	1.17	06/21/2002 12:33	
Ethyl benzene	ND	0.0059	mg/Kg	1.17	06/21/2002 12:33	
Xylene(s)	ND	0.0059	mg/Kg	1.17	06/21/2002 12:33	
Surrogate(s)						
Trifluorotoluene	71.0	53-125	%	1.17	06/21/2002 12:33	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

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www.chromalab.com

CA DHS ELAP#2496

Sample ID:	**PL-06**	Lab Sample ID:	2002-06-0345-006
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/24/2002 13:19
Sampled:	06/19/2002 09:10	QC-Batch:	2002/06/24-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	1.00	06/24/2002 13:19	
Toluene	ND	0.0050	mg/Kg	1.00	06/24/2002 13:19	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	06/24/2002 13:19	
Xylene(s)	ND	0.0050	mg/Kg	1.00	06/24/2002 13:19	
Surrogate(s)						
Trifluorotoluene	94.5	53-125	%	1.00	06/24/2002 13:19	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

Sample ID:	**PL-07**	Lab Sample ID:	2002-06-0345-007
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/21/2002 13:35
Sampled:	06/19/2002 09:30	QC-Batch:	2002/06/21-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0058	mg/Kg	1.17	06/21/2002 13:35	
Toluene	ND	0.0058	mg/Kg	1.17	06/21/2002 13:35	
Ethyl benzene	ND	0.0058	mg/Kg	1.17	06/21/2002 13:35	
Xylene(s)	ND	0.0058	mg/Kg	1.17	06/21/2002 13:35	
Surrogate(s)						
Trifluorotoluene	86.4	53-125	%	1.17	06/21/2002 13:35	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

STL San Francisco
1220 Quarry Lane
Pleasanton, CA 94566

Tel 925 484 1919
Fax 925 484 1096
www.stl-inc.com
www.chromalab.com

CA DHS ELAP#2496

Sample ID:	PL-08	Lab Sample ID:	2002-06-0345-008
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/21/2002 14:06
Sampled:	06/19/2002 09:45	QC-Batch:	2002/06/21-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	1.00	06/21/2002 14:06	
Toluene	ND	0.0050	mg/Kg	1.00	06/21/2002 14:06	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	06/21/2002 14:06	
Xylene(s)	ND	0.0050	mg/Kg	1.00	06/21/2002 14:06	
Surrogate(s)						
Trifluorotoluene	76.0	53-125	%	1.00	06/21/2002 14:06	

Submission #: 2002-06-0345

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

Sample ID:	**PL-09**	Lab Sample ID:	2002-06-0345-009
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/21/2002 14:38
Sampled:	06/19/2002 10:10	QC-Batch:	2002/06/21-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	1.00	06/21/2002 14:38	
Toluene	ND	0.0050	mg/Kg	1.00	06/21/2002 14:38	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	06/21/2002 14:38	
Xylene(s)	ND	0.0050	mg/Kg	1.00	06/21/2002 14:38	
Surrogate(s)						
Trifluorotoluene	77.4	53-125	%	1.00	06/21/2002 14:38	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

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CA DHS ELAP#2496

Sample ID:	**PL-10**	Lab Sample ID:	2002-06-0345-010
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/24/2002 13:50
Sampled:	06/19/2002 10:30	QC-Batch:	2002/06/24-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	1.00	06/24/2002 13:50	
Toluene	ND	0.0050	mg/Kg	1.00	06/24/2002 13:50	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	06/24/2002 13:50	
Xylene(s)	ND	0.0050	mg/Kg	1.00	06/24/2002 13:50	
Surrogate(s)						
Trifluorotoluene	95.5	53-125	%	1.00	06/24/2002 13:50	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

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www.chromalab.com

CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

Sample ID:	**PL-11**	Lab Sample ID:	2002-06-0345-011
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/24/2002 14:21
Sampled:	06/19/2002 11:00	QC-Batch:	2002/06/24-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0055	mg/Kg	1.10	06/24/2002 14:21	
Toluene	ND	0.0055	mg/Kg	1.10	06/24/2002 14:21	
Ethyl benzene	ND	0.0055	mg/Kg	1.10	06/24/2002 14:21	
Xylene(s)	ND	0.0055	mg/Kg	1.10	06/24/2002 14:21	
Surrogate(s)						
Trifluorotoluene	93.6	53-125	%	1.10	06/24/2002 14:21	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

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CA DHS ELAP#2496

Sample ID:	**PL-12**	Lab Sample ID:	2002-06-0345-012
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/24/2002 14:53
Sampled:	06/19/2002 11:40	QC-Batch:	2002/06/24-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	1.00	06/24/2002 14:53	
Toluene	ND	0.0050	mg/Kg	1.00	06/24/2002 14:53	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	06/24/2002 14:53	
Xylene(s)	ND	0.0050	mg/Kg	1.00	06/24/2002 14:53	
Surrogate(s)						
Trifluorotoluene	67.1	53-125	%	1.00	06/24/2002 14:53	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

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CA DHS ELAP#2496

Sample ID:	**SPOB-1**	Lab Sample ID:	2002-06-0345-013
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/20/2002 17:39
Sampled:	06/19/2002 12:30	QC-Batch:	2002/06/20-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	1.00	06/20/2002 17:39	
Toluene	ND	0.0050	mg/Kg	1.00	06/20/2002 17:39	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	06/20/2002 17:39	
Xylene(s)	ND	0.0050	mg/Kg	1.00	06/20/2002 17:39	
Surrogate(s)						
Trifluorotoluene	69.8	53-125	%	1.00	06/20/2002 17:39	

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

Gas/BTEX Compounds by 8015M/8021

Geomatrix Consultants
Attn: Charles Rome

Test Method: 8021B
Prep Method: 5035

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www.chromalab.com

CA DHS ELAP#2496

Sample ID:	**SPTS-1**	Lab Sample ID:	2002-06-0345-014
Project:	2770.005	Received:	06/19/2002 19:30
		Extracted:	06/20/2002 18:10
Sampled:	06/19/2002 13:00	QC-Batch:	2002/06/20-01.03
Matrix:	Soil		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	1.00	06/20/2002 18:10	
Toluene	ND	0.0050	mg/Kg	1.00	06/20/2002 18:10	
Ethyl benzene	ND	0.0050	mg/Kg	1.00	06/20/2002 18:10	
Xylene(s)	ND	0.0050	mg/Kg	1.00	06/20/2002 18:10	
Surrogate(s)						
Trifluorotoluene	64.6	53-125	%	1.00	06/20/2002 18:10	

Submission #: 2002-06-0345

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8015M
8021B

Prep Method: 5035

Method Blank **Soil** **QC Batch # 2002/06/20-01.03**

MB: 2002/06/20-01.03-003 Date Extracted: 06/20/2002 08:16

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	06/20/2002 08:16	
Toluene	ND	0.0050	mg/Kg	06/20/2002 08:16	
Ethyl benzene	ND	0.0050	mg/Kg	06/20/2002 08:16	
Xylene(s)	ND	0.0050	mg/Kg	06/20/2002 08:16	
Surrogate(s)					
Trifluorotoluene	101.0	53-125	%	06/20/2002 08:16	

Submission #: 2002-06-0345

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8015M
8021B

Prep Method: 5035

Method Blank **Soil** **QC Batch # 2002/06/21-01.03**

MB: 2002/06/21-01.03-003 Date Extracted: 06/21/2002 08:42

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	06/21/2002 08:42	
Toluene	ND	0.0050	mg/Kg	06/21/2002 08:42	
Ethyl benzene	ND	0.0050	mg/Kg	06/21/2002 08:42	
Xylene(s)	ND	0.0050	mg/Kg	06/21/2002 08:42	
Surrogate(s)					
Trifluorotoluene	96.2	53-125	%	06/21/2002 08:42	

Submission #: 2002-06-0345

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8015M
8021B

Prep Method: 5035

Method Blank **Soil** **QC Batch # 2002/06/24-01.03**

MB: 2002/06/24-01.03-004 Date Extracted: 06/24/2002 09:28

Compound	Result	Rep.Limit	Unit	Analyzed	Flag
Benzene	ND	0.0050	mg/Kg	06/24/2002 09:28	
Toluene	ND	0.0050	mg/Kg	06/24/2002 09:28	
Ethyl benzene	ND	0.0050	mg/Kg	06/24/2002 09:28	
Xylene(s)	ND	0.0050	mg/Kg	06/24/2002 09:28	
Surrogate(s)					
Trifluorotoluene	106.7	53-125	%	06/24/2002 09:28	

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8021B Prep Method: 5035

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/06/20-01.03**

LCS: 2002/06/20-01.03-004 Extracted: 06/20/2002 08:47 Analyzed: 06/20/2002 08:47

LCSD: 2002/06/20-01.03-005 Extracted: 06/20/2002 09:18 Analyzed: 06/20/2002 09:18

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Benzene	0.0961	0.0918	0.1000	0.1000	96.1	91.8	4.6	77-123	35		
Toluene	0.0927	0.0894	0.1000	0.1000	92.7	89.4	3.6	78-122	35		
Ethyl benzene	0.0912	0.0898	0.1000	0.1000	91.2	89.8	1.5	70-130	35		
Xylene(s)	0.275	0.271	0.300	0.300	91.7	90.3	1.5	75-125	35		
Surrogate(s)											
Trifluorotoluene	474	448	500	500	94.8	89.6		53-125			

Submission #: 2002-06-0345

SEVERN TRENT SERVICES

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8021B Prep Method: 5035

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/06/21-01.03**

LCS: 2002/06/21-01.03-004 Extracted: 06/21/2002 09:13 Analyzed: 06/21/2002 09:13

LCSD: 2002/06/21-01.03-005 Extracted: 06/21/2002 09:44 Analyzed: 06/21/2002 09:44

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Benzene	0.0913	0.0906	0.1000	0.1000	91.3	90.6	0.8	77-123	35		
Toluene	0.0887	0.0893	0.1000	0.1000	88.7	89.3	0.7	78-122	35		
Ethyl benzene	0.0866	0.0882	0.1000	0.1000	86.6	88.2	1.8	70-130	35		
Xylene(s)	0.261	0.270	0.300	0.300	87.0	90.0	3.4	75-125	35		
Surrogate(s)											
Trifluorotoluene	453	433	500	500	90.6	86.6		53-125			

Submission #: 2002-06-0345

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CA DHS ELAP#2496

Gas/BTEX Compounds by 8015M/8021

Batch QC report

Test Method: 8021B Prep Method: 5035

Laboratory Control Spike (LCS/LCSD) **Soil** **QC Batch # 2002/06/24-01.03**

LCS: 2002/06/24-01.03-005 Extracted: 06/24/2002 09:59 Analyzed: 06/24/2002 09:59

LCSD: 2002/06/24-01.03-006 Extracted: 06/24/2002 10:30 Analyzed: 06/24/2002 10:30

Compound	Conc. [mg/Kg]		Exp.Conc. [mg/Kg]		Recovery		RPD	Ctrl.Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recover	RPD	LCS	LCSD
Benzene	0.0954	0.0917	0.1000	0.1000	95.4	91.7	4.0	77-123	35		
Toluene	0.0930	0.0903	0.1000	0.1000	93.0	90.3	2.9	78-122	35		
Ethyl benzene	0.0904	0.0902	0.1000	0.1000	90.4	90.2	0.2	70-130	35		
Xylene(s)	0.273	0.272	0.300	0.300	91.0	90.7	0.3	75-125	35		
Surrogate(s)											
Trifluorotoluene	478	442	500	500	95.6	88.4		53-125			

Appendix F

GEOMATRIX

APPENDIX F

Chain-of-Custody Record and Laboratory Analytical Results, Leachability Testing – November 2002

FRIEDMAN & BRUYA, INC.
ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Charlene Morrow, M.S.
Yelena Aravkina, M.S.
Bradley T. Benson, B.S.
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December 13, 2002

Charlie Rome, Project Manager
Geomatrix Consultants, Inc.
2101 Webster Street, 12th Floor
Oakland, CA 94612

Dear Mr. Rome:

Included are the results from the testing of material submitted on November 15, 2002 from your 2770.005 project. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Charlene Morrow

Charlene Morrow
Chemist

Enclosures
GMC1213R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on November 15, 2002 by Friedman & Bruya, Inc. from the Geomatrix Consultants, Inc. 2770.005 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Geomatrix Consultants, Inc.
211125-01	SRB-100L-4.75
211125-02	SRB-100L-8.0
211125-03	SRB-79L-5.0
211125-04	SRB-79L-11.0
211125-05	SRB-53L-5.0
211125-06	SRB-53L-11.0
211125-07	SRB-88L-8.0
211125-08	SRB-88L-11.0
211125-09	PL-06L-1.0
211125-10	PL-06L-5.0
211125-11	PL-12L-1.0
211125-12	PL-12L-5.0

All quality control requirements were acceptable except for the following.

For analysis of diesel range material following extraction by the modified CA WET method, laboratory contamination was found in the method blanks and samples. This was due to the procedure which was necessary to remove fine suspended particulates. The contamination was removed with silica gel cleanup.

For analysis of diesel range material following silica gel cleanup, surrogate recoveries for several samples were outside of normal acceptance criteria. In addition, the RPD for LCS/LCSD results was outside of normal acceptance criteria.

For analysis of diesel and motor oil range material following extraction by the modified CA WET method, the RPD for duplicate sample results was outside of normal acceptance criteria, possibly due to sample inhomogeneity.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 11/19/02
Date Analyzed: 11/20/02 and 11/21/02

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M
Results Reported as µg/g (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 45-153)
SRB-100L-4.75 d 211125-01	430	76
SRB-100L-8.0 d 211125-02	16,000	151
SRB-79L-5.0 211125-03	310	80
SRB-79L-11.0 211125-04	<10	89
SRB-53L-5.0 211125-05	350	87
SRB-53L-11.0 211125-06	20	90
SRB-88L-8.0 211125-07	1,400	92
SRB-88L-11.0 211125-08	610	105
PL-06L-1.0 d 211125-09	1,400	90
PL-06L-5.0 211125-10	670	86
PL-12L-1.0 d 211125-11	16,000	110
PL-12L-5.0 d 211125-12	3,700	108
Method Blank	<10	89

d - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 11/19/02
Date Analyzed: 11/20/02 and 11/21/02

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Results Reported as µg/g (ppm)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SRB-100L-4.75 211125-01	2,100	97
SRB-100L-8.0 d 211125-02	15,000	135
SRB-79L-5.0 d 211125-03	950	87
SRB-79L-11.0 211125-04	<50	94
SRB-53L-5.0 211125-05	810	94
SRB-53L-11.0 211125-06	61	97
SRB-88L-8.0 d 211125-07	1,800	99
SRB-88L-11.0 211125-08	780	109
PL-06L-1.0 d 211125-09	4,400	137
PL-06L-5.0 211125-10	920	95

d - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 11/19/02
Date Analyzed: 11/20/02 and 11/21/02

RESULTS FROM THE ANALYSIS OF THE SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Results Reported as µg/g (ppm)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
PL-12L-1.0 d 211125-11	22,000	ip
PL-12L-5.0 d 211125-12	4,100	105
Method Blank	<50	98

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

d - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 12/06/02
Date Analyzed: 12/06/02, 12/08/02, and 12/10/02

RESULTS FROM THE ANALYSIS OF THE CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 51-151)
SRB-100L-4.75 211125-01	350 fb	87
SRB-100L-8.0 211125-02	2,400 fbp	90
SRB-79L-5.0 211125-03	420 fb	78
SRB-79L-11.0 211125-04	640 fb	90
SRB-53L-5.0 211125-05	1,300 fb	80
SRB-53L-11.0 211125-06	710 fb	77
SRB-88L-8.0 211125-07	1,100 fb	93
SRB-88L-11.0 211125-08	910 fb	102
PL-06L-1.0 211125-09	880 fb	97

fb - The analyte indicated was found in the blank. The majority, if not all, of the material present is likely due to laboratory contamination.

fbp - The analyte indicated was found in the blank. A portion of the material present may be due to laboratory contamination.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 12/06/02
Date Analyzed: 12/06/02, 12/08/02, and 12/10/02

RESULTS FROM THE ANALYSIS OF THE CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 51-151)
PL-06L-5.0 211125-10	1,200 fb	80
PL-12L-1.0 d 211125-11	14,000 fbp	ip
PL-12L-5.0 211125-12	2,400 fbp	115
Method Blank	160	107
Method Blank	63	110

d - The sample was diluted. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

ip - Recovery fell outside of normal control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

fb - The analyte indicated was found in the blank. The majority, if not all, of the material present is likely due to laboratory contamination.

fbp - The analyte indicated was found in the blank. A portion of the material present may be due to laboratory contamination.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 12/06/02
Date Analyzed: 12/09/02 and 12/10/02

RESULTS FROM THE ANALYSIS OF THE CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 51-151)
SRB-100L-4.75 211125-01	<50	82
SRB-100L-8.0 211125-02	61	66
SRB-79L-5.0 211125-03	<50	69
SRB-79L-11.0 211125-04	<50	69
SRB-53L-5.0 211125-05	<50	35 vo
SRB-53L-11.0 211125-06	<50	50 vo
SRB-88L-8.0 211125-07	<50	60
SRB-88L-11.0 211125-08	<50	53
PL-06L-1.0 211125-09	<50	49 vo
PL-06L-5.0 211125-10	<50	17 vo

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 12/06/02
Date Analyzed: 12/09/02 and 12/10/02

RESULTS FROM THE ANALYSIS OF THE CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Surrogate (% Recovery) (Limit 51-151)
PL-12L-1.0 211125-11	690	34 vo
PL-12L-5.0 211125-12	180	55
Method Blank	<50	91
Method Blank	<50	73

vo - The value reported fell outside the control limits established for this analyte.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 12/06/02
Date Analyzed: 12/06/02, 12/08/02, and 12/10/02

RESULTS FROM THE ANALYSIS OF THE CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{35})	Surrogate (% Recovery) (Limit 50-150)
SRB-100L-4.75 211125-01	320	122
SRB-100L-8.0 211125-02	810	105
SRB-79L-5.0 211125-03	350	108
SRB-79L-11.0 211125-04	<100	127
SRB-53L-5.0 211125-05	630	122
SRB-53L-11.0 211125-06	<100	113
SRB-88L-8.0 211125-07	190	138
SRB-88L-11.0 211125-08	140	146
PL-06L-1.0 211125-09	770	142
PL-06L-5.0 211125-10	320	122
PL-12L-1.0 211125-11	1,000	124

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 12/06/02
Date Analyzed: 12/06/02, 12/08/02, and 12/10/02

RESULTS FROM THE ANALYSIS OF THE CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
PL-12L-5.0 211125-12	520	150
Method Blank	<100	113
Method Blank	<100	122

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 12/06/02
Date Analyzed: 12/09/02 and 12/10/02

RESULTS FROM THE ANALYSIS OF THE CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
SRB-100L-4.75 211125-01	<100	104
SRB-100L-8.0 211125-02	<100	78
SRB-79L-5.0 211125-03	<100	87
SRB-79L-11.0 211125-04	<100	110
SRB-53L-5.0 211125-05	<100	71
SRB-53L-11.0 211125-06	<100	105
SRB-88L-8.0 211125-07	<100	88
SRB-88L-11.0 211125-08	<100	95
PL-06L-1.0 211125-09	<100	104
PL-06L-5.0 211125-10	<100	103
PL-12L-1.0 211125-11	<100	56

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005
Date Extracted: 12/06/02
Date Analyzed: 12/09/02 and 12/10/02

RESULTS FROM THE ANALYSIS OF THE CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M
Sample Extracts Passed Through a Silica Gel Column Prior to Analysis
Results Reported as µg/L (ppb)

Sample ID Laboratory ID	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 50-150)
PL-12L-5.0 211125-12	<100	96
Method Blank	<100	115
Method Blank	<100	91

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID:	PL-12L-5.0	Client:	Geomatrix Consultants, Inc.
Date Received:	11/15/02	Project:	2770.005
Date Extracted:	11/20/02	Lab ID:	211125-12 1/100
Date Analyzed:	11/23/02	Data File:	112220.D
Matrix:	Soil	Instrument:	GCMS3
Units:	ug/kg (ppb)	Operator:	YA

Surrogates:	% Recovery	Lower Limit	Upper Limit
Anthracene-d10	105	43	109
Benzo(a)anthracene-d12	84	65	134

Compounds:	Concentration: ug/kg (ppb)
Naphthalene	<500
Acenaphthylene	<500
Acenaphthene	980
Fluorene	1,900
Phenanthrene	960
Anthracene	1,200
Fluoranthene	<500
Pyrene	1,700
Benz(a)anthracene	510
Chrysene	1,100
Benzo(b)fluoranthene	<500
Benzo(k)fluoranthene	<500
Benzo(a)pyrene	<500
Indeno(1,2,3-cd)pyrene	<500
Dibenzo(a,h)anthracene	<500
Benzo(g,h,i)perylene	<500

Note: The sample was diluted due to high levels of interfering compounds. Detection limits are raised due to dilution and surrogate recoveries may not be meaningful.

Analysis For PNA Compounds By EPA Method 8270C SIM

Client Sample ID:	Method Blank	Client:	Geomatrix Consultants, Inc.
Date Received:	Not Applicable	Project:	2770.005
Date Extracted:	11/20/02	Lab ID:	02-866 mb8
Date Analyzed:	11/23/02	Data File:	112219.D
Matrix:	Soil	Instrument:	GCMS3
Units:	ug/kg (ppb)	Operator:	YA

Surrogates:	% Recovery	Lower Limit	Upper Limit
Anthracene-d10	78	43	109
Benzo(a)anthracene-d12	83	65	134

Compounds:	Concentration: ug/kg (ppb)
Naphthalene	<5
Acenaphthylene	<5
Acenaphthene	<5
Fluorene	<5
Phenanthrene	<5
Anthracene	<5
Fluoranthene	<5
Pyrene	<5
Benz(a)anthracene	<5
Chrysene	<5
Benzo(b)fluoranthene	<5
Benzo(k)fluoranthene	<5
Benzo(a)pyrene	<5
Indeno(1,2,3-cd)pyrene	<5
Dibenzo(a,h)anthracene	<5
Benzo(g,h,i)perylene	<5

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code: 211135-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Diesel	µg/g (ppm)	<10	<10	nm

Laboratory Code: 211135-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Diesel	µg/g (ppm)	500	<10	100	62-142

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/g (ppm)	500	108	108	66-132	0

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Laboratory Code: 211135-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Motor Oil	µg/g (ppm)	<50	<50	nm

Laboratory Code: 211135-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Motor Oil	µg/g (ppm)	250	<50	94	65-135

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Motor Oil	µg/g (ppm)	250	96	101	65-135	6

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code: 211125-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Diesel	µg/L (ppb)	350	860	84 vo

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	667	112	128	71-128	14

vo - The value reported fell outside the control limits established for this analyte.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL USING EPA METHOD 8015M

Laboratory Code: 211125-01 (Duplicate) Silica Gel

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Diesel	µg/L (ppb)	<50	<50	nm

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel	µg/L (ppb)	667	83	110	71-128	28 vo

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

vo - The value reported fell outside the control limits established for this analyte.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Laboratory Code: 211125-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Motor Oil	µg/L (ppb)	320	500	44 vo

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Motor Oil	µg/L (ppb)	333	91	108	65-135	17

vo - The value reported fell outside the control limits established for this analyte.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF CA WET-M EXTRACT SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL USING EPA METHOD 8015M

Laboratory Code: 211125-01 (Duplicate) Silica Gel

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Motor Oil	µg/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample Silica Gel

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Motor Oil	µg/L (ppb)	333	83	100	71-128	19

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

Date of Report: 12/13/02
Date Received: 11/15/02
Project: 2770.005

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PNA'S BY EPA METHOD 8270C SIM

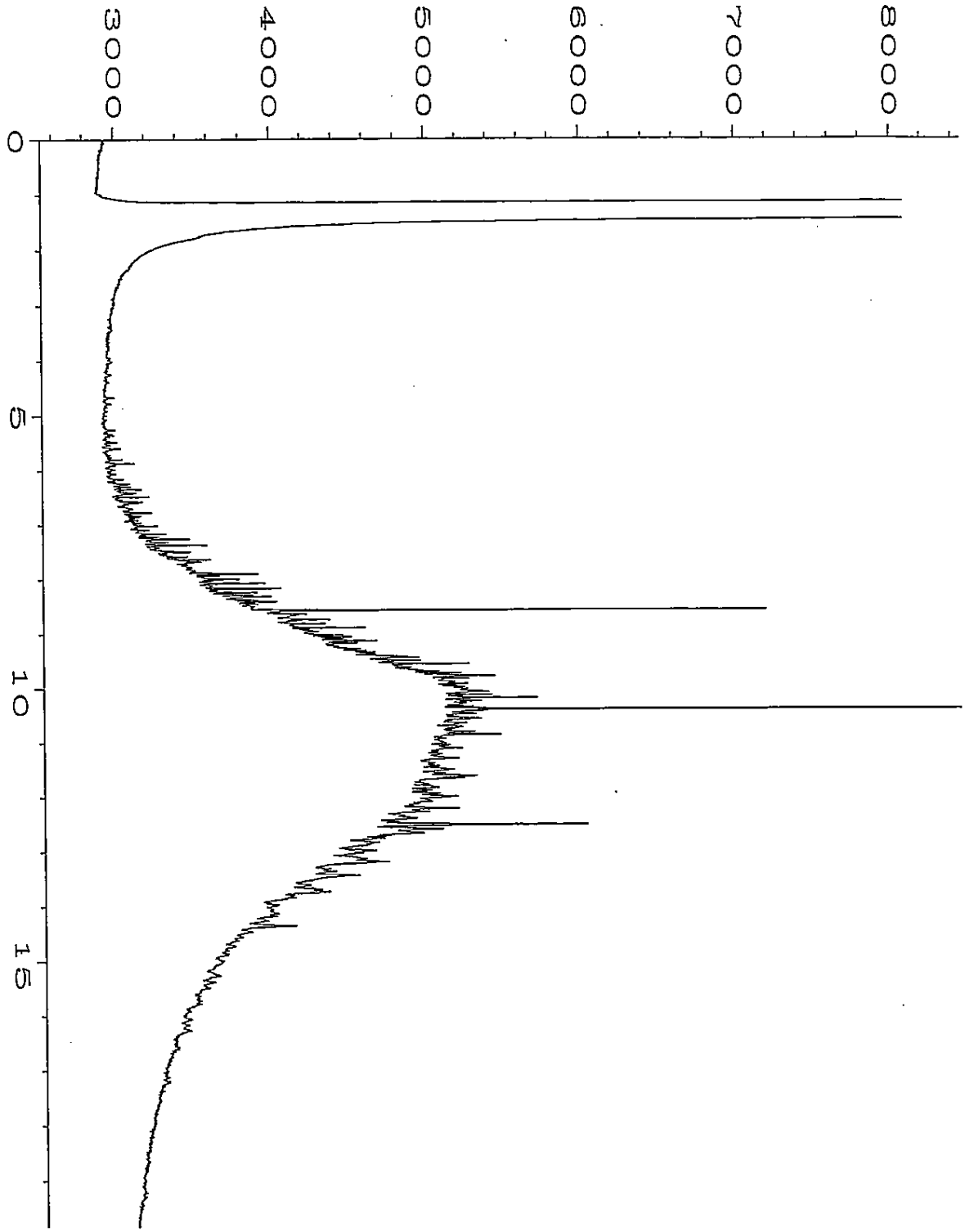
Laboratory Code: 211027-02 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	Relative Percent Difference (Limit 20)
Naphthalene	µg/kg (ppb)	<5	<5	nm
Acenaphthylene	µg/kg (ppb)	<5	<5	nm
Acenaphthene	µg/kg (ppb)	<5	<5	nm
Fluorene	µg/kg (ppb)	<5	<5	nm
Phenanthrene	µg/kg (ppb)	<5	<5	nm
Anthracene	µg/kg (ppb)	<5	<5	nm
Fluoranthene	µg/kg (ppb)	<5	<5	nm
Pyrene	µg/kg (ppb)	210	250	17
Benz(a)anthracene	µg/kg (ppb)	<5	<5	nm
Chrysene	µg/kg (ppb)	<5	<5	nm
Benzo(b)fluoranthene	µg/kg (ppb)	<5	<5	nm
Benzo(k)fluoranthene	µg/kg (ppb)	<5	<5	nm
Benzo(a)pyrene	µg/kg (ppb)	<5	<5	nm
Indeno(1,2,3-cd)pyrene	µg/kg (ppb)	<5	<5	nm
Dibenzo(a,h)anthracene	µg/kg (ppb)	<5	<5	nm
Benzo(g,h,i)perylene	µg/kg (ppb)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

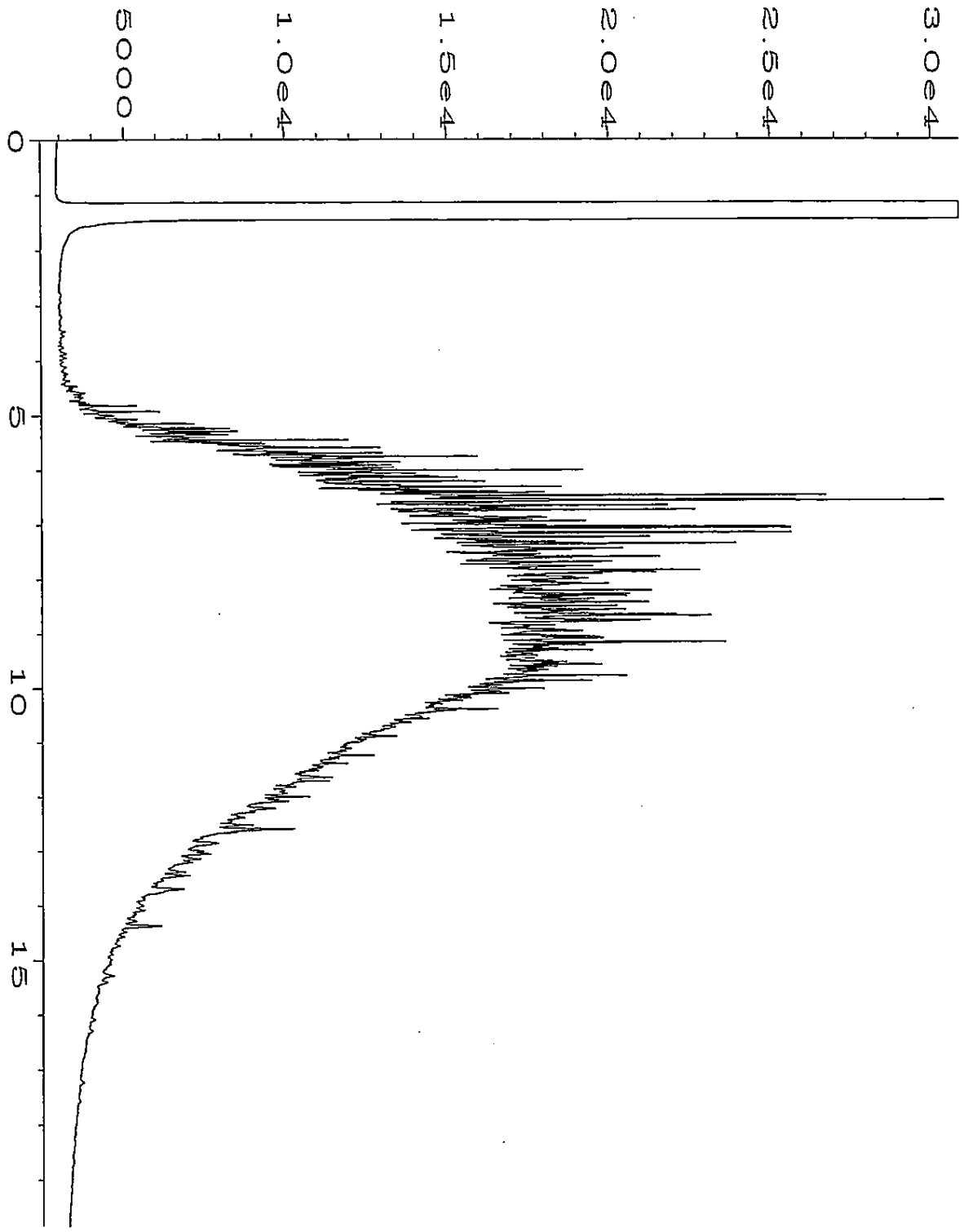
Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	µg/kg (ppb)	170	92	91	58-121	1
Acenaphthylene	µg/kg (ppb)	170	99	97	54-122	2
Acenaphthene	µg/kg (ppb)	170	92	92	58-119	0
Fluorene	µg/kg (ppb)	170	96	95	57-122	1
Phenanthrene	µg/kg (ppb)	170	90	90	57-123	0
Anthracene	µg/kg (ppb)	170	107	101	44-125	6
Fluoranthene	µg/kg (ppb)	170	105	105	54-127	0
Pyrene	µg/kg (ppb)	170	103	103	56-123	0
Benz(a)anthracene	µg/kg (ppb)	170	75	84	50-124	11
Chrysene	µg/kg (ppb)	170	76	86	51-122	13
Benzo(b)fluoranthene	µg/kg (ppb)	170	74	82	44-149	10
Benzo(k)fluoranthene	µg/kg (ppb)	170	79	86	52-140	9
Benzo(a)pyrene	µg/kg (ppb)	170	81	79	42-129	2
Indeno(1,2,3-cd)pyrene	µg/kg (ppb)	170	76	82	48-134	8
Dibenzo(a,h)anthracene	µg/kg (ppb)	170	76	82	49-136	7
Benzo(g,h,i)perylene	µg/kg (ppb)	170	75	80	46-134	6

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.



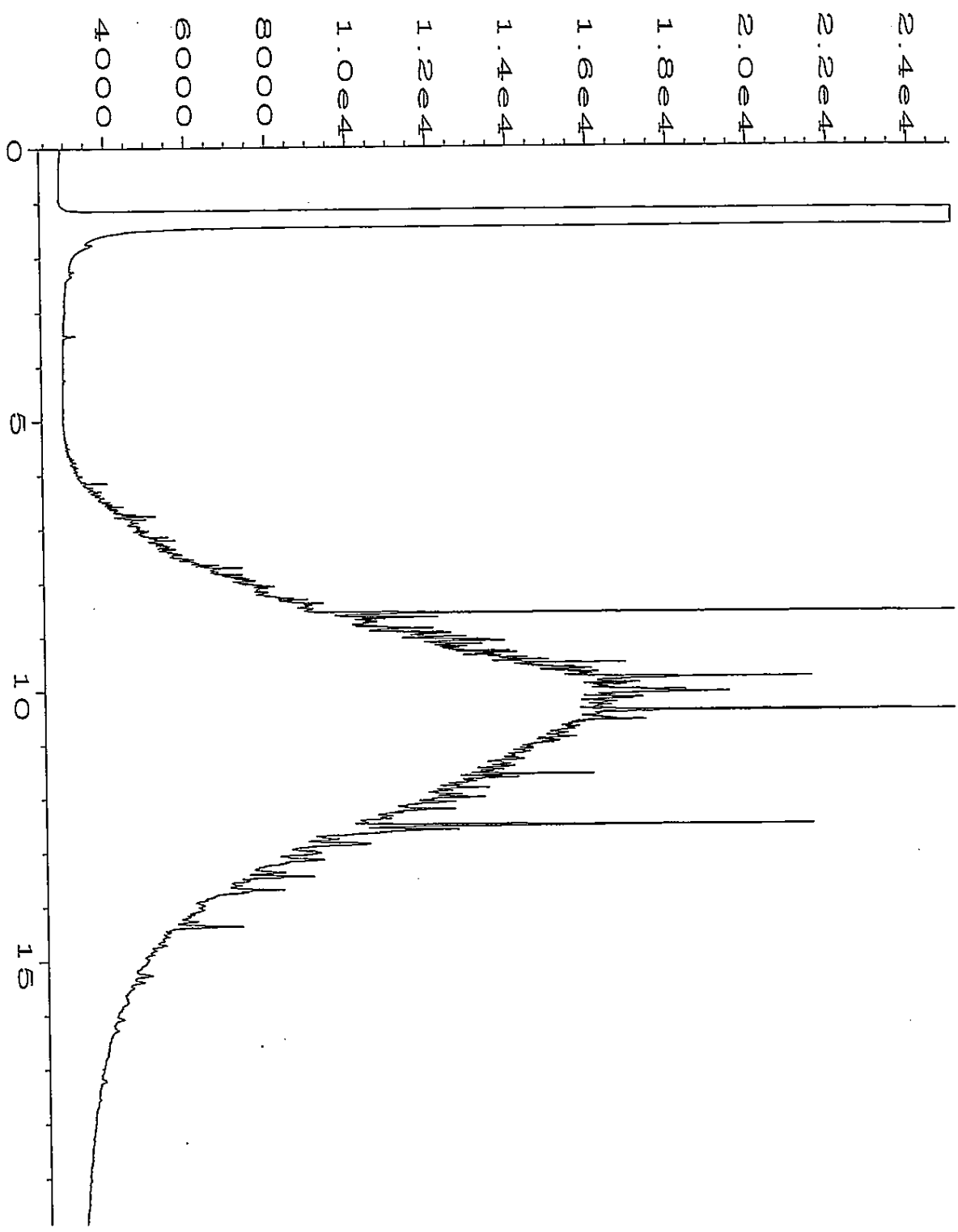
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Injection Number : 1
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Analysis Method : DEFAULT.MTH



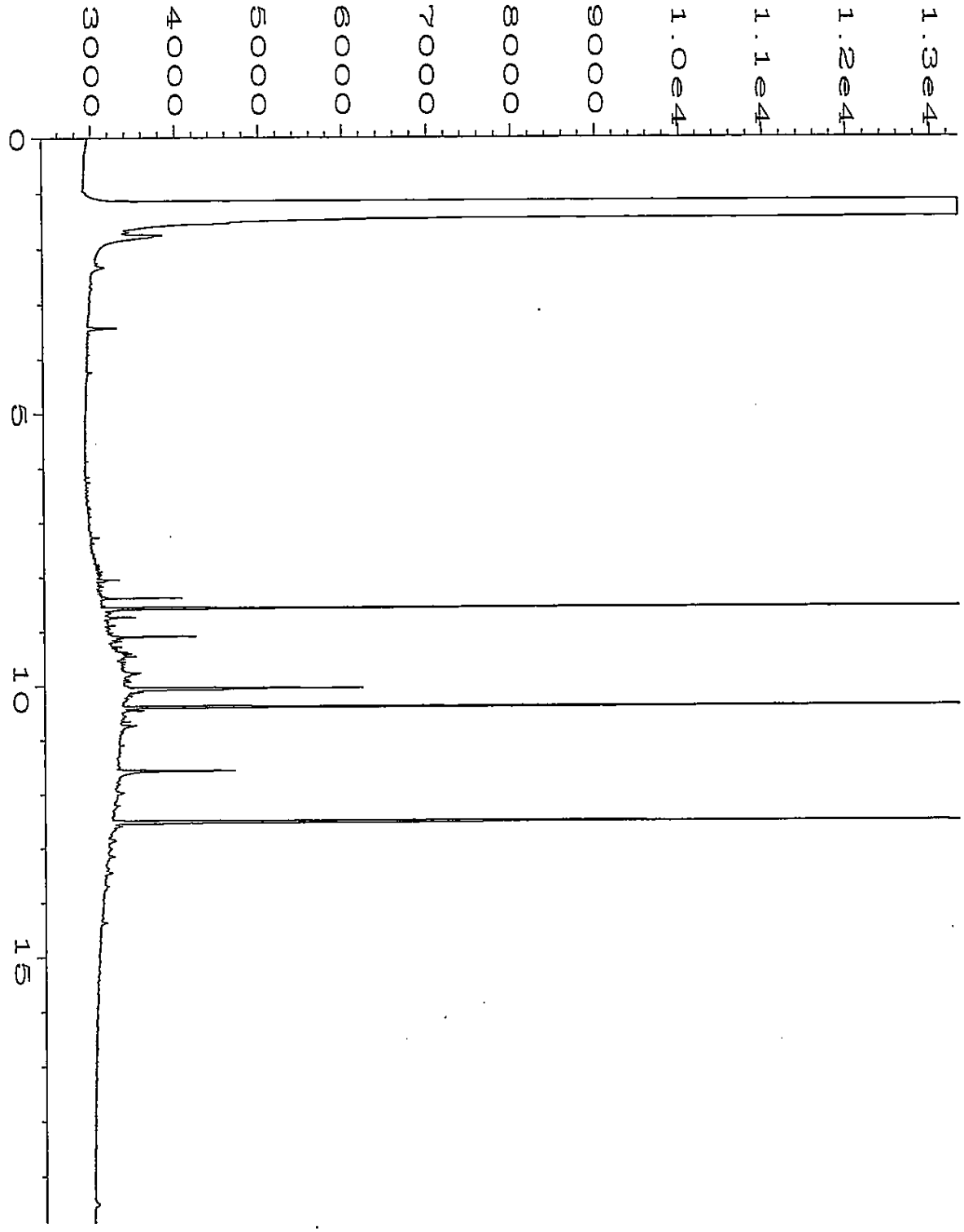
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Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



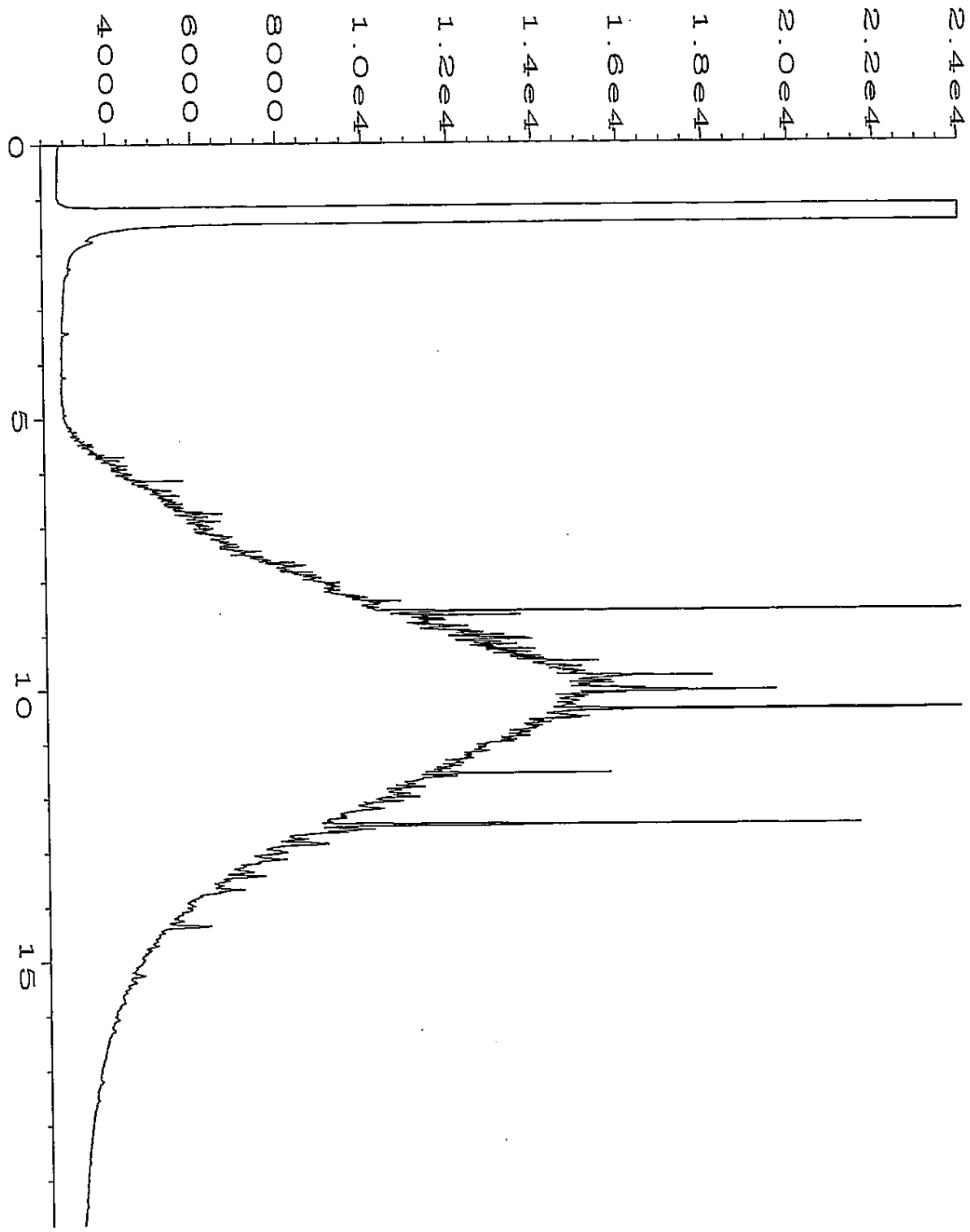
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Analysis Method : DEFAULT.MTH



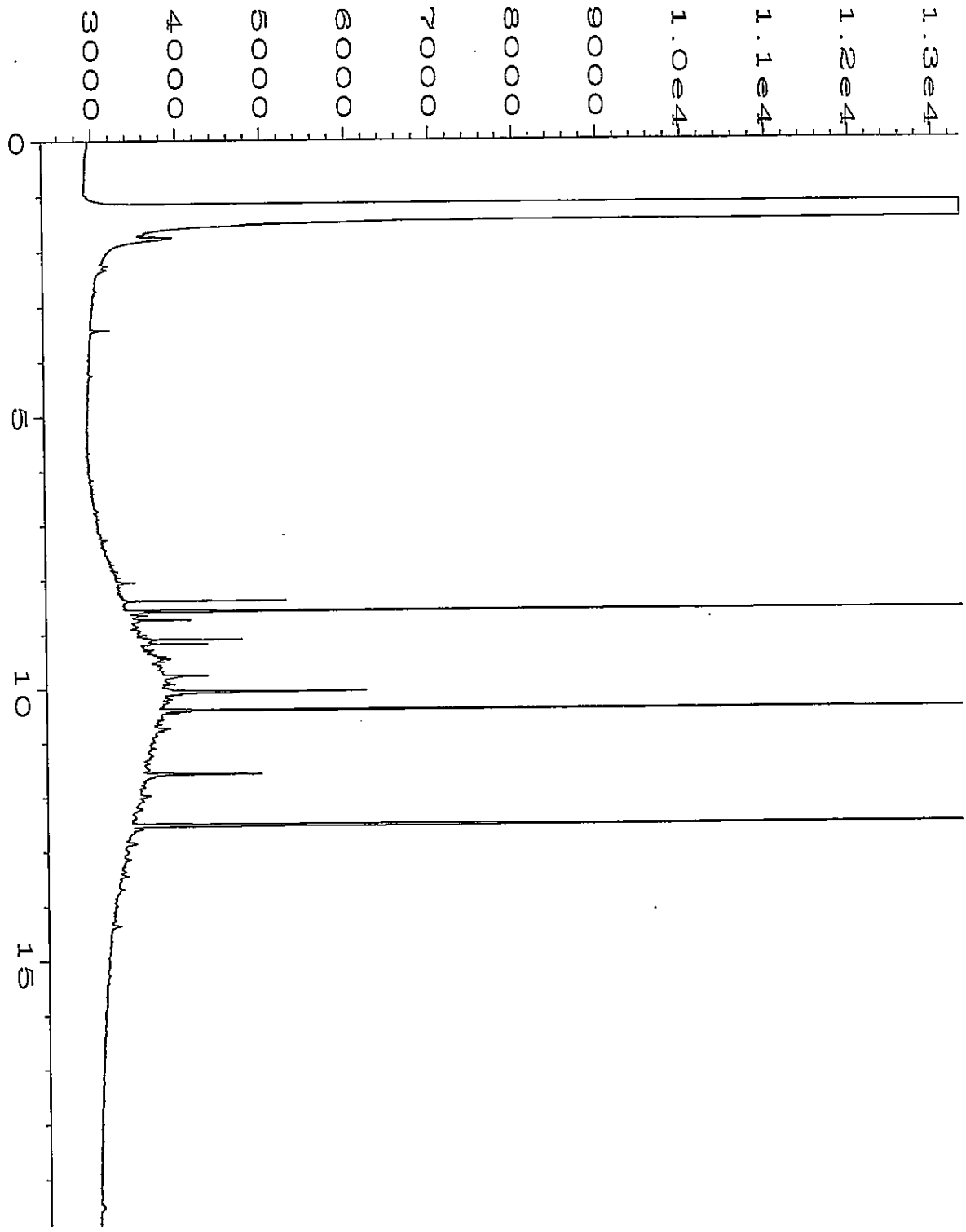
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Report Created on: 22 Nov 02 08:55 AM

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Injection Number : 1
Sequence Line : 4
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



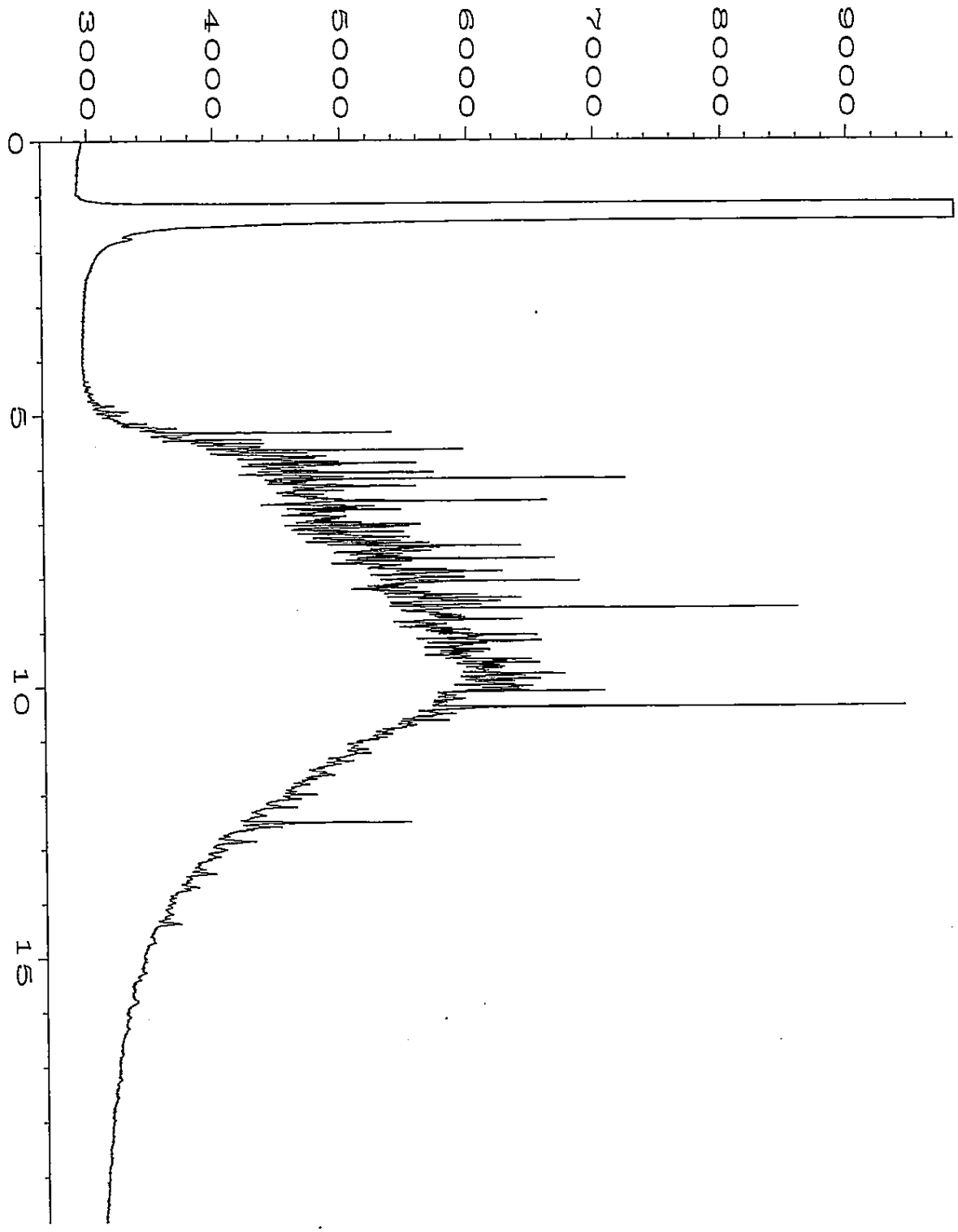
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Report Created on: 21 Nov 02 02:01 PM

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Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



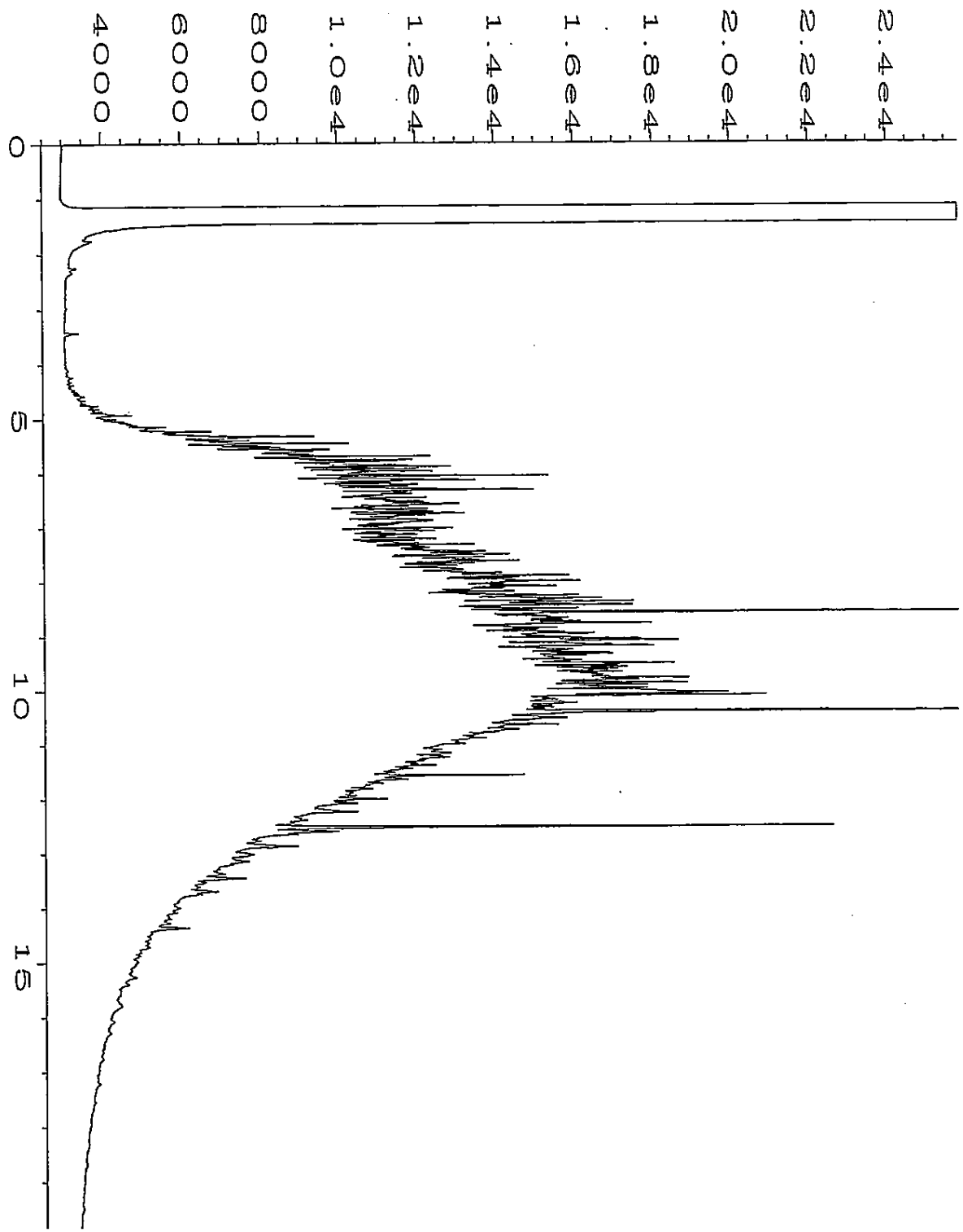
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Report Created on: 22 Nov 02 08:55 AM

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Sequence Line : 4
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



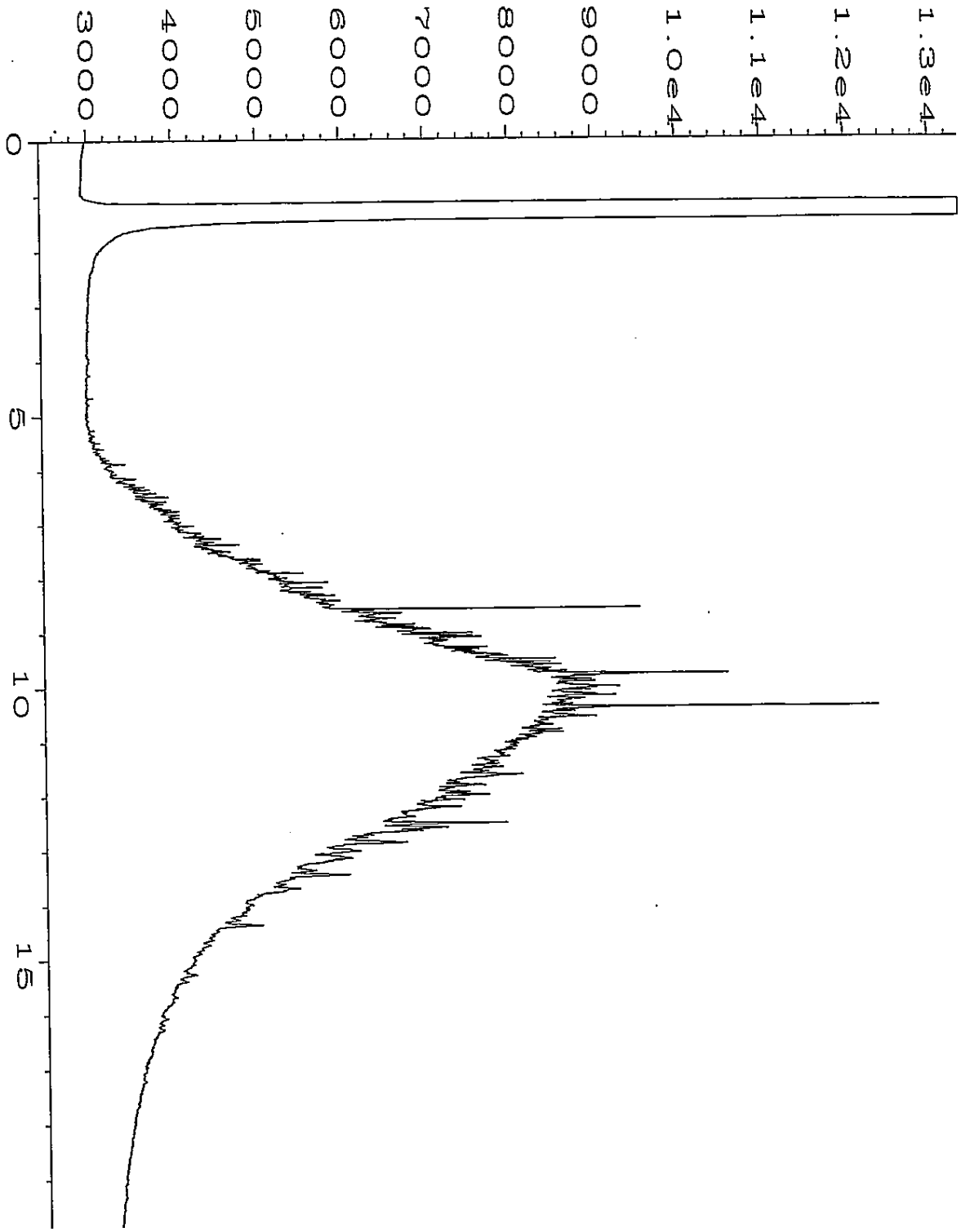
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Instrument : GC #6
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Report Created on: 22 Nov 02 08:56 AM

Page Number : 1
Vial Number : 9
Injection Number : 1
Sequence Line : 4
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



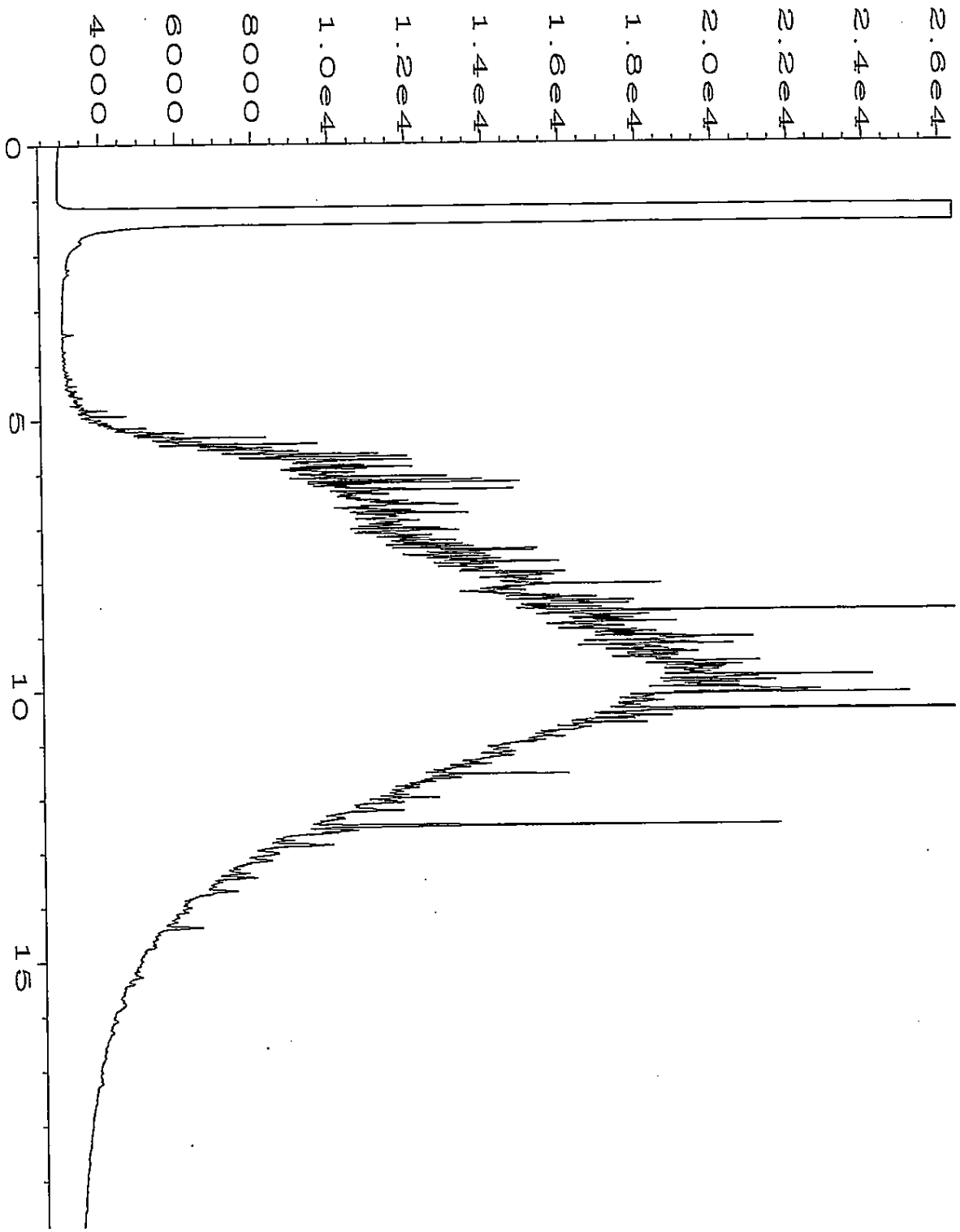
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Instrument : GC #6
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Report Created on: 21 Nov 02 02:02 PM

Page Number : 1
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Injection Number : 1
Sequence Line : 15
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



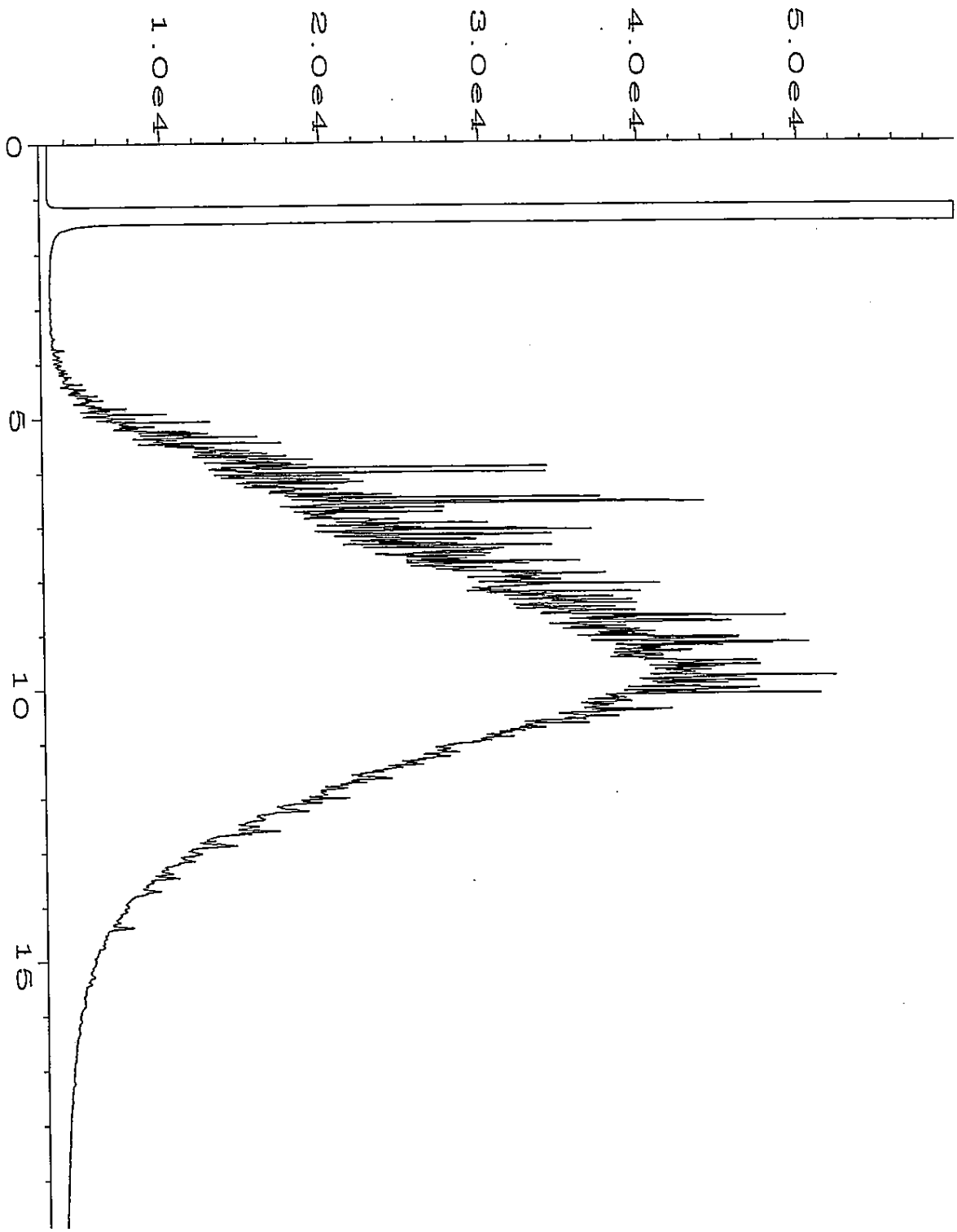
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Instrument : GC #6
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Report Created on: 21 Nov 02 02:02 PM

Page Number : 1
Vial Number : 36
Injection Number : 1
Sequence Line : 15
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



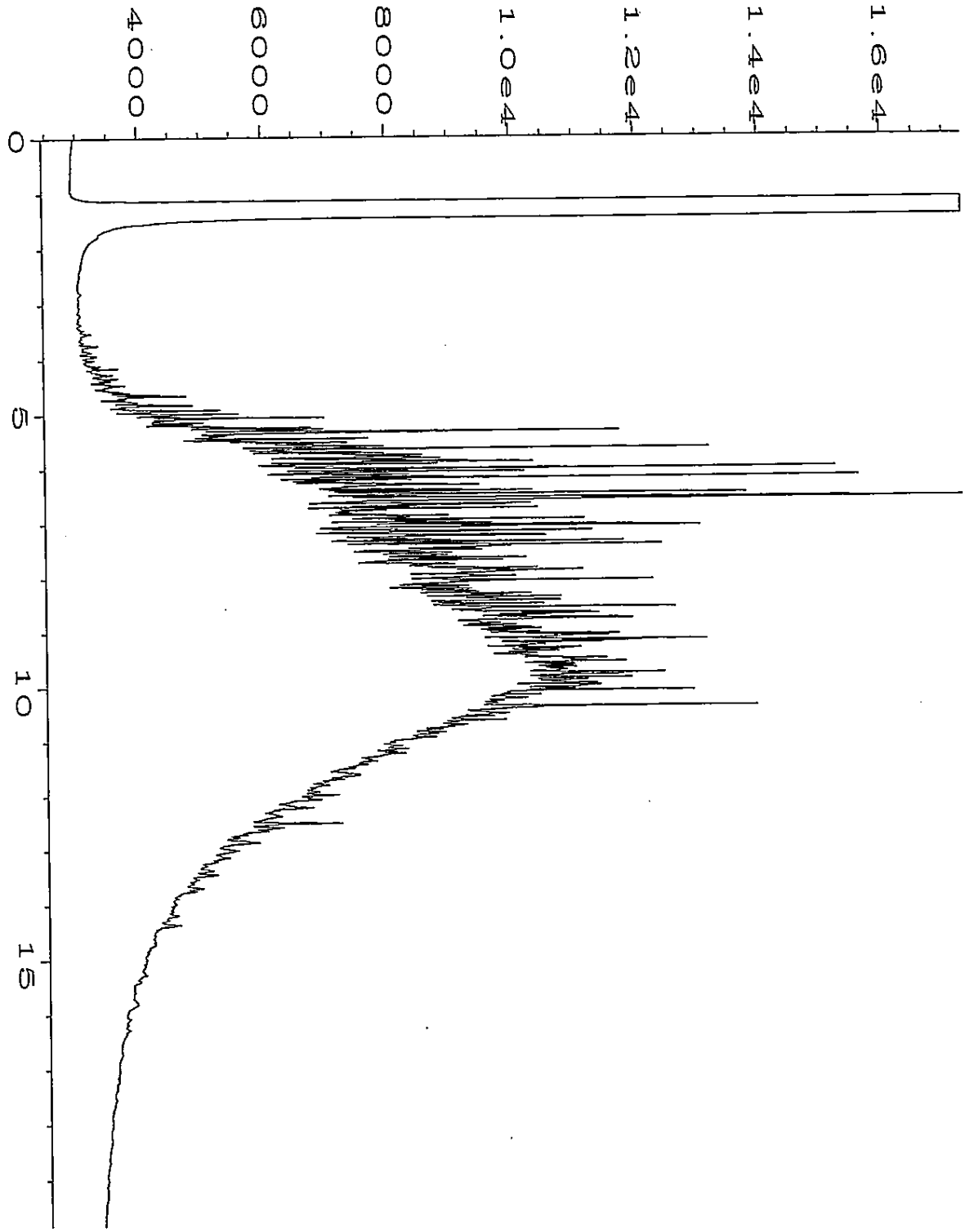
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Instrument : GC #6
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Acquired on : 21 Nov 02 06:31 AM
Report Created on: 21 Nov 02 02:03 PM

Page Number : 1
Vial Number : 37
Injection Number : 1
Sequence Line : 15
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



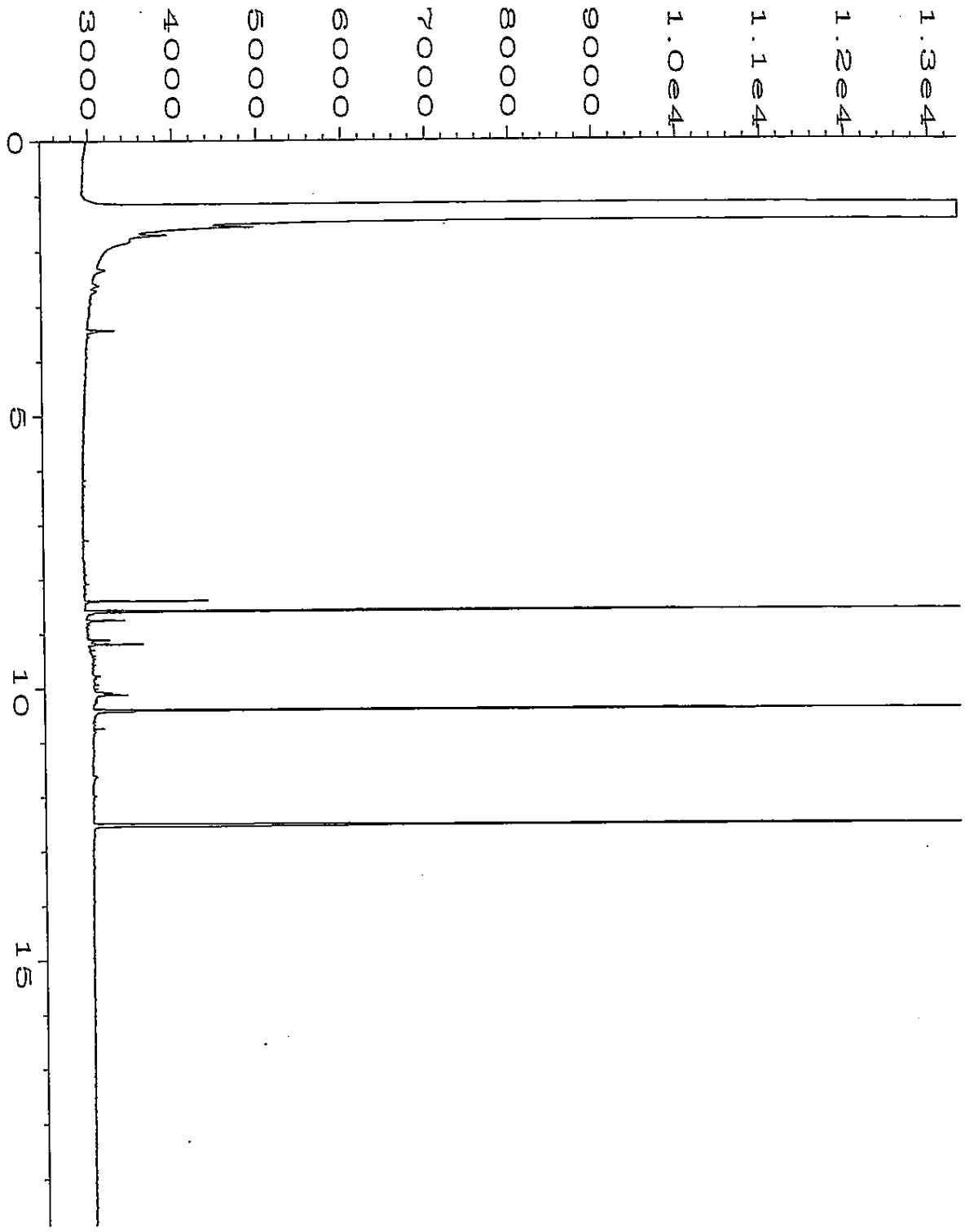
Data File Name : E:\GC6\11-20-02\038F1501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-11 1:10
Run Time Bar Code:
Acquired on : 21 Nov 02 06:57 AM
Report Created on: 21 Nov 02 02:03 PM

Page Number : 1
Vial Number : 38
Injection Number : 1
Sequence Line : 15
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



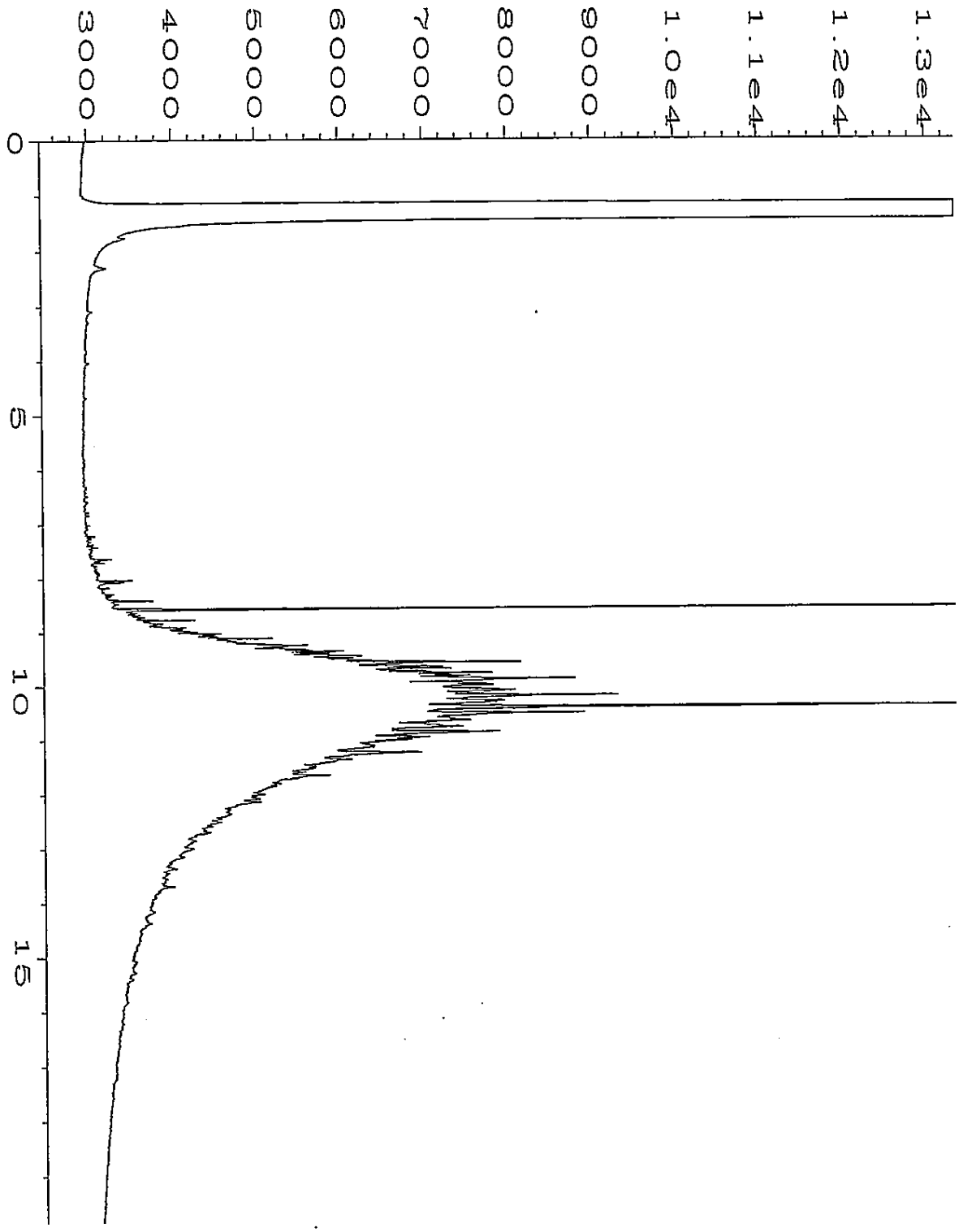
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Operator : SO
Instrument : GC #6
Sample Name : 211125-12 1:10
Run Time Bar Code:
Acquired on : 21 Nov 02 07:23 AM
Report Created on: 21 Nov 02 02:03 PM

Page Number : 1
Vial Number : 39
Injection Number : 1
Sequence Line : 15
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



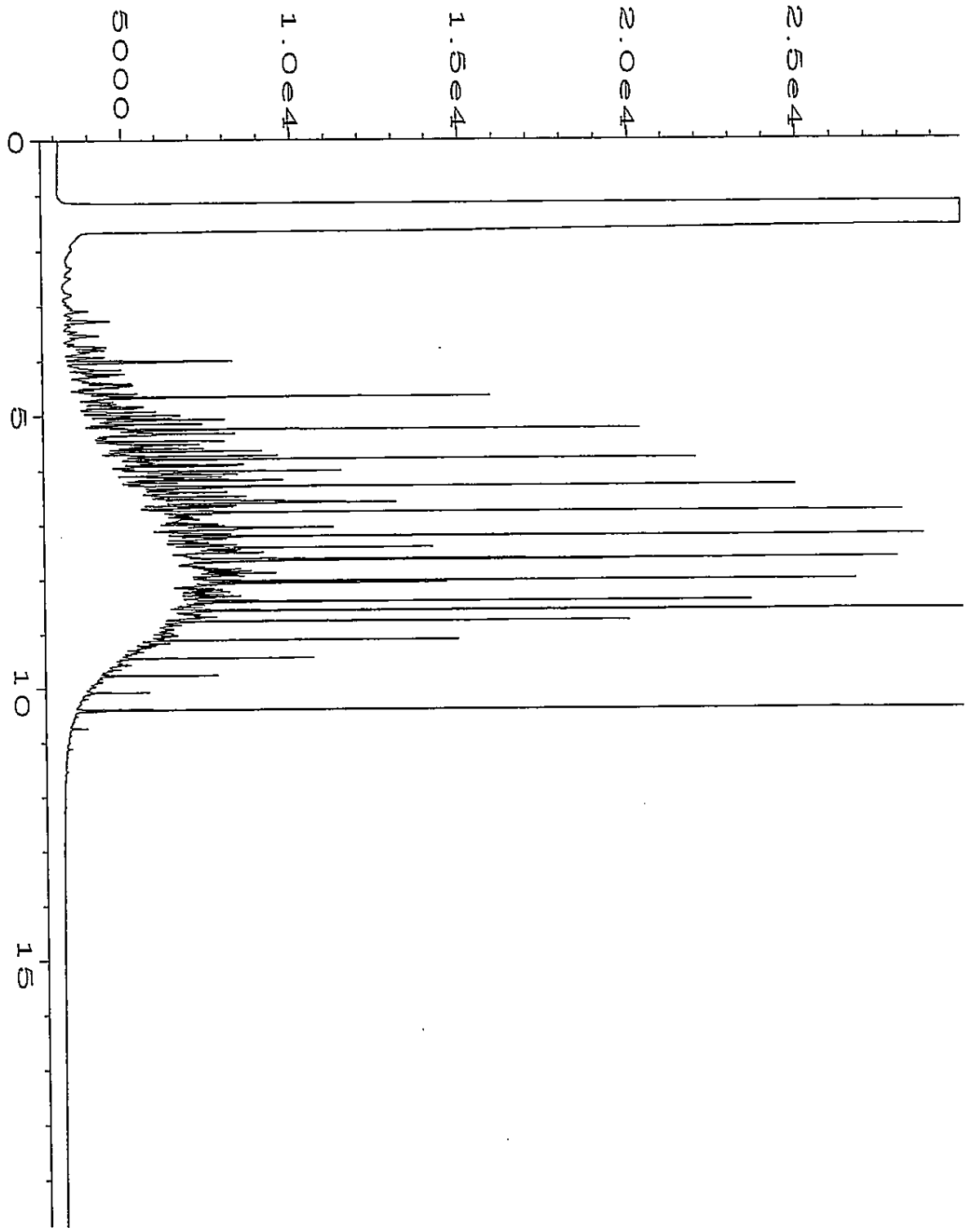
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Operator : SO
Instrument : GC #6
Sample Name : 02-893 MB
Run Time Bar Code:
Acquired on : 20 Nov 02 03:19 PM
Report Created on: 21 Nov 02 02:00 PM

Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 9
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



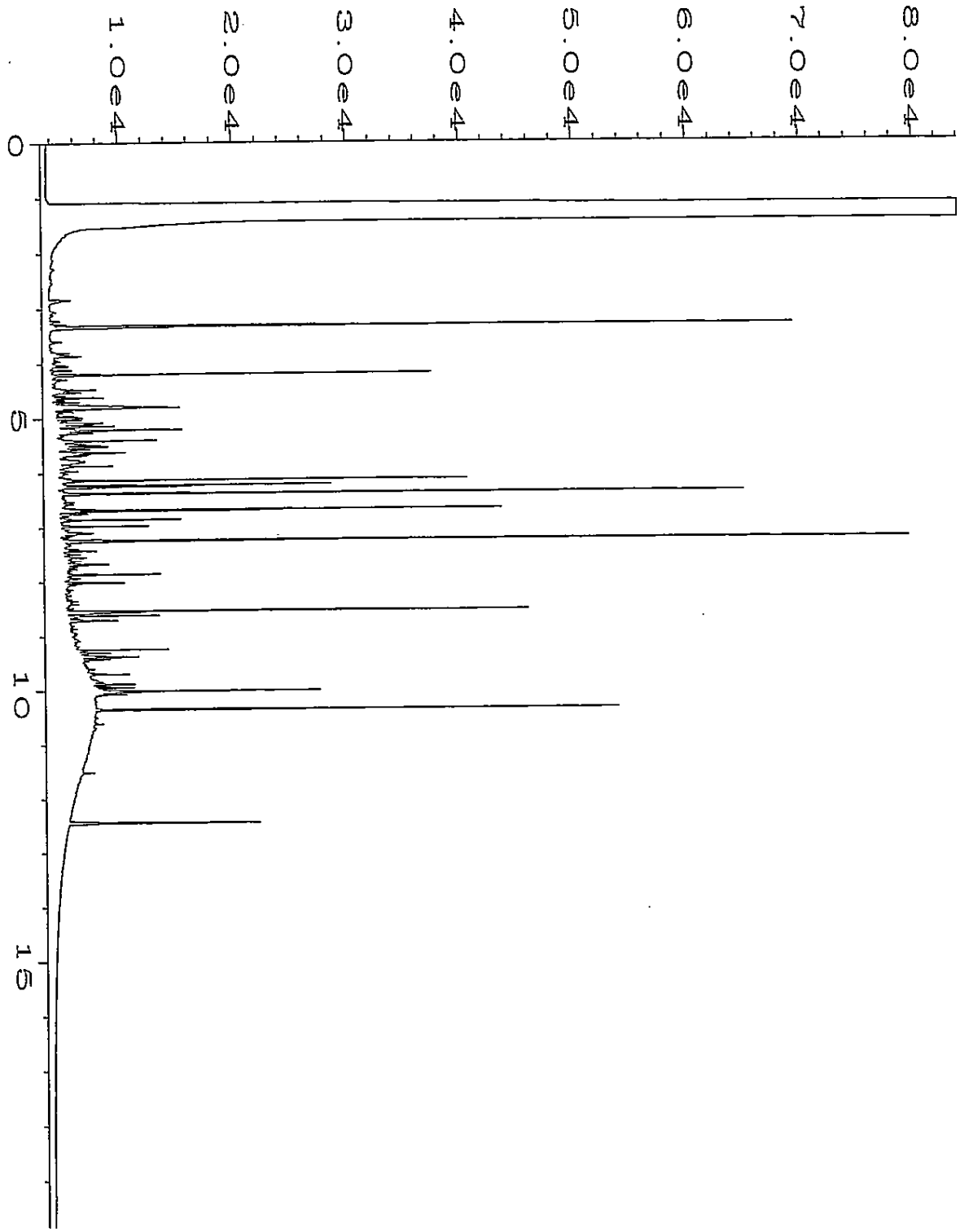
Data File Name : E:\GC6\11-20-02\017F0701.D
Operator : SO
Instrument : GC #6
Sample Name : 500 MO 11-222
Run Time Bar Code:
Acquired on : 20 Nov 02 02:03 PM
Report Created on: 21 Nov 02 01:59 PM

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



Data File Name : E:\GC6\11-20-02\002F0201.D
Operator : SO
Instrument : GC #6
Sample Name : 500 WADF 12-204
Run Time Bar Code:
Acquired on : 20 Nov 02 05:55 AM
Report Created on: 21 Nov 02 01:59 PM

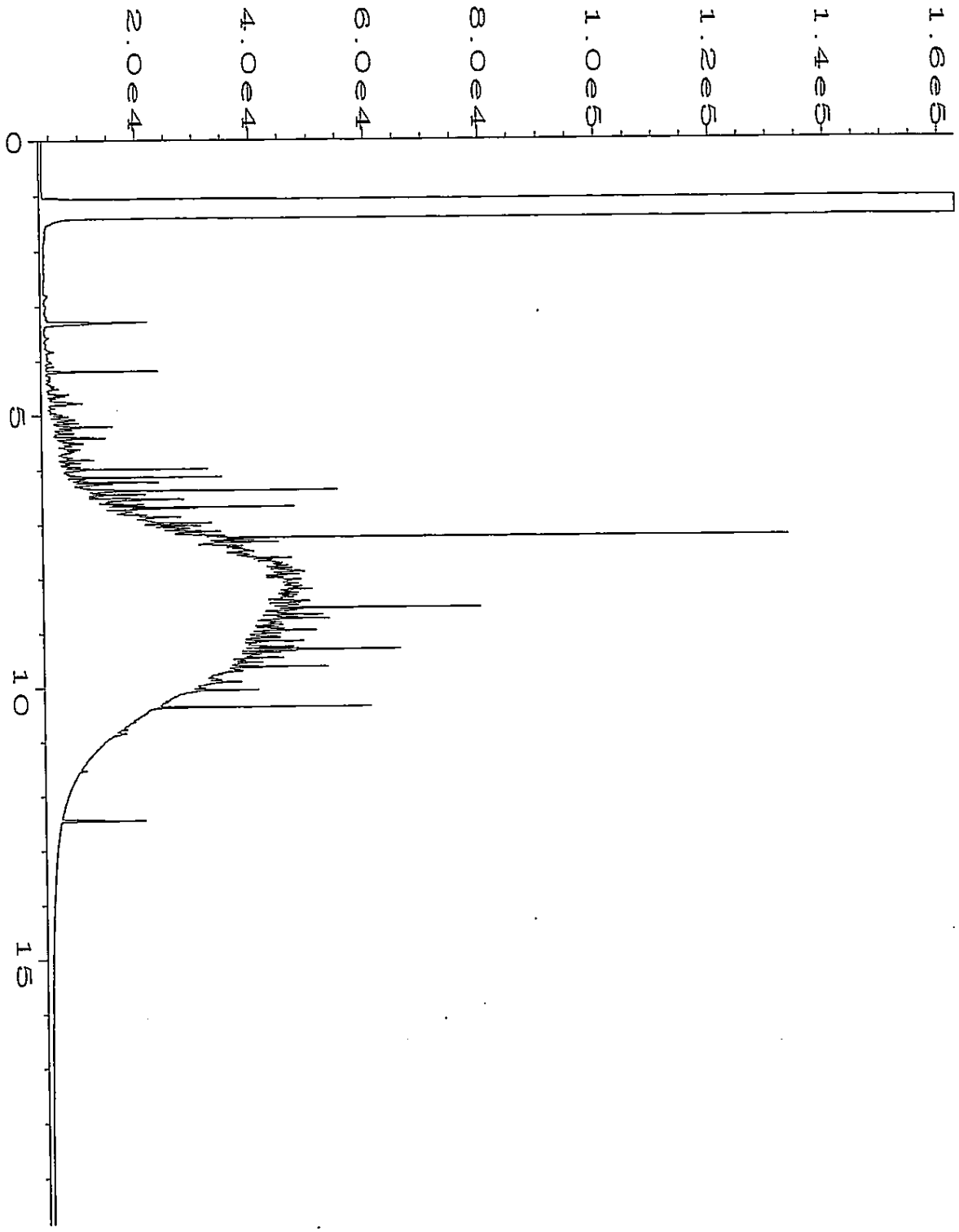
Page Number : 1
Vial Number : 2
Injection Number : 1
Sequence Line : 2
Instrument Method: TPHD.MTH
Analysis Method : DEFAULT.MTH



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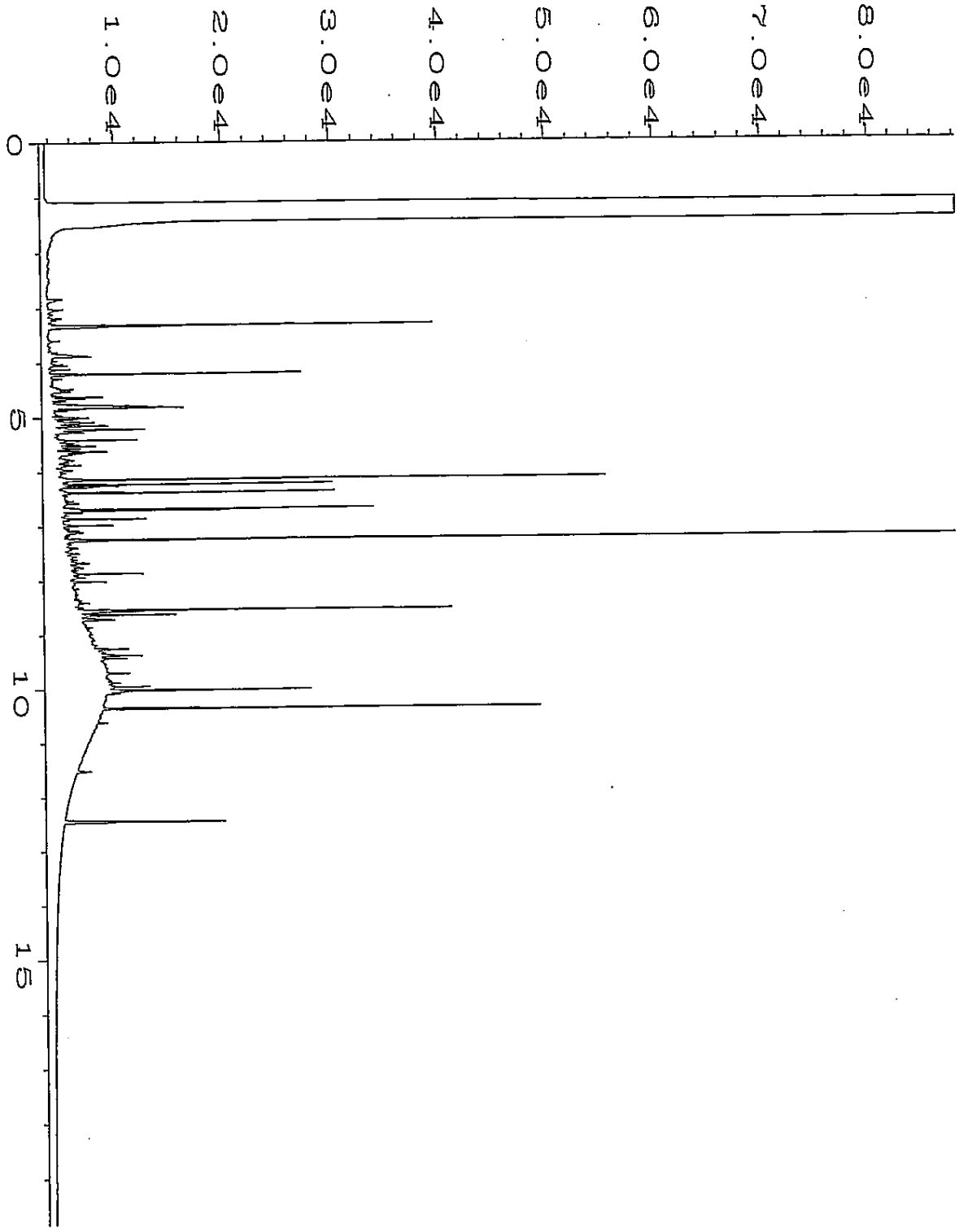
Data File Name : E:\GC6\12-06-02\031F0701.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-01 WET-M
Run Time Bar Code:
Acquired on : 06 Dec 02 11:18 PM
Report Created on: 10 Dec 02 09:39 AM

Page Number : 1
Vial Number : 31
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



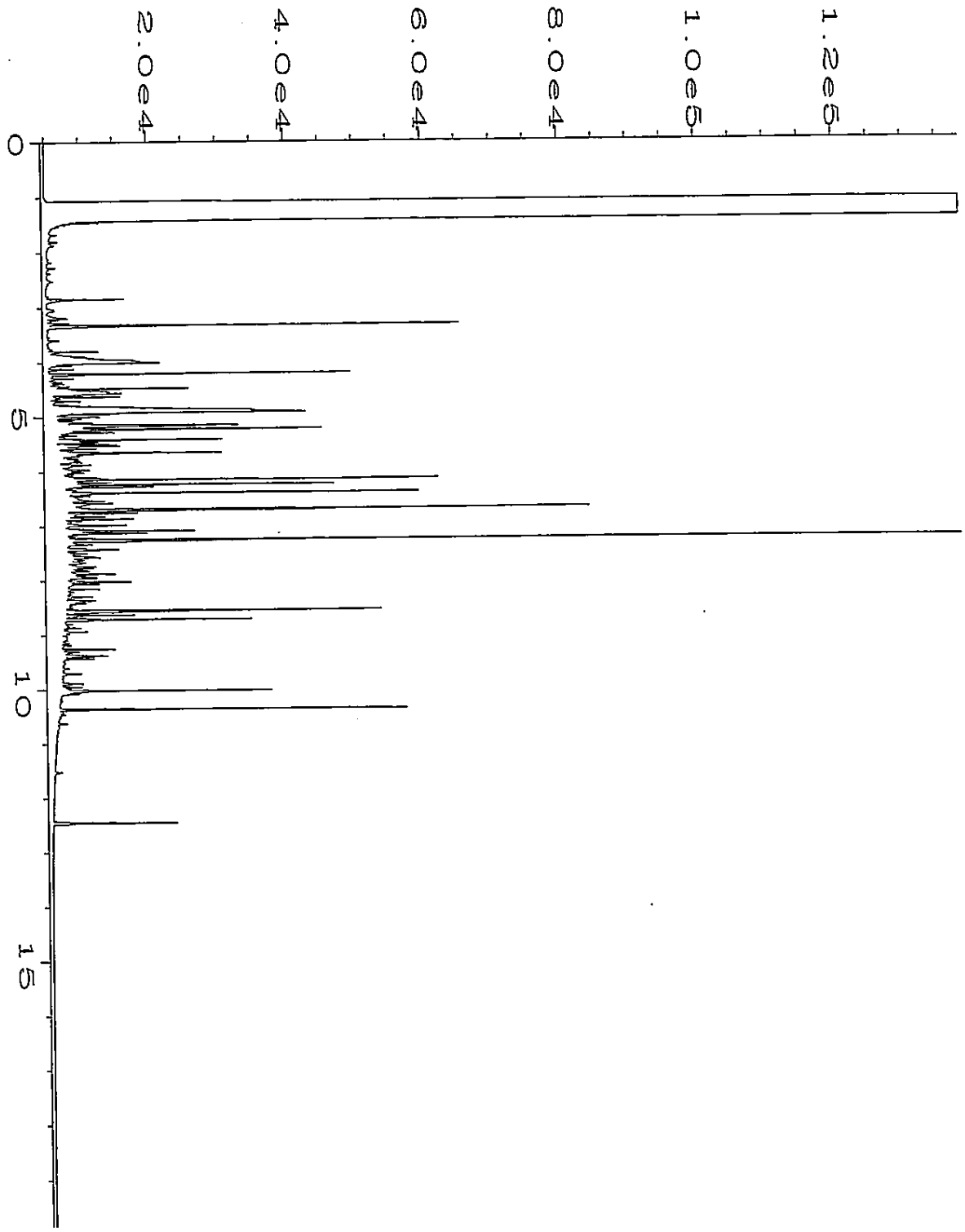
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Operator : SO
Instrument : GC #6
Sample Name : 211125-02 WET-M
Run Time Bar Code:
Acquired on : 07 Dec 02 00:08 AM
Report Created on: 10 Dec 02 09:40 AM

Page Number : 1
Vial Number : 33
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



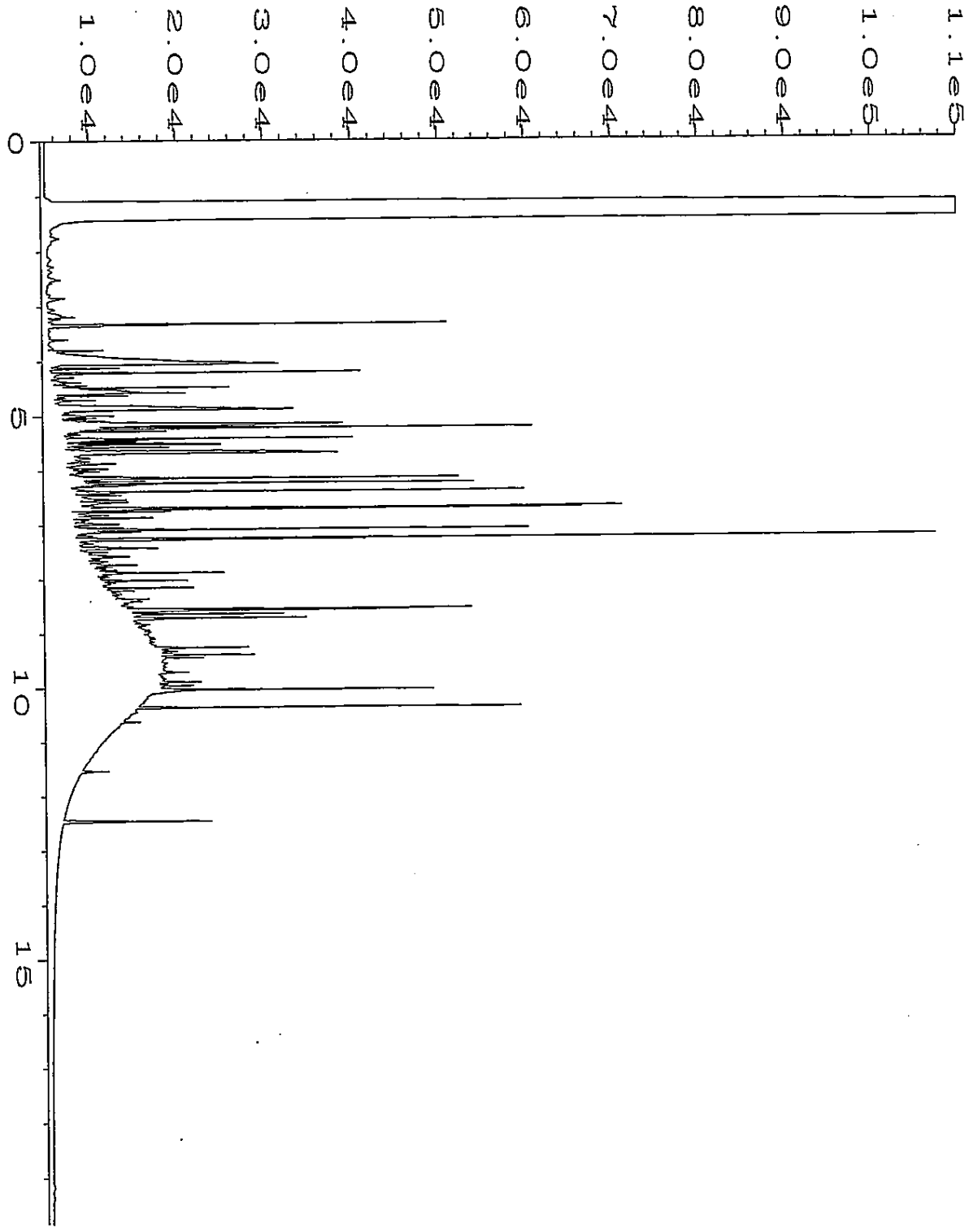
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Operator : SO
Instrument : GC #6
Sample Name : 211125-03 WET-M
Run Time Bar Code:
Acquired on : 07 Dec 02 00:33 AM
Report Created on: 10 Dec 02 09:40 AM

Page Number : 1
Vial Number : 34
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



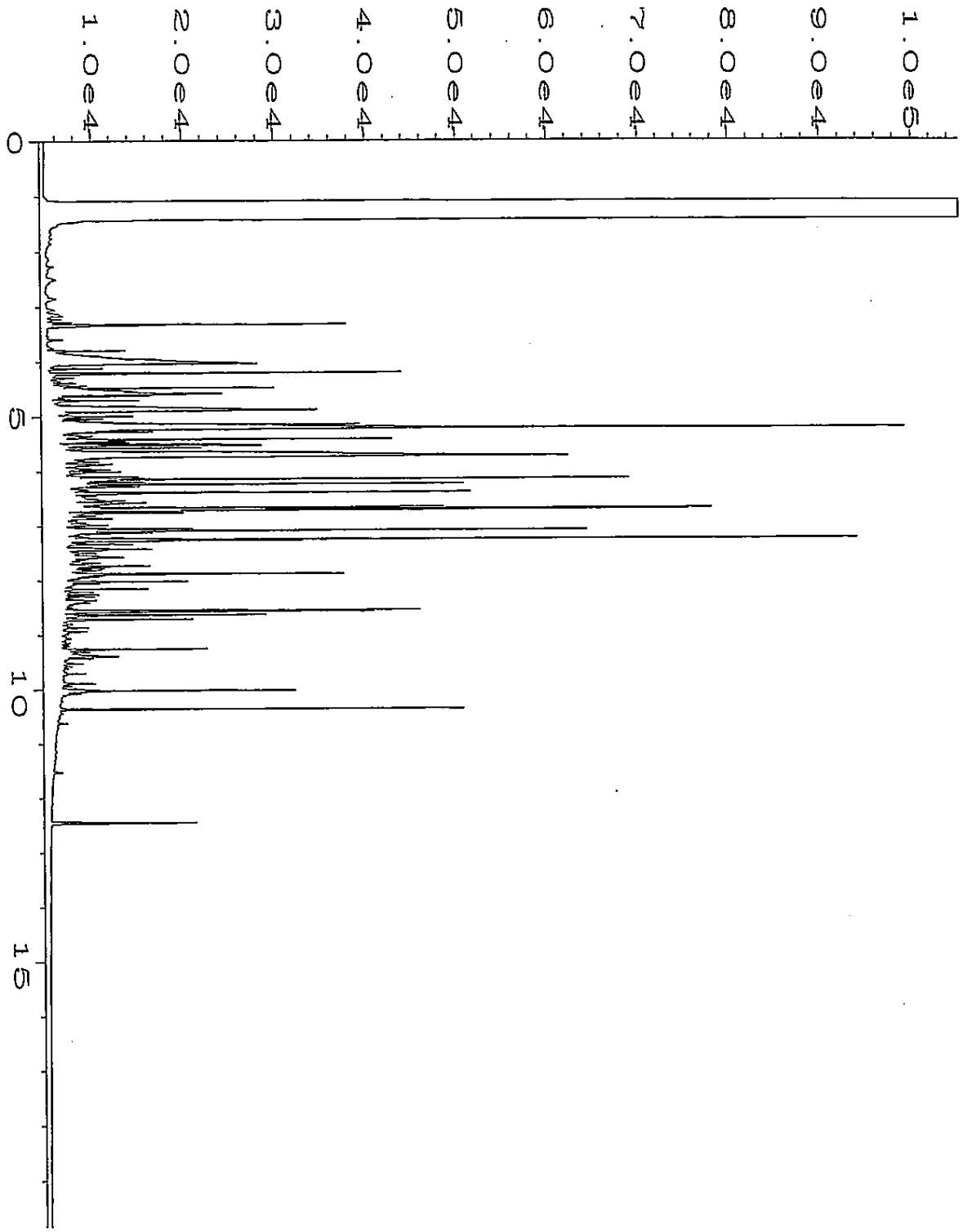
Data File Name : E:\GC6\12-06-02\035F1201.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-04 WET-M
Run Time Bar Code:
Acquired on : 08 Dec 02 04:51 PM
Report Created on: 10 Dec 02 09:40 AM

Page Number : 1
Vial Number : 35
Injection Number : 1
Sequence Line : 12
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



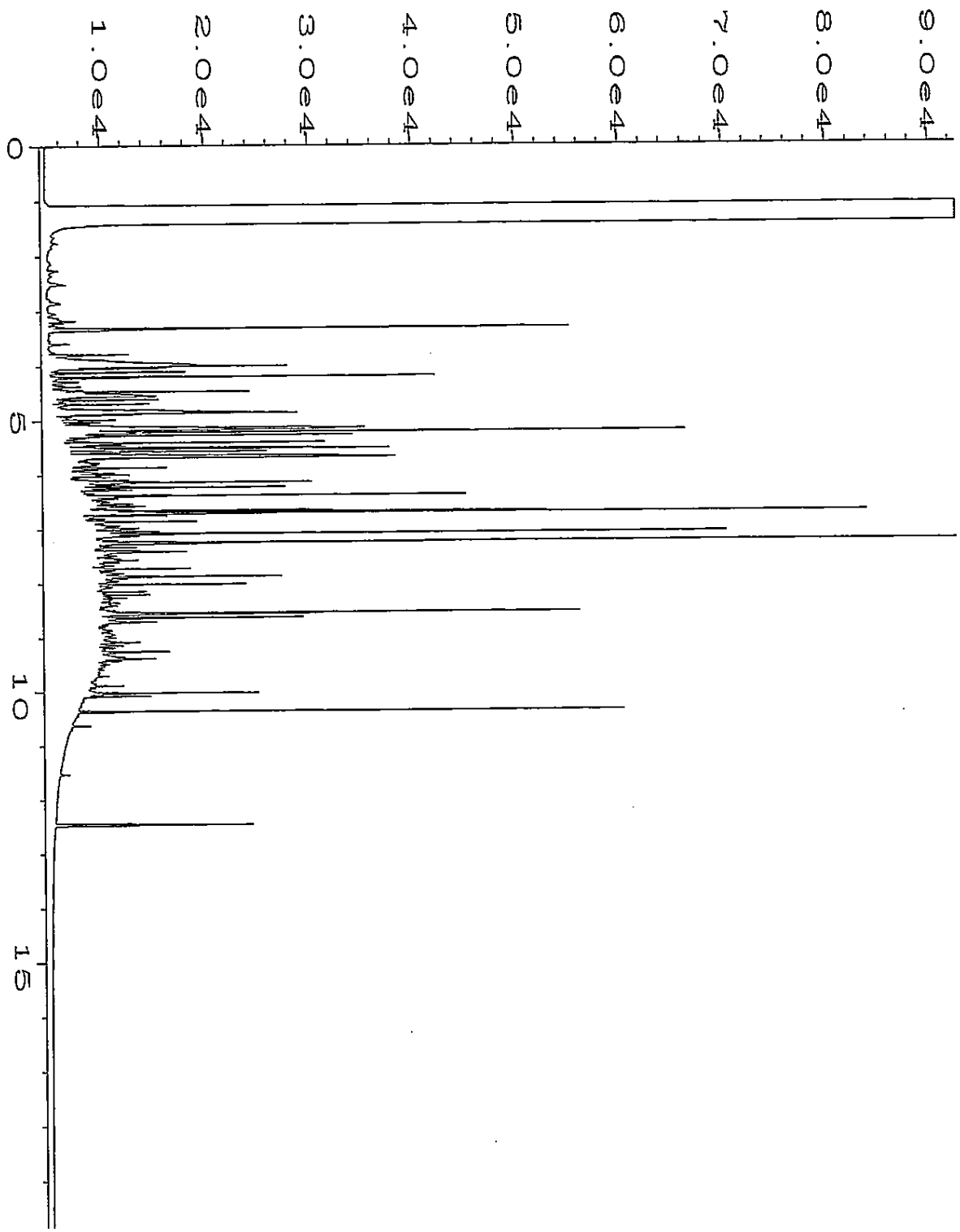
Data File Name : E:\GC6\12-06-02\036F1201.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-05 WET-M
Run Time Bar Code:
Acquired on : 08 Dec 02 05:16 PM
Report Created on: 10 Dec 02 09:47 AM

Page Number : 1
Vial Number : 36
Injection Number : 1
Sequence Line : 12
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



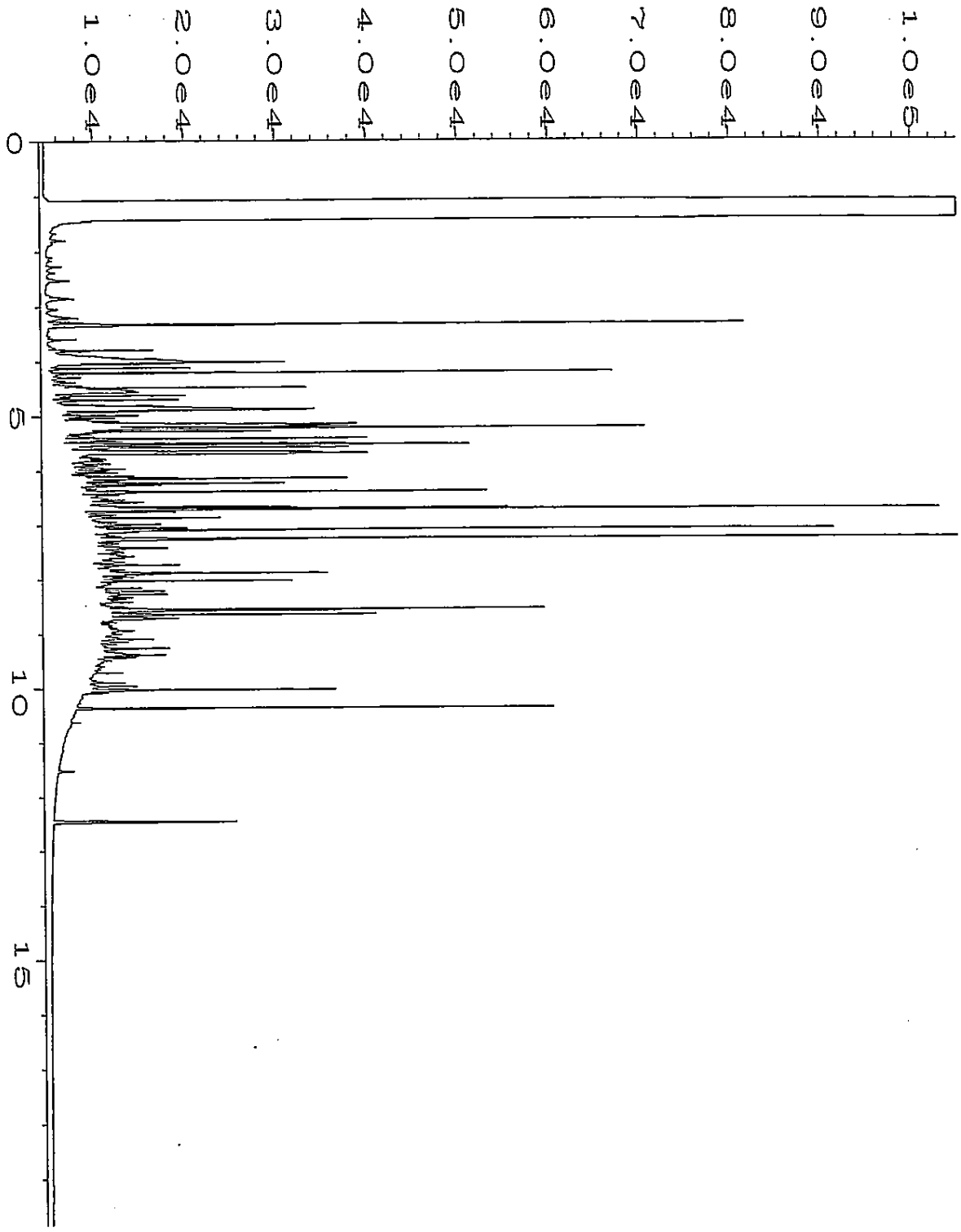
Data File Name : E:\GC6\12-06-02\037F1201.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-06 WET-M
Run Time Bar Code:
Acquired on : 08 Dec 02 05:40 PM
Report Created on: 10 Dec 02 09:47 AM

Page Number : 1
Vial Number : 37
Injection Number : 1
Sequence Line : 12
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



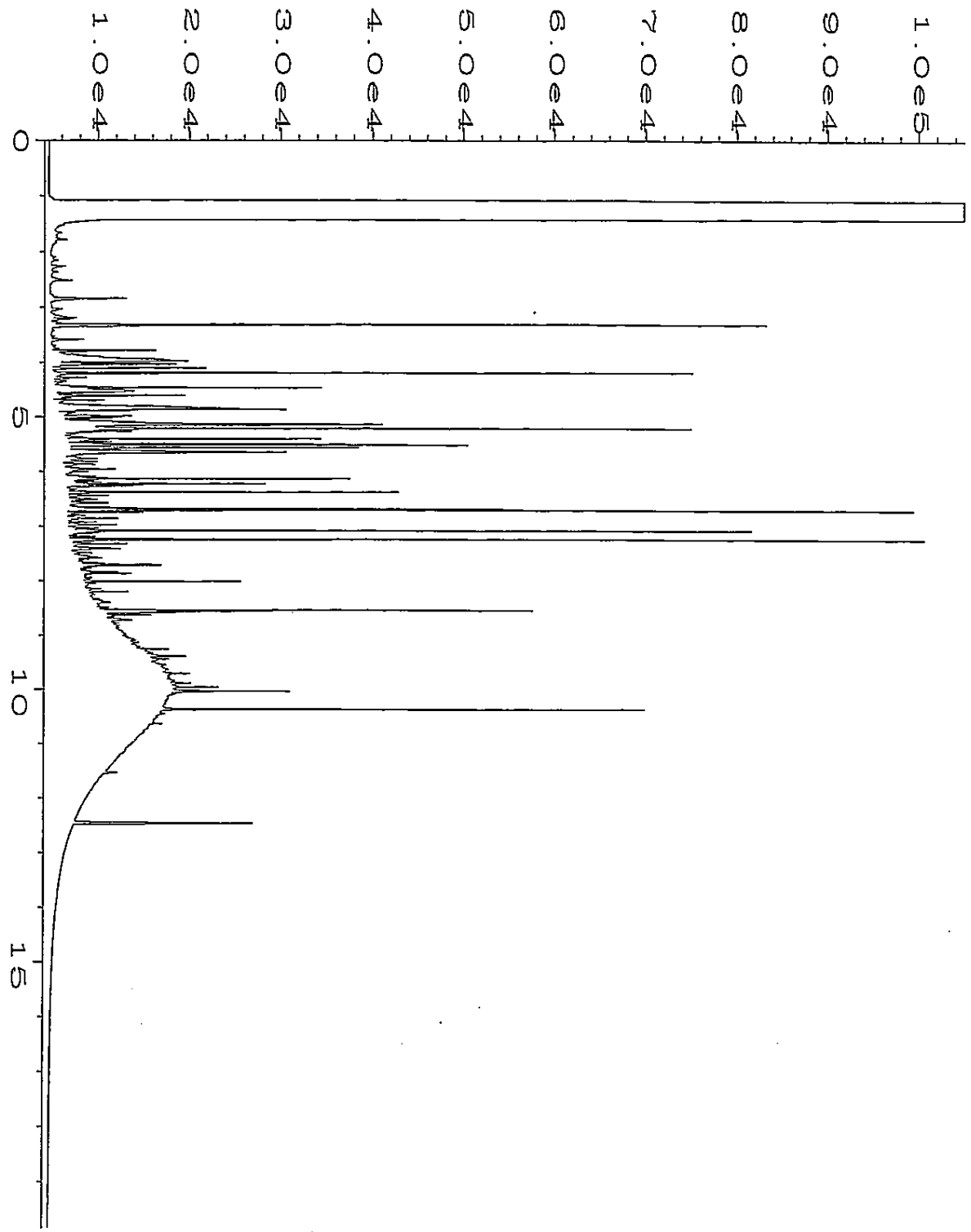
Data File Name : E:\GC6\12-06-02\038F1201.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-07 WET+M
Run Time Bar Code:
Acquired on : 08 Dec 02 06:05 PM
Report Created on: 10 Dec 02 09:47 AM

Page Number : 1
Vial Number : 38
Injection Number : 1
Sequence Line : 12
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M

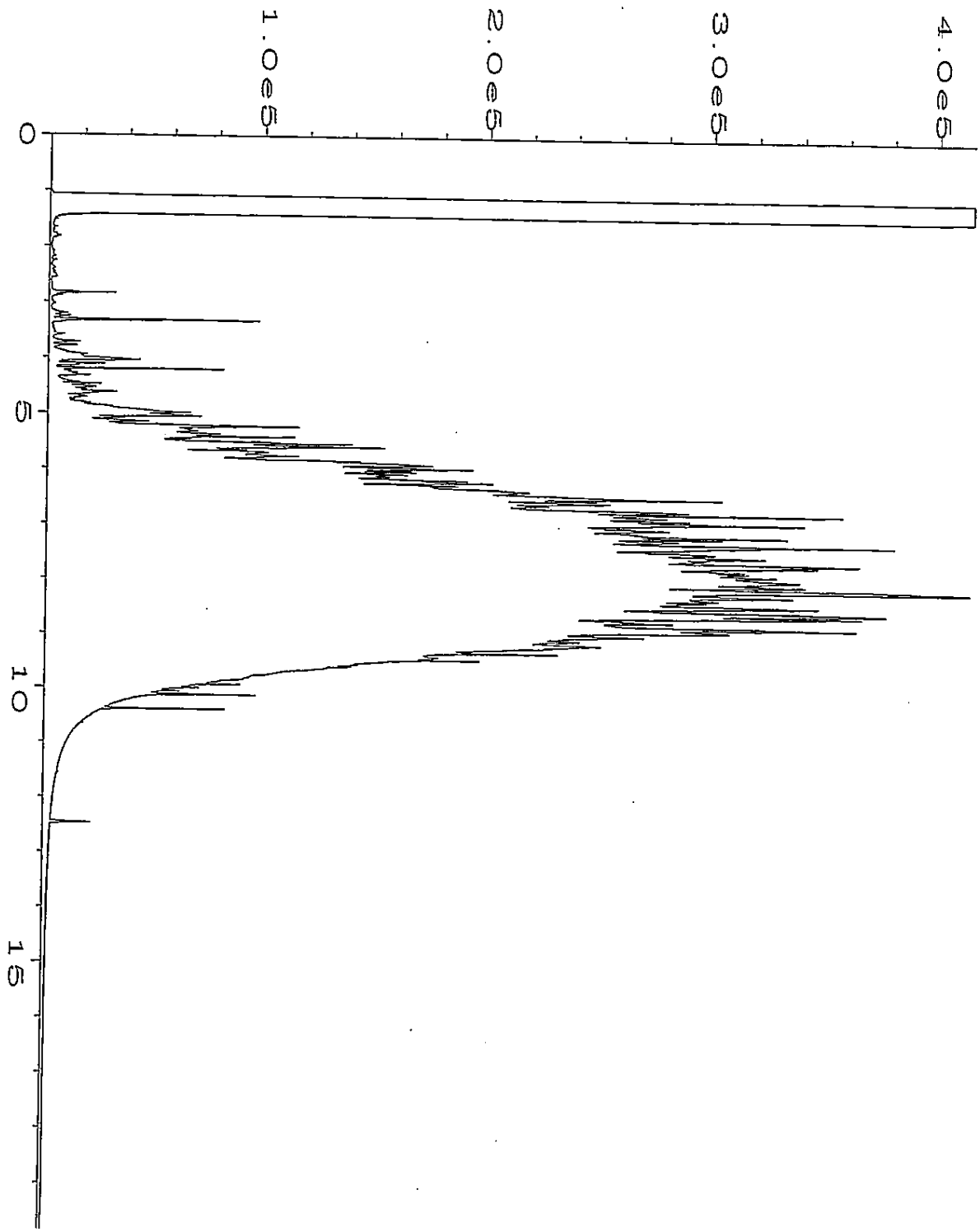


Data File Name : E:\GC6\12-06-02\039F1201.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-08 WET-M
Run Time Bar Code:
Acquired on : 08 Dec 02 06:30 PM
Report Created on: 10 Dec 02 09:47 AM

Page Number : 1
Vial Number : 39
Injection Number : 1
Sequence Line : 12
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH

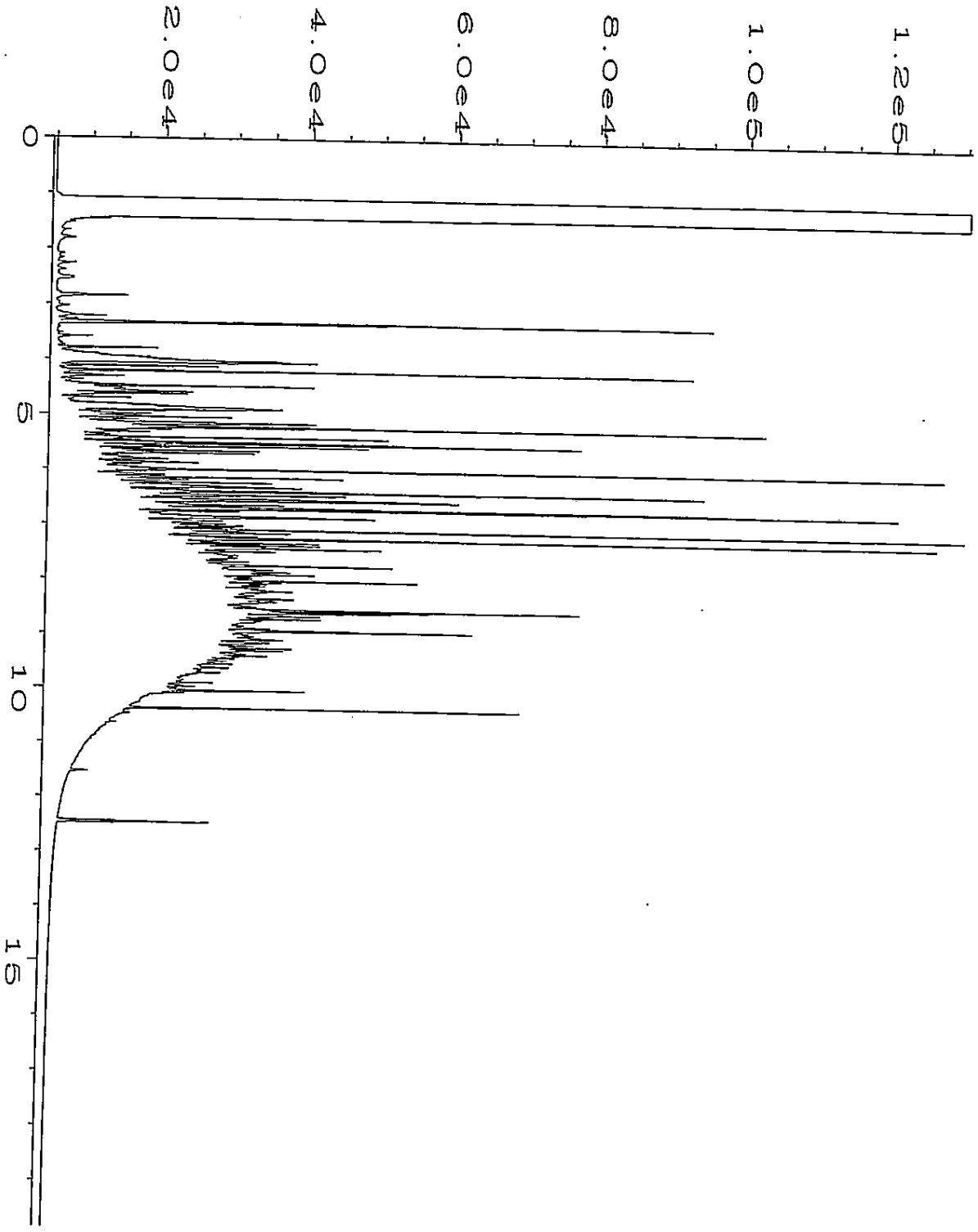


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Operator	: SO	Page Number	: 1
Instrument	: GC #6	Vial Number	: 40
Sample Name	: 211125-09 WET-M	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 12
Acquired on	: 08 Dec 02 06:54 PM	Instrument Method	: TPHDAK.MTP
Report Created on	: 10 Dec 02 09:48 AM	Analysis Method	: DEFAULT.M



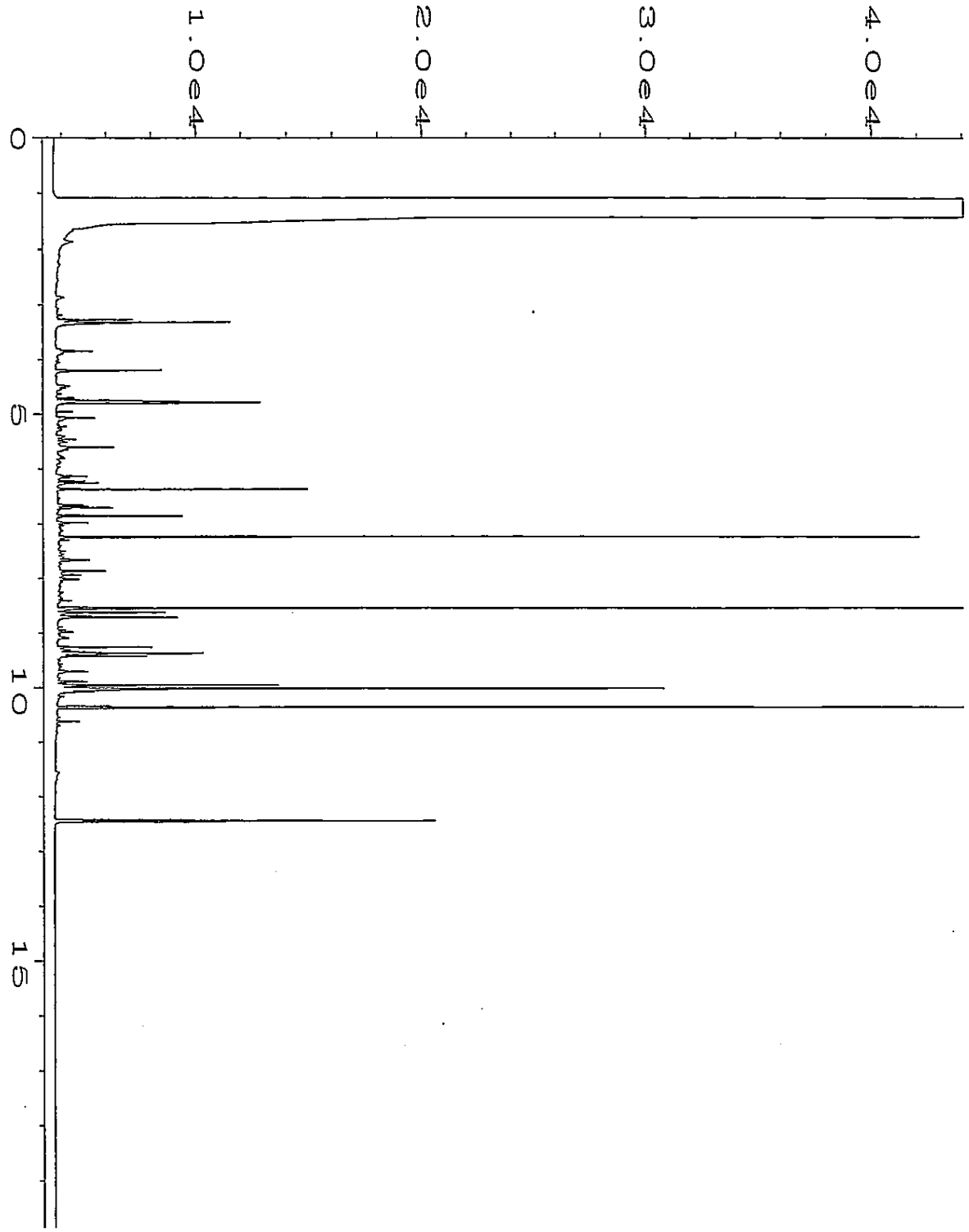
Data File Name : E:\GC6\12-06-02\042F1201.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-11 WET-M
Run Time Bar Code:
Acquired on : 08 Dec 02 07:44 PM
Report Created on: 10 Dec 02 09:48 AM

Page Number : 1
Vial Number : 42
Injection Number : 1
Sequence Line : 12
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



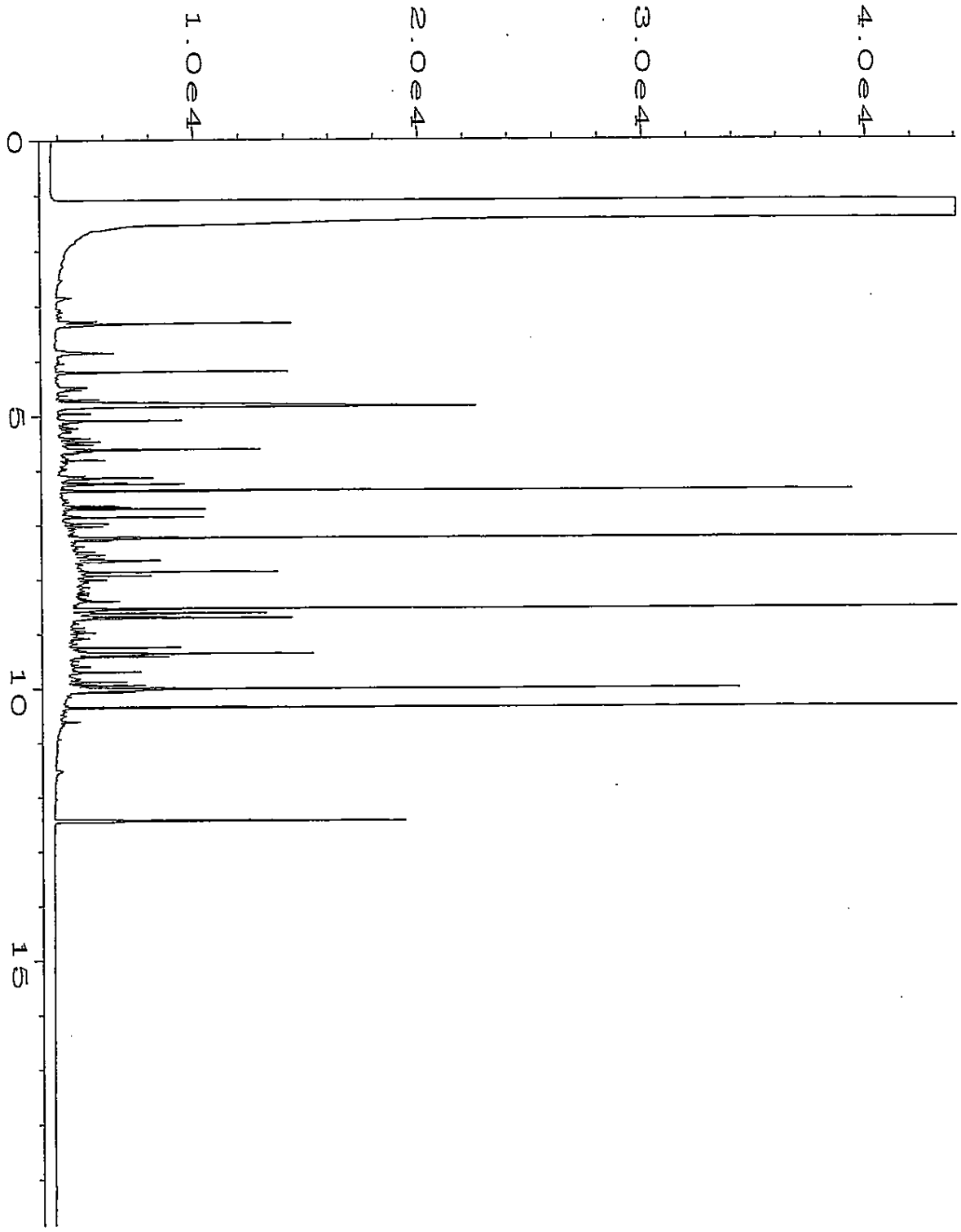
Data File Name : E:\GC6\12-06-02\043F1201.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-12 WET-M
Run Time Bar Code:
Acquired on : 08 Dec 02 08:09 PM
Report Created on: 10 Dec 02 09:49 AM

Page Number : 1
Vial Number : 43
Injection Number : 1
Sequence Line : 12
Instrument Method: TPHDAK.MTF
Analysis Method : DEFAULT.MT



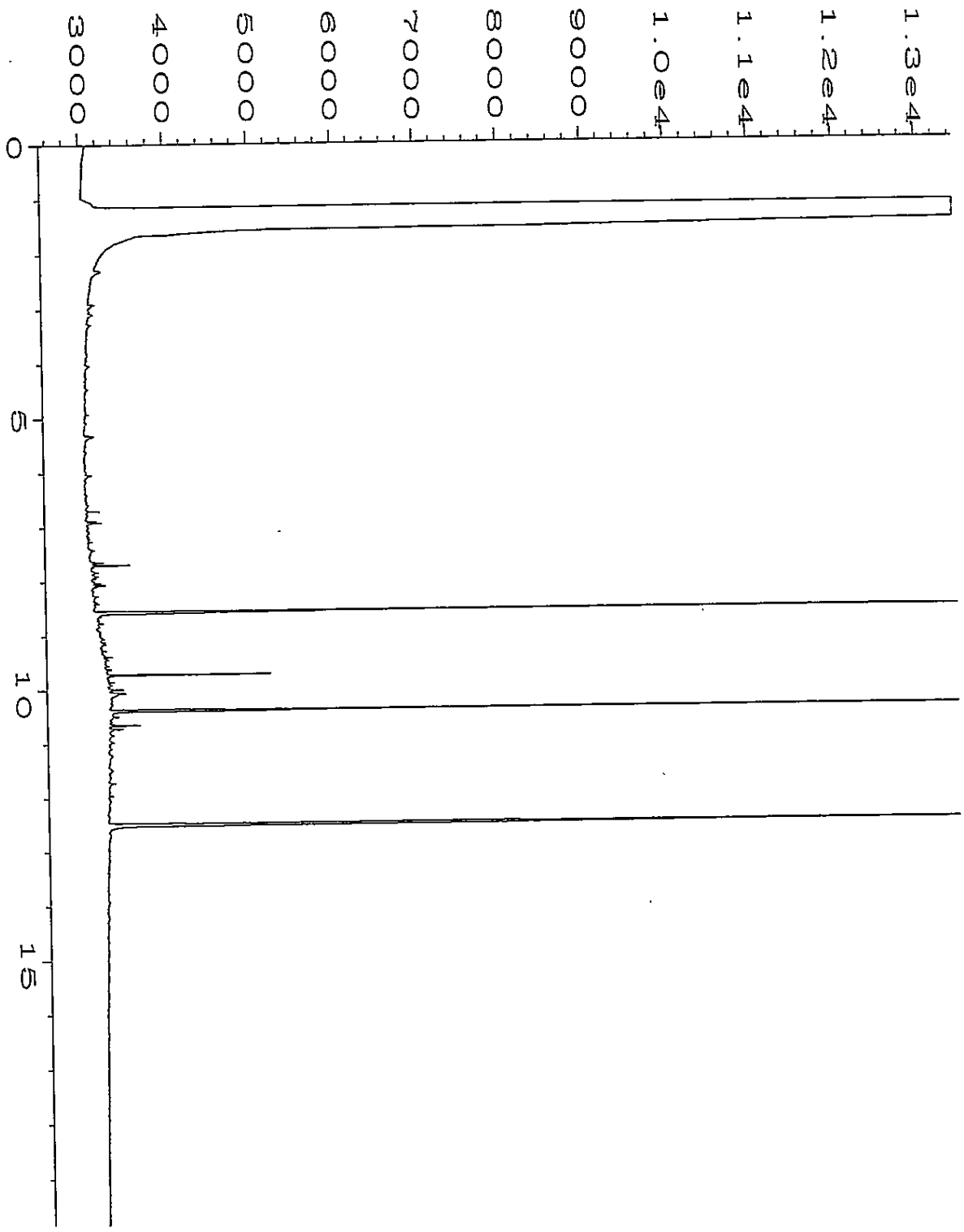
Data File Name : E:\GC6\12-06-02\026F0701.D
Operator : SO
Instrument : GC #6
Sample Name : 02-930 MB2 WET-M
Run Time Bar Code:
Acquired on : 06 Dec 02 09:13 PM
Report Created on: 10 Dec 02 09:39 AM

Page Number : 1
Vial Number : 26
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



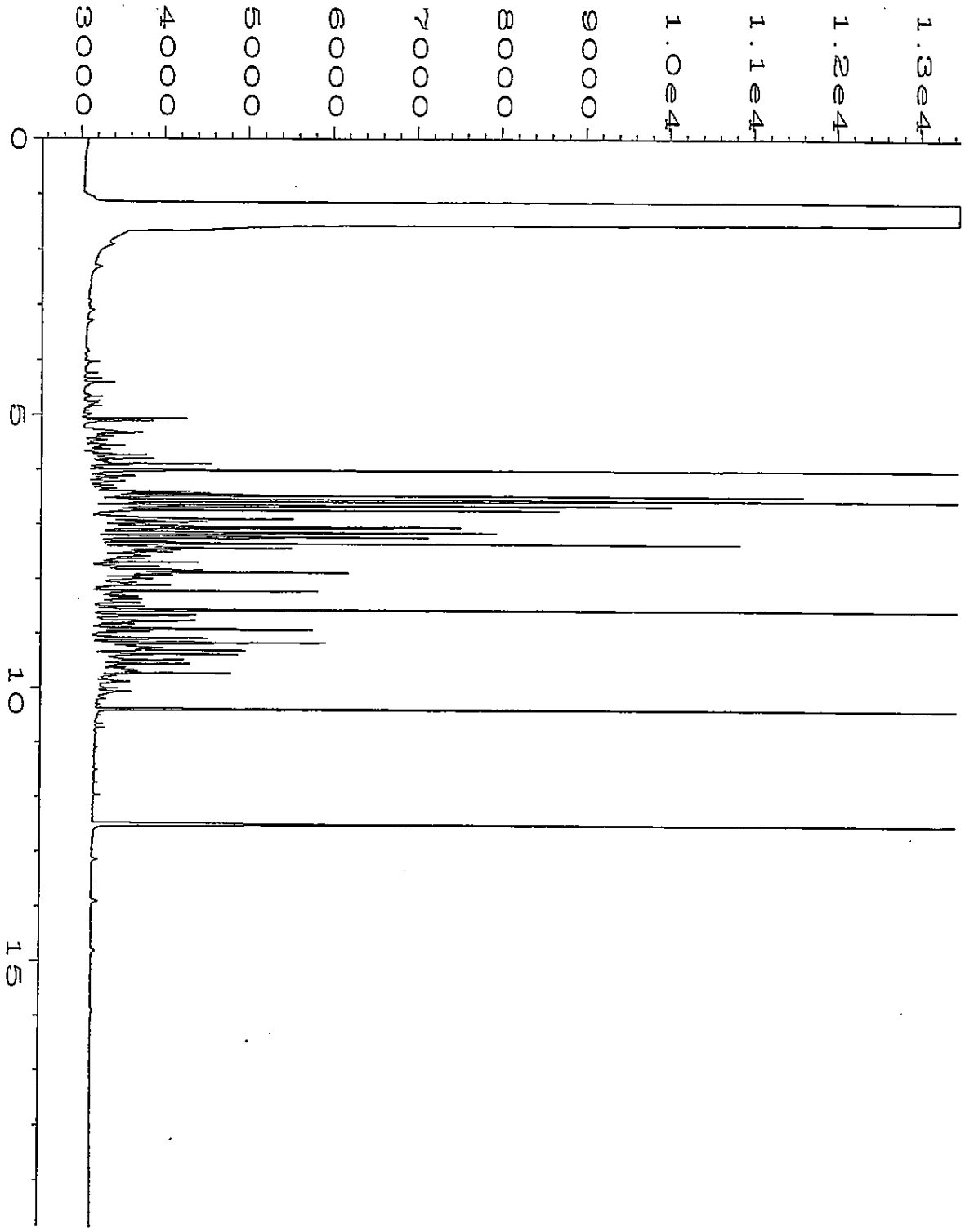
Data File Name : E:\GC6\12-06-02\025F0701.D
Operator : SO
Instrument : GC #6
Sample Name : 02-930 MB WET-M
Run Time Bar Code:
Acquired on : 06 Dec 02 08:48 PM
Report Created on: 10 Dec 02 09:39 AM

Page Number : 1
Vial Number : 25
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



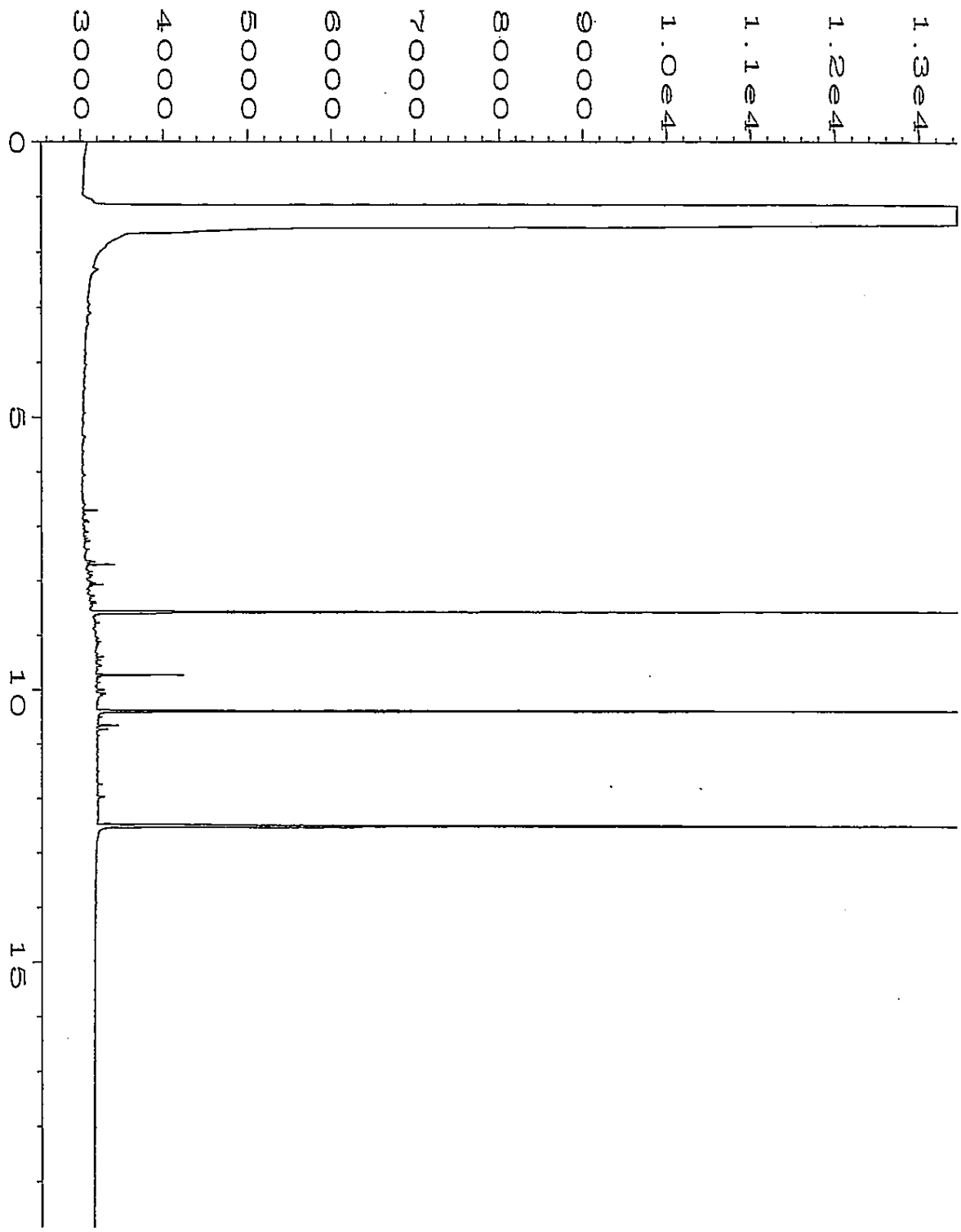
Data File Name : E:\GC6\12-09-02\012F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-01 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 06:11 PM
Report Created on: 10 Dec 02 11:33 AM

Page Number : 1
Vial Number : 12
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



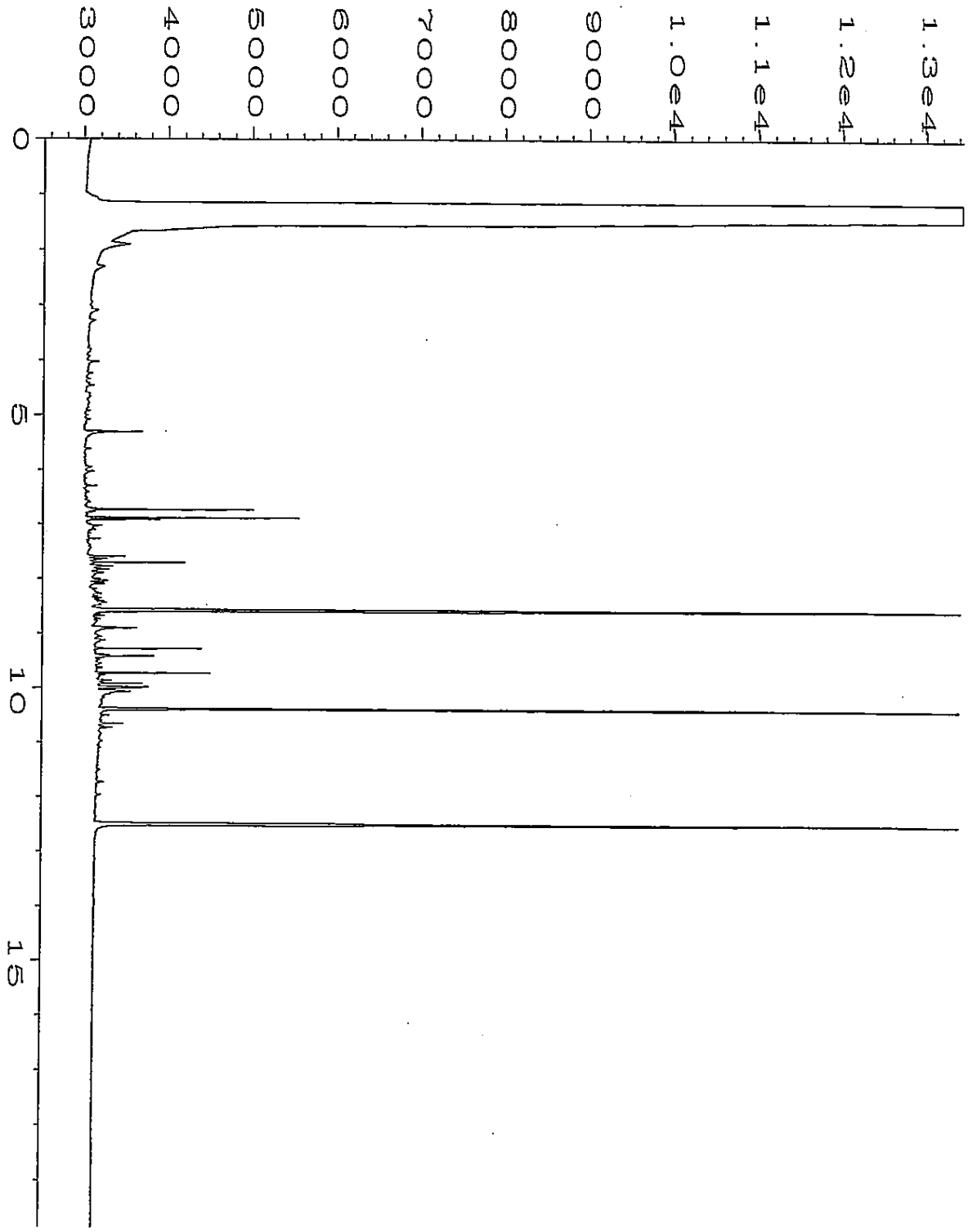
Data File Name : E:\GC6\12-09-02\013F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-02 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 06:36 PM
Report Created on: 10 Dec 02 11:33 AM

Page Number : 1
Vial Number : 13
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



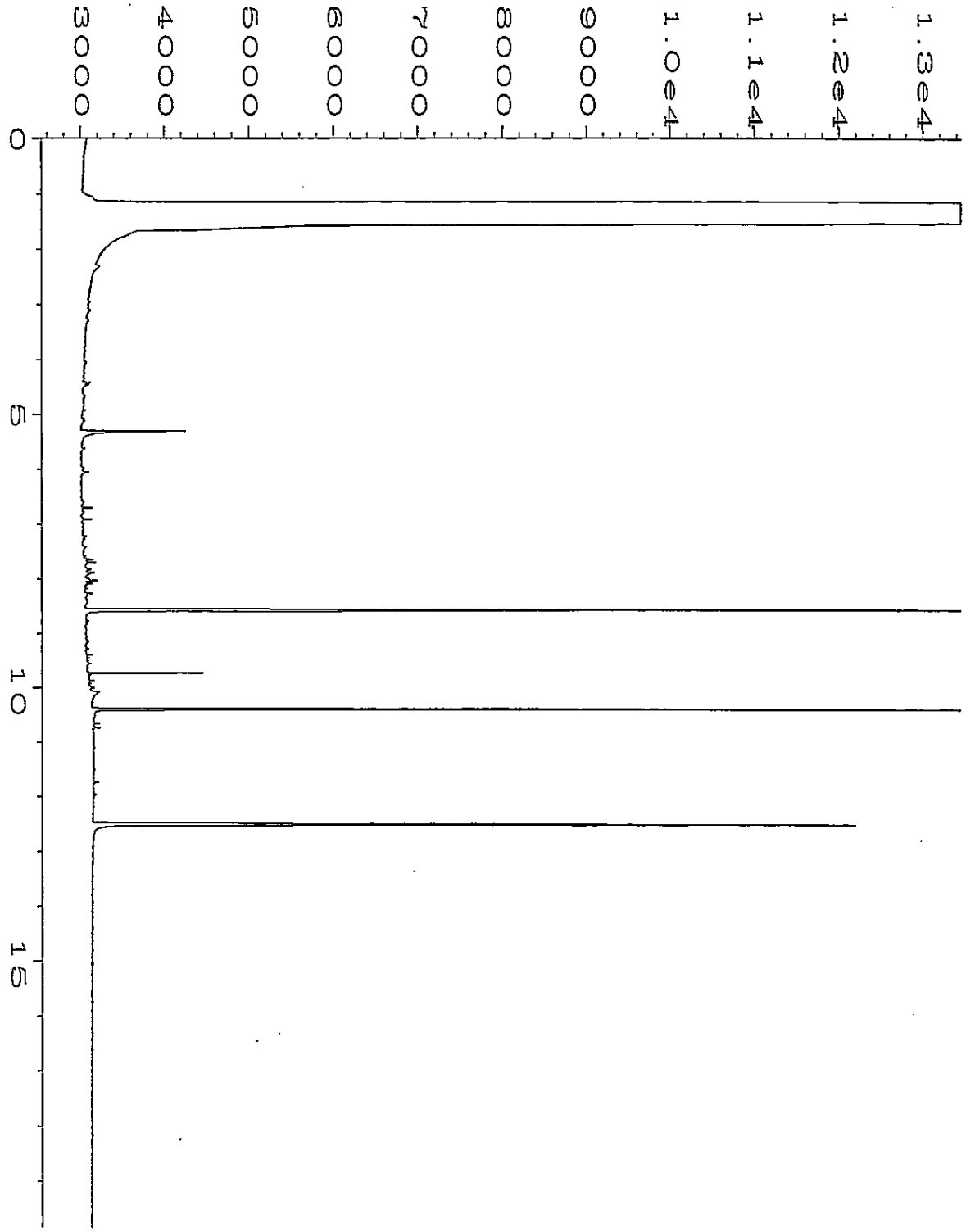
Data File Name : E:\GC6\12-09-02\014F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-03 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 07:02 PM
Report Created on: 10 Dec 02 11:34 AM

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



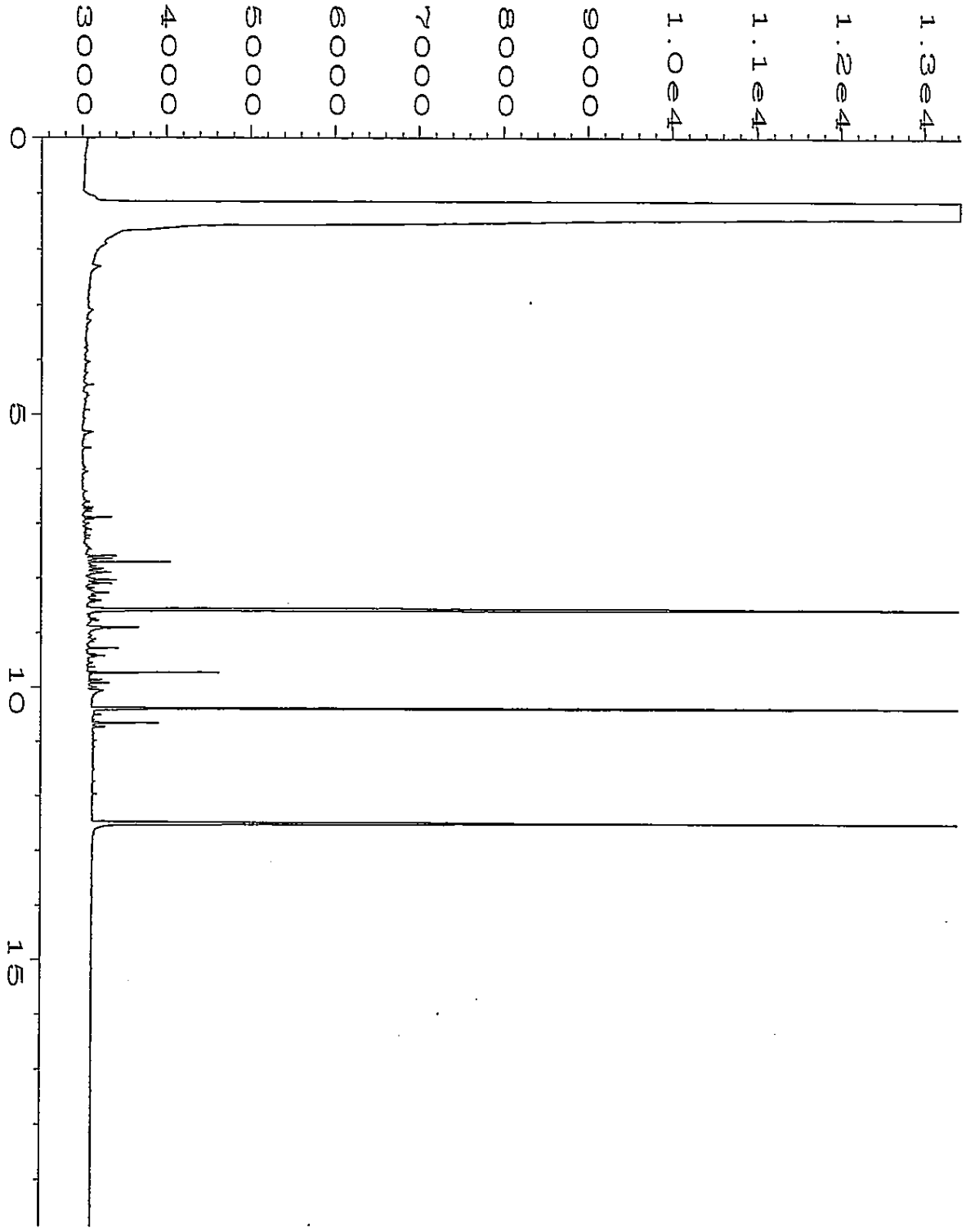
Data File Name : E:\GC6\12-09-02\015F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-04 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 07:27 PM
Report Created on: 10 Dec 02 11:34 AM

Page Number : 1
Vial Number : 15
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTP
Analysis Method : DEFAULT.M



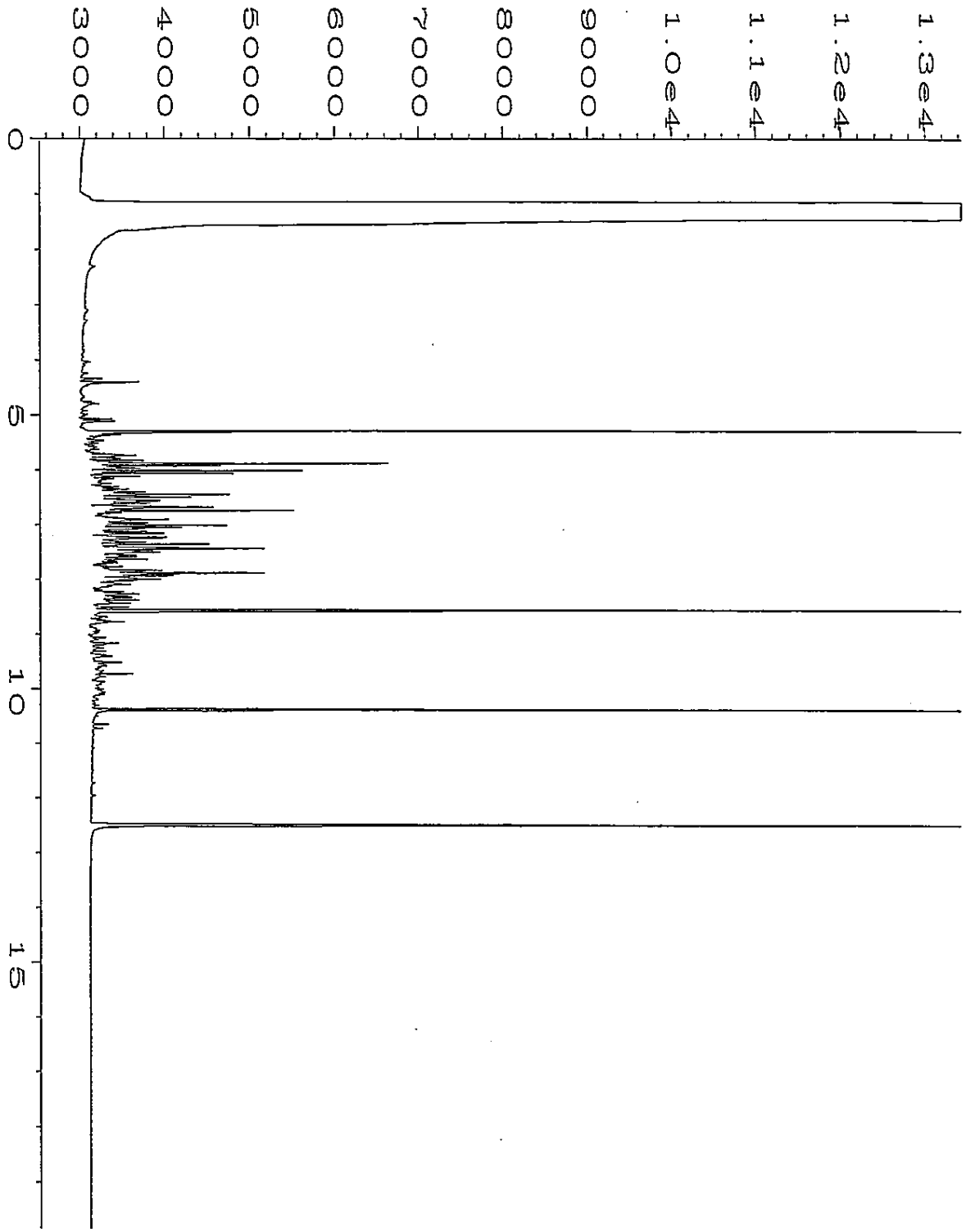
Data File Name : E:\GC6\12-09-02\016F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-05 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 07:52 PM
Report Created on: 10 Dec 02 11:34 AM

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



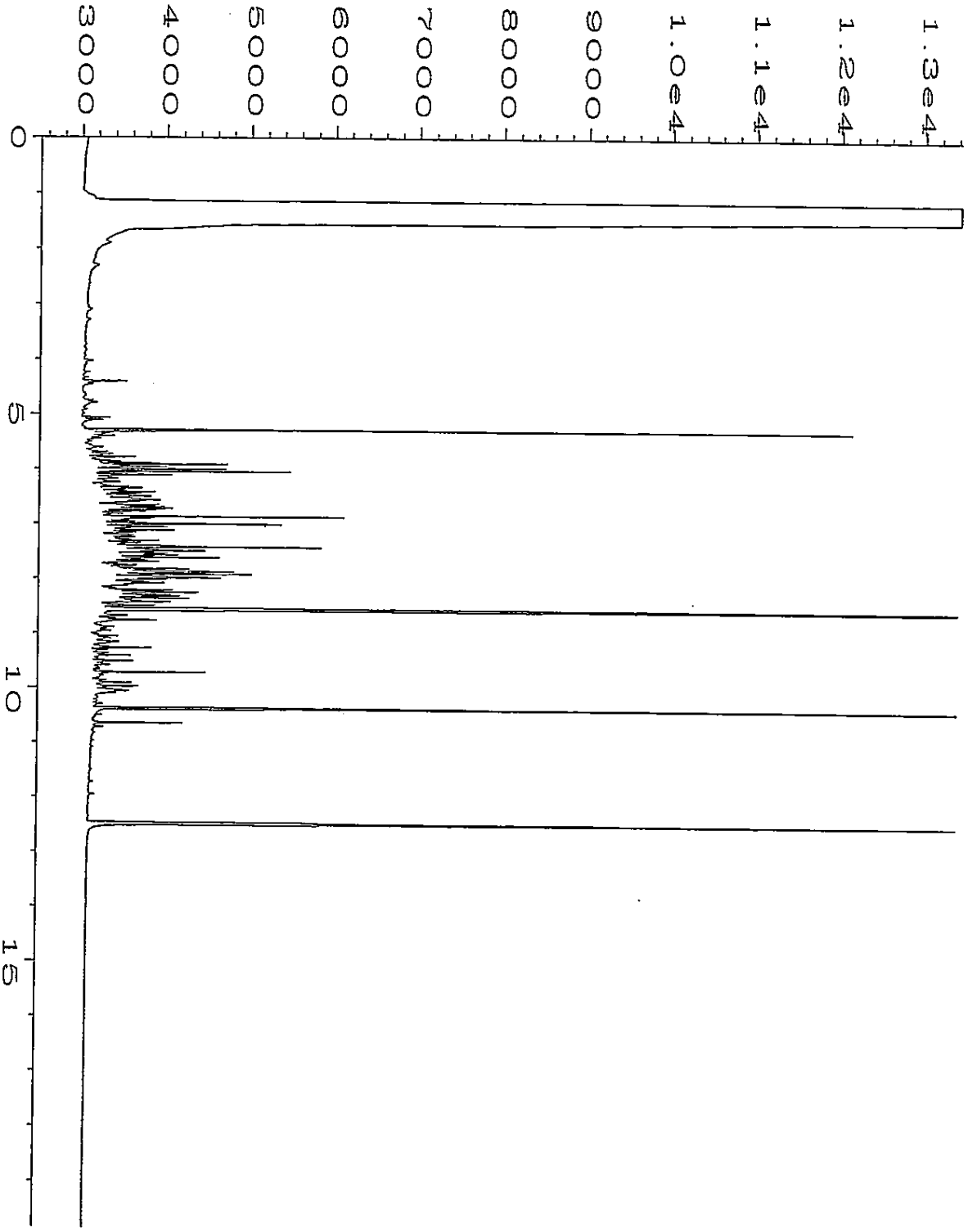
Data File Name : E:\GC6\12-09-02\017F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-06 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 08:17 PM
Report Created on: 10 Dec 02 11:35 AM

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



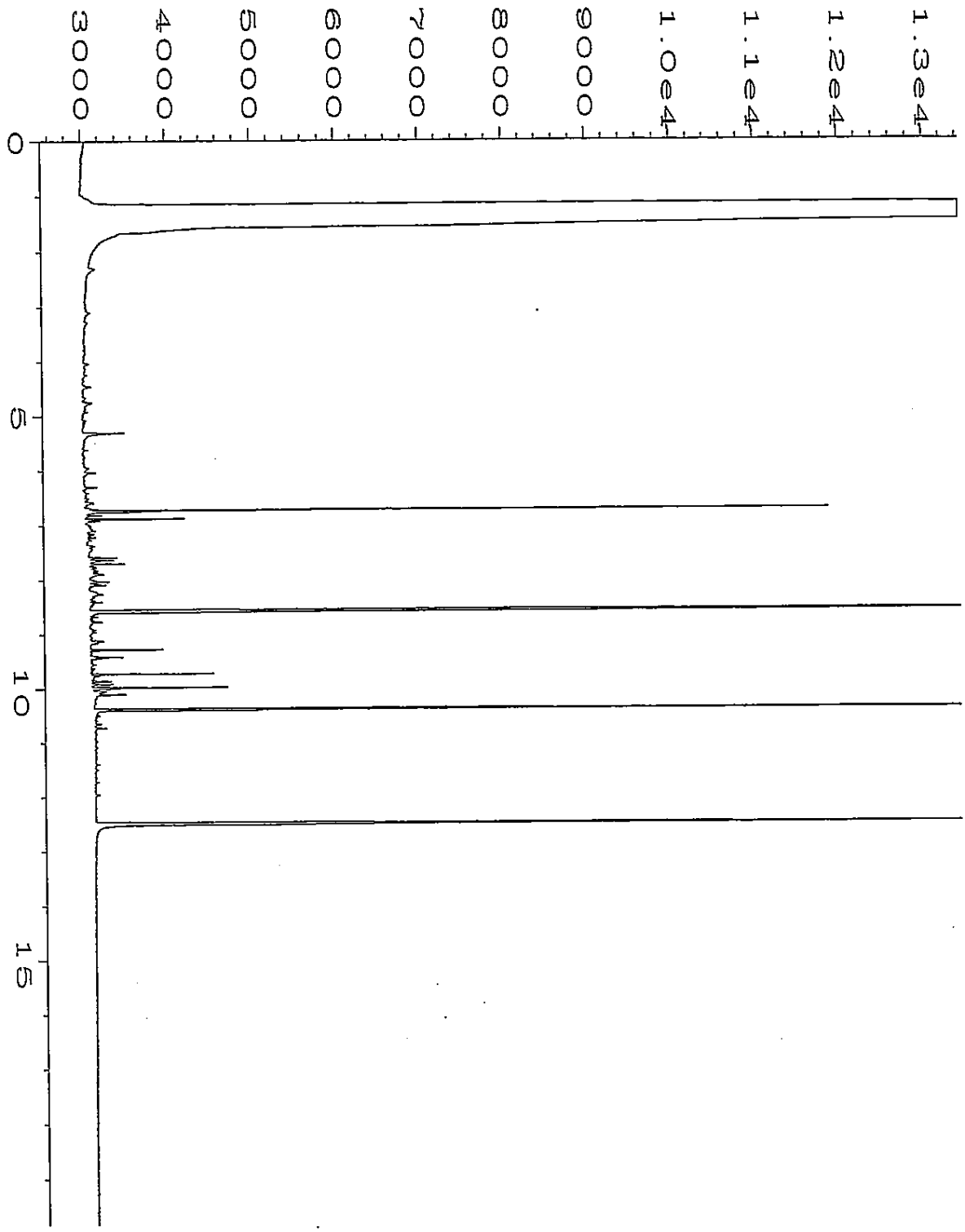
Data File Name : E:\GC6\12-09-02\018F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-07 sg WET-A
Run Time Bar Code:
Acquired on : 09 Dec 02 08:42 PM
Report Created on: 10 Dec 02 11:35 AM

Page Number : 1
Vial Number : 18
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



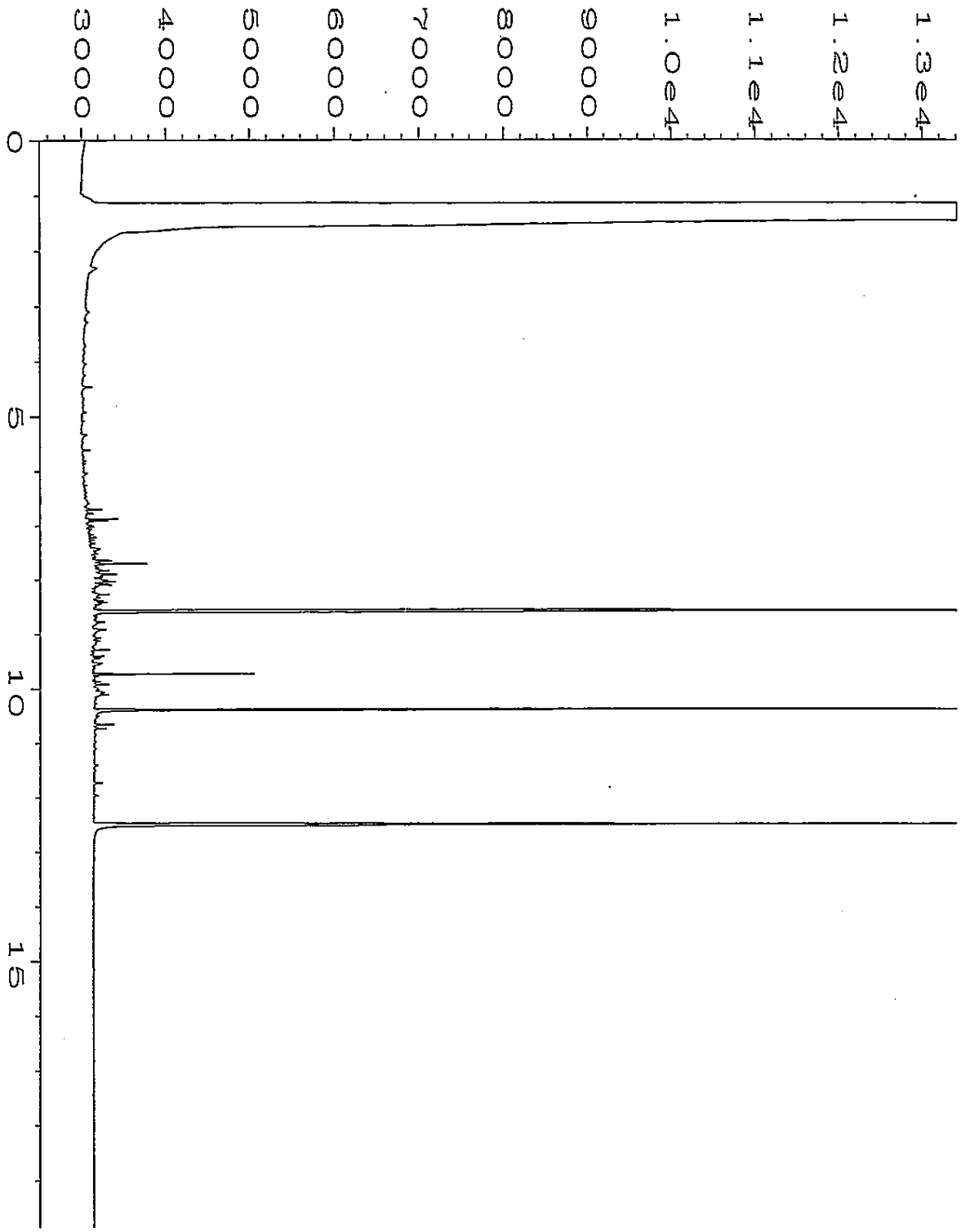
Data File Name : E:\GC6\12-09-02\019F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-08 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 09:07 PM
Report Created on: 10 Dec 02 11:35 AM

Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MT
Analysis Method : DEFAULT.M



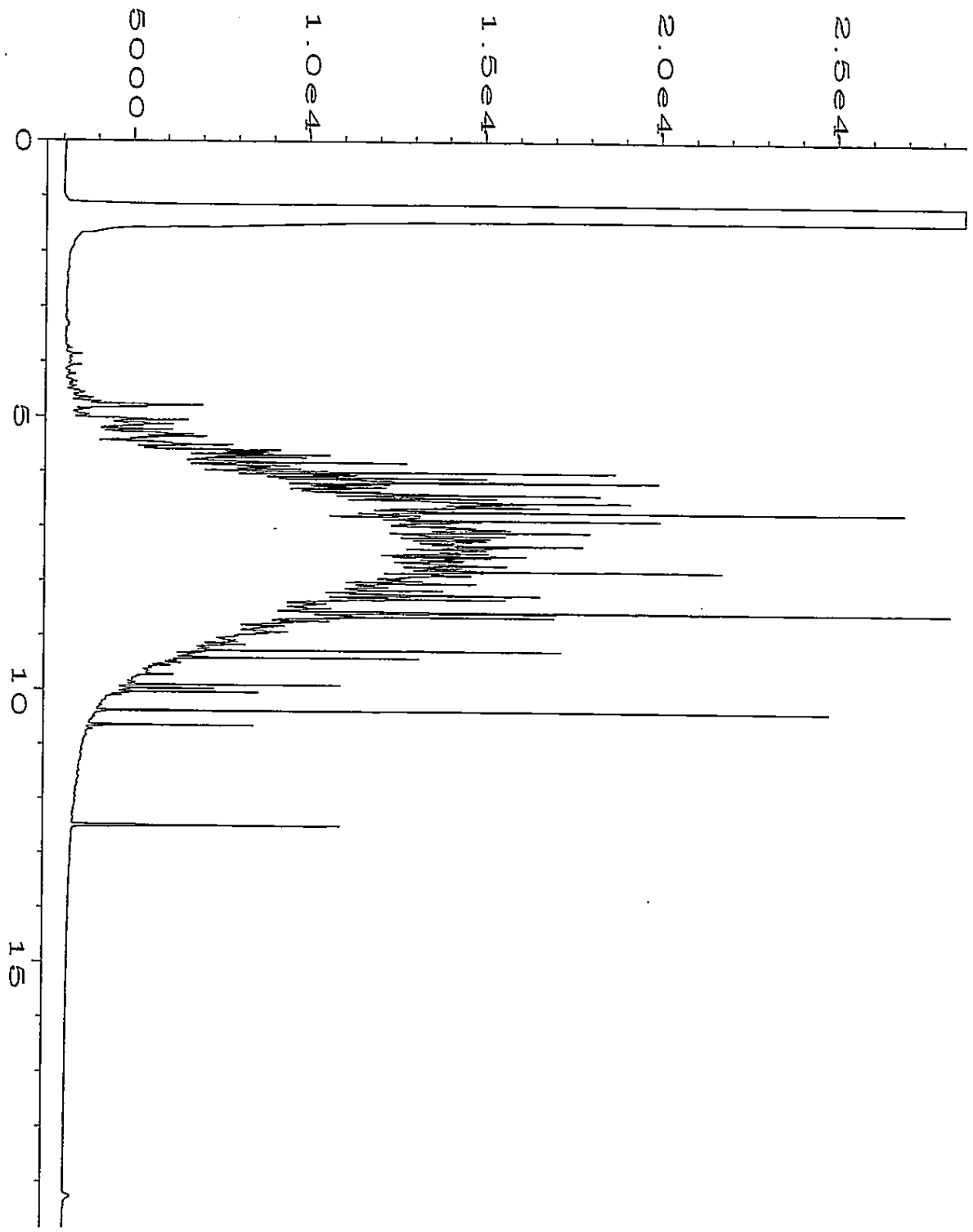
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Operator : SO
Instrument : GC #6
Sample Name : 211125-09 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 09:33 PM
Report Created on: 10 Dec 02 11:35 AM

Page Number : 1
Vial Number : 20
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



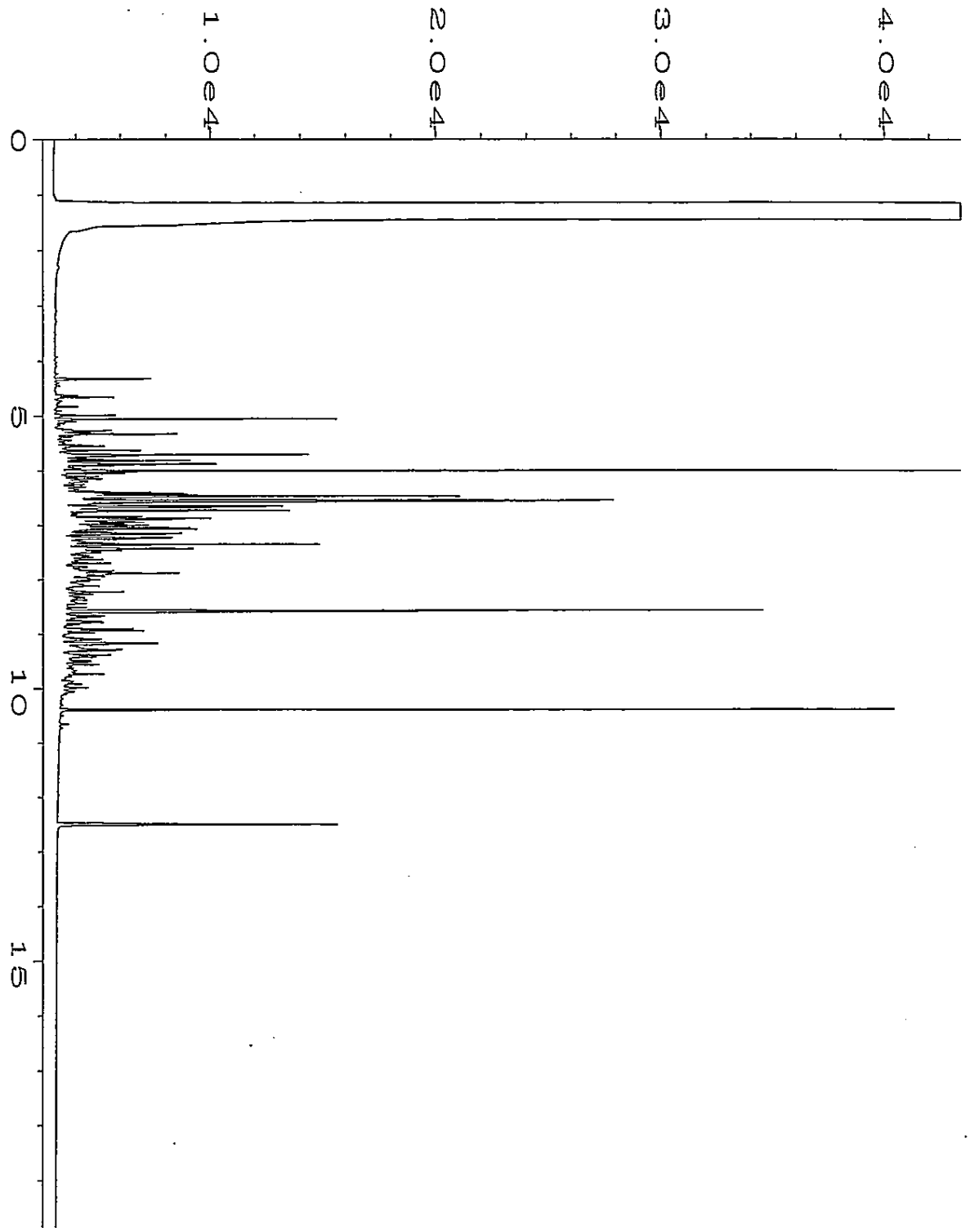
Data File Name : E:\GC6\12-09-02\021F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-10 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 09:58 PM
Report Created on: 10 Dec 02 11:37 AM

Page Number : 1
Vial Number : 21
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M

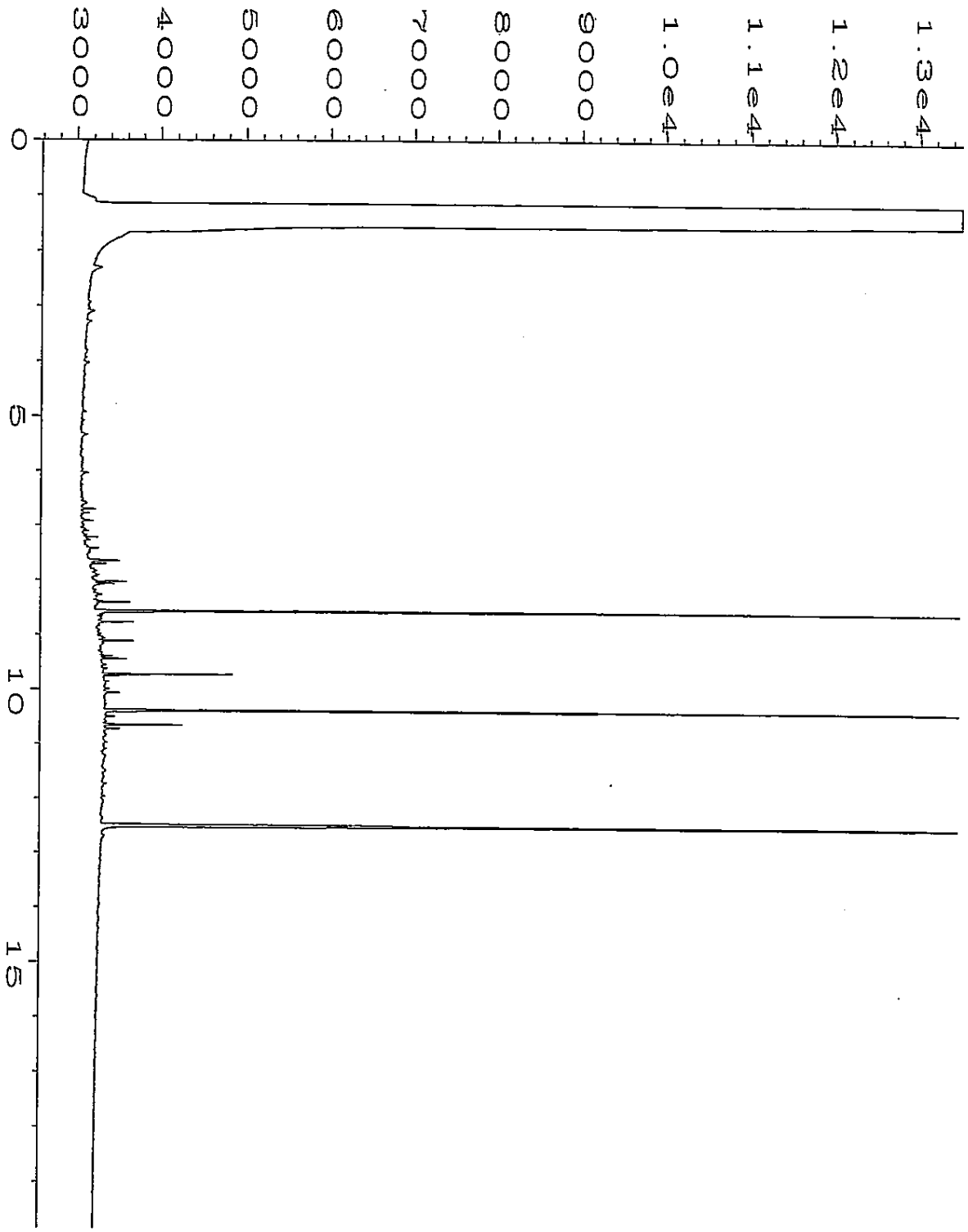


Data File Name : E:\GC6\12-09-02\022F0701.D
Operator : SO
Instrument : GC #6
Sample Name : 211125-11 sg WET-M
Run Time Bar Code:
Acquired on : 10 Dec 02 00:04 AM
Report Created on: 10 Dec 02 11:37 AM

Page Number : 1
Vial Number : 22
Injection Number : 1
Sequence Line : 7
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH

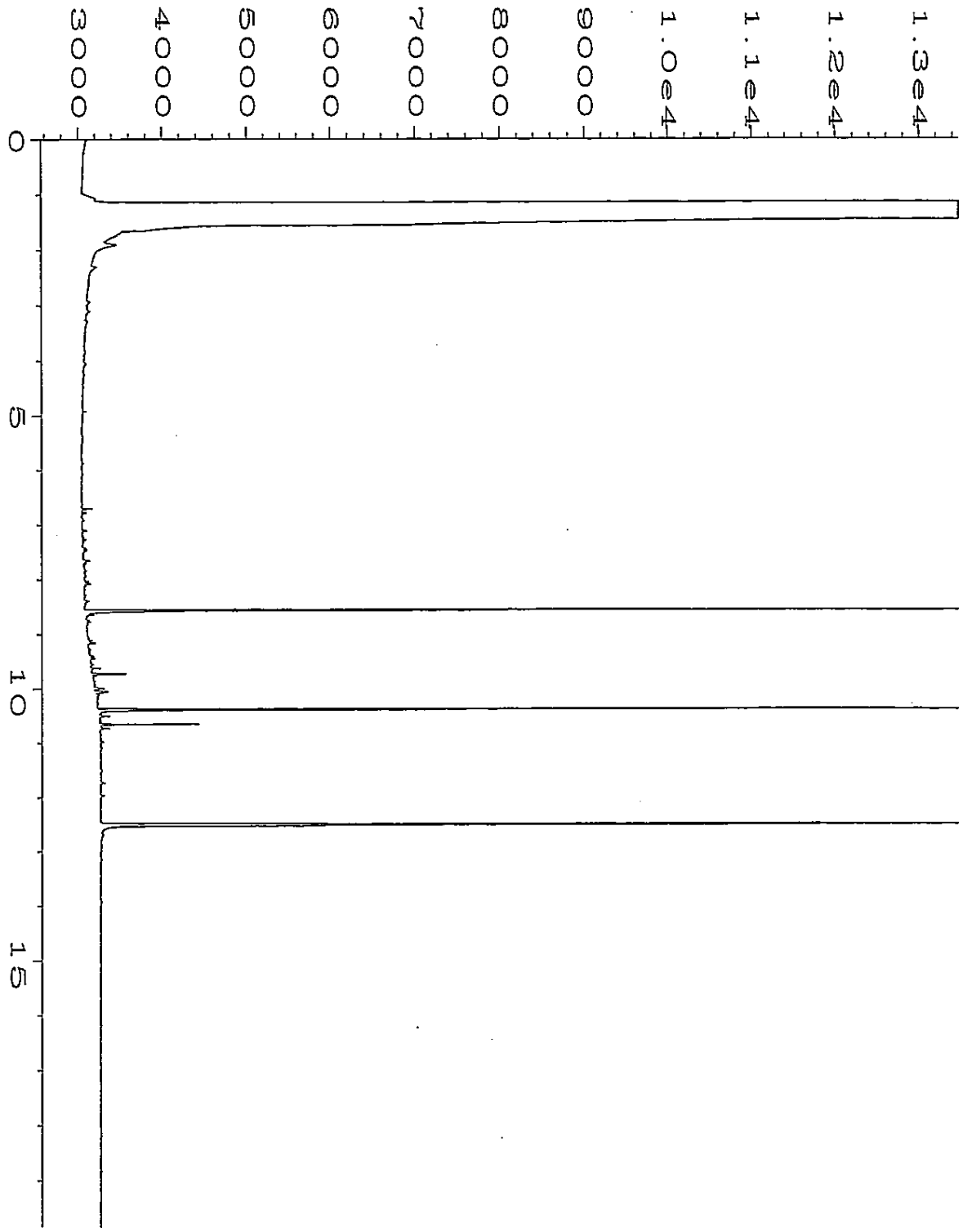


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Operator	: SO	Page Number	: 1
Instrument	: GC #6	Vial Number	: 23
Sample Name	: 211125-12 sg WET-M	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 10 Dec 02 00:29 AM	Instrument Method	: TPHDAK.MTH
Report Created on	: 10 Dec 02 11:37 AM	Analysis Method	: DEFAULT.M



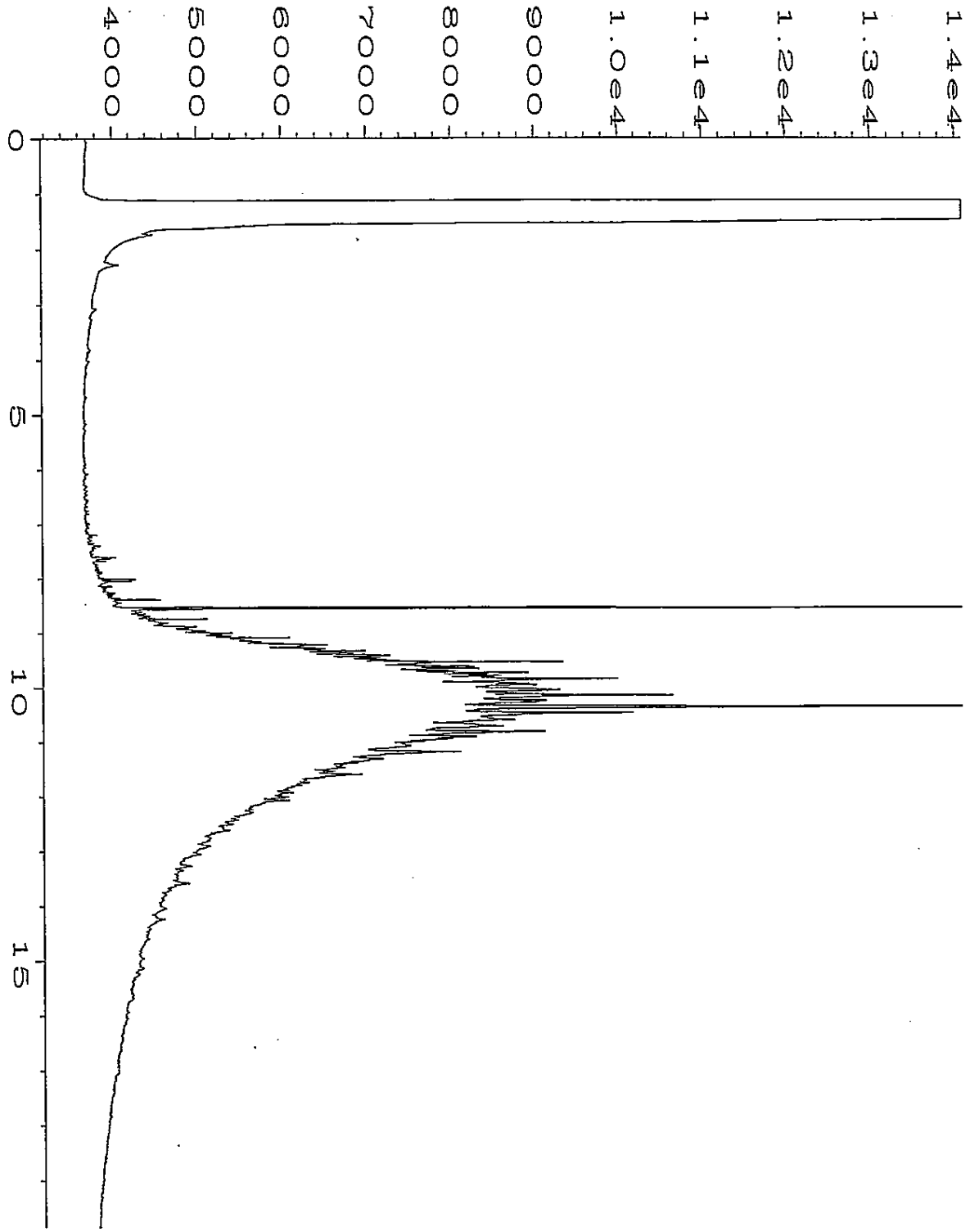
Data File Name : E:\GC6\12-09-02\006F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 02-930 mb sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 03:41 PM
Report Created on: 10 Dec 02 11:33 AM

Page Number : 1
Vial Number : 6
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



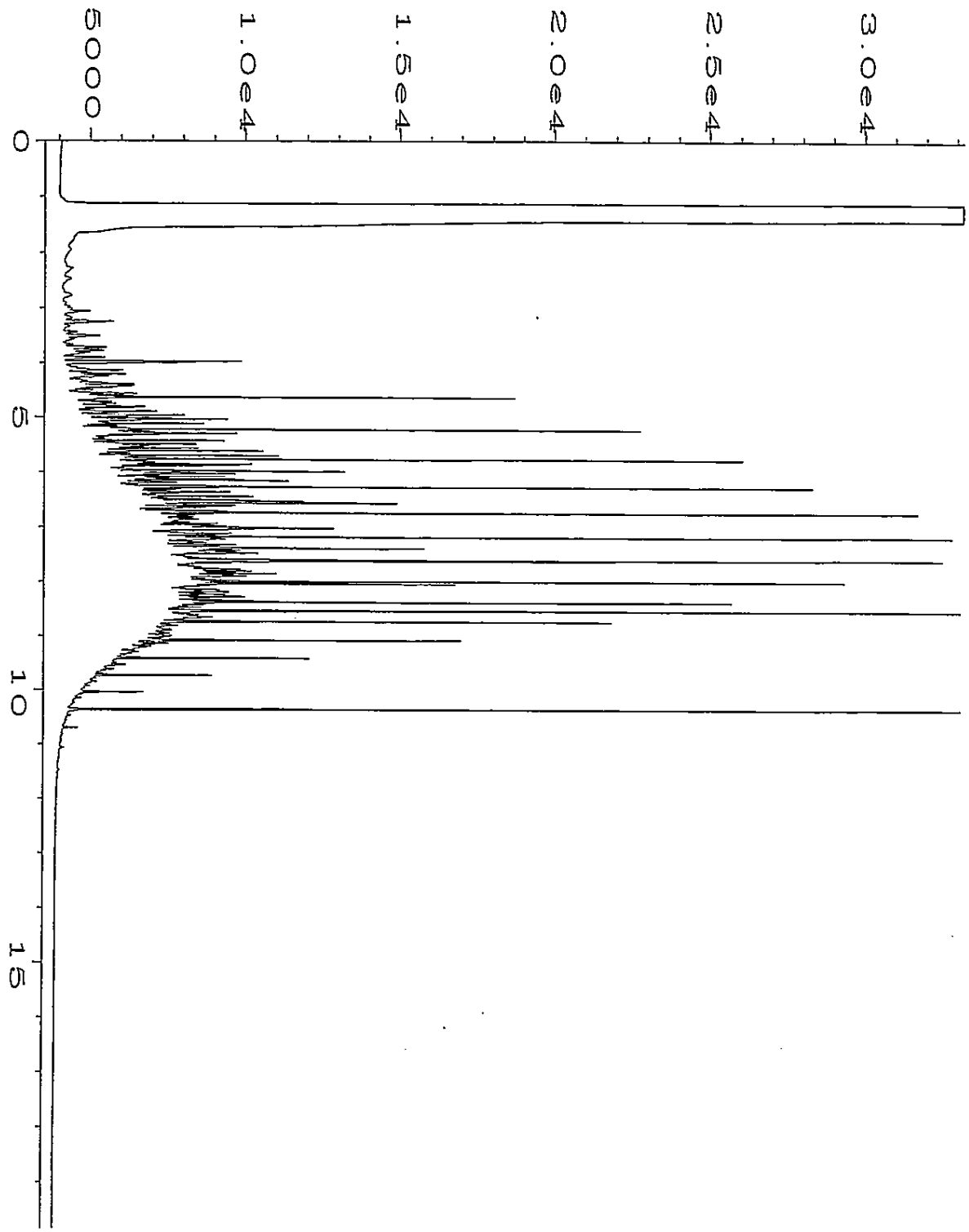
Data File Name : E:\GC6\12-09-02\007F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 02-930 mb2 sg WET-M
Run Time Bar Code:
Acquired on : 09 Dec 02 04:05 PM
Report Created on: 10 Dec 02 11:33 AM

Page Number : 1
Vial Number : 7
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.M



Data File Name : E:\GC6\12-06-02\019F0501.D
Operator : SO
Instrument : GC #6
Sample Name : 500 MO 11-222
Run Time Bar Code:
Acquired on : 06 Dec 02 07:33 PM
Report Created on: 10 Dec 02 09:38 AM

Page Number : 1
Vial Number : 19
Injection Number : 1
Sequence Line : 5
Instrument Method: TPHDAK.MTH
Analysis Method : DEFAULT.MTH



Data File Name : E:\GC6\12-06-02\002F0201.D
Operator : SO
Instrument : GC #6
Sample Name : 500 WADF 12-204
Run Time Bar Code:
Acquired on : 06 Dec 02 07:22 AM
Report Created on: 10 Dec 02 09:38 AM

Page Number : 1
Vial Number : 2
Injection Number : 1
Sequence Line : 2
Instrument Method: TPHD.MTH
Analysis Method : DEFAULT.M'

CM 11/15/02 AO5

Chain-of Custody Record

016203

Project No.: 2770.005

Samplers (Signature:)

Sarah Mearon

Date: 11/14/02

Page 1 of 1

Date	Time	Sample Number
11/14/02	0830	SRB-100L-4.75
11/14/02	0840	SRB-100L-8.0
11/14/02	0910	SRB-79L-5.0
11/14/02	0930	SRB-79L-11.0
11/14/02	0955	SRB-53L-5.0
11/14/02	1010	SRB-53L-11.0
11/14/02	1045	SRB-88L-8.0
11/14/02	1055	SRB-88L-11.0
11/14/02	1120	PL-06L-1.0
11/14/02	1130	PL-06L-5.0
11/14/02	1140	PL-12L-1.0
11/14/02	1150	PL-12L-5.0

ANALYSES

EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015m (Gasoline)	Method 8015m (Diesel)	Method 8015m (Motor Oil)	Silica Gel Cleanup	WET-m TPHd, TPHmo
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
							X	X	X	X
					X		X	X	X	X

REMARKS

Soil (S), Water (W) Vapor (V), or Other (o)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
S			X	2	6"x 15/8" metal sleeves
S			X	2	
S			X	2	
S			X	2	
S			X	2	
S			X	2	
S			X	2	
S			X	2	
S			X	2	
S			X	2	
S			X	2	
S			X	2	

SRA 11/14/02

Laboratory: Friedman and Bruya

Turnaround Time: Standard

Results to: Charlie Rome

Total No. of Containers: 24

Relinquished by (Signature): Sarah Mearon	Date: 11/14	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Printed Name: Sarah Mearon	Time: 1430	Printed Name:	Time:	Printed Name:	Time:
Company: Geomatrix		Company:		Company:	
Received by:	Date: 11/15/02	Received by:	Date:	Received by:	Date:
Printed Name: Laura Hooper	Time: 11:53 AM	Printed Name:	Time:	Printed Name:	Time:
Company: CBL		Company:		Company:	

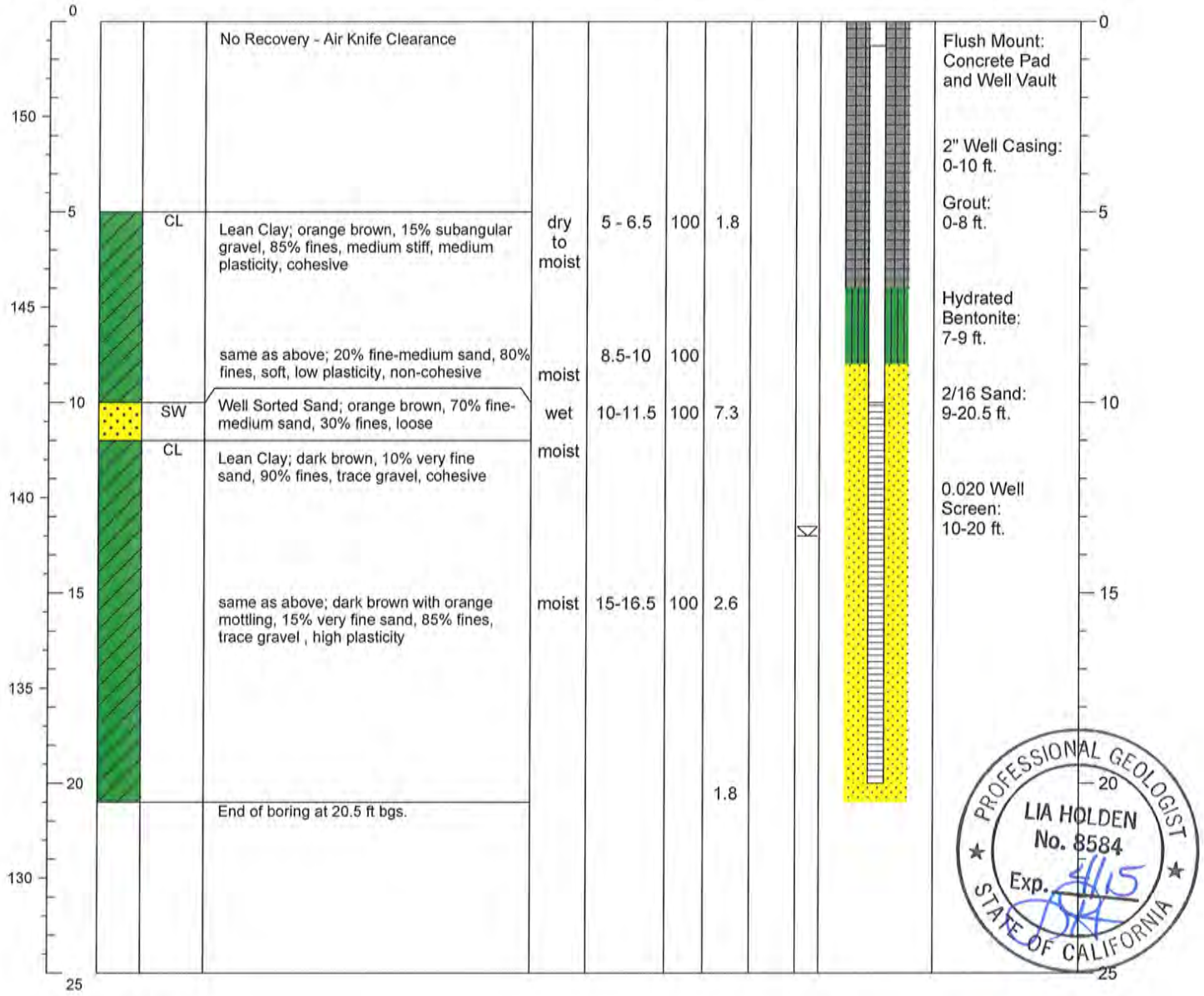
Method of Shipment: Fed Ex

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakl 94612
Phone: 510-663-4100 Fax: 510-6

Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			MW-1

Address 2 Fourth St & 34 Sixth St Santa Rosa California	Drilling Contractor Gregg Drilling	Ground Surface Elevation: 152.50	Top of Casing Elevation: 151.86
	Drilling Method Air Knife / Hollow Stem Auger	Boring Depth 20.5 ft.	Boring Diameter 8 in.
Logged By: R. Ransom; Approved By: L. Holden	Sampling Method Split Spoon	Well Depth: 20 ft.; Casing Type: SCH 40 PVC	Well Screen Interval: 10 - 20 ft.; Slot Size: 0.020
Antea Group Project Number UPR8248	Headspace Monitoring Device PID	Date Drilling Started 5/15/13	Date Drilling Completed 5/15/13



PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/15
STATE OF CALIFORNIA

* Blow counts not recorded

▽ First Encountered Groundwater ▼ Static Groundwater

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INOGEN

Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			MW-2

Address 2 Fourth St & 34 Sixth St Santa Rosa California	Drilling Contractor Gregg Drilling	Ground Surface Elevation: 153.55	Top of Casing Elevation: 152.79
	Drilling Method Air Knife / Hollow Stem Auger	Boring Depth 20.5 ft.	Boring Diameter 8 in.
Logged By: R. Ransom; Approved By: L. Holden	Sampling Method Split Spoon	Well Depth: 20 ft.; Casing Type: SCH 40 PVC	Well Screen Interval: 10 - 20 ft.; Slot Size: 0.020
Antea Group Project Number UPR8248	Headspace Monitoring Device PID	Date Drilling Started 5/15/13	Date Drilling Completed 5/15/13

LITHOLOGY **SAMPLING DATA**

Elevation	Depth	Graphic Log	USCS	Visual Description	Moisture Content	Sample Interval (ft)	Recovery (%)	Headspace (ppm)	Blow Count (blows/6")	Water Level	Well Diagram	Well Details	Depth
150	0			No Recovery - Air Knife Clearance								Flush Mount: Concrete Pad and Well Vault	0
	5		ML	Silt; dark brown with orange mottling, 15% gravel, 20% fine-medium sand, 65% fines, medium stiff, low plasticity, non-cohesive	dry to moist	5 - 6.5	75	50.1	2 3 3			2" Well Casing: 0-10 ft.	5
145				same as above; orange brown with dark brown mottling, 25% very fine sand, 75% fines, low-medium plasticity	moist	8.5-10	100		2 3 3			Grout: 0-8 ft.	
	10			No Recovery		10-11.5	0	17.0	2 2 4	▽		Hydrated Bentonite: 7-9 ft.	10
			CL	Lean Clay; orange gray, 5% angular gravel, 10% fine-medium sand, 85% fines, stiff, medium plasticity, cohesive	wet	11.5-13	75		2 4 3	▼		2/16 Sand: 9-20.5 ft.	
140			SM	Silty Sand; gray, 10% angular gravel, 50% very fine-medium sand, 40% fines, loose, low plasticity	wet	13-14.5	75		3 3 5			0.020 Well Screen: 10-20 ft.	
	15		GP	Poorly Graded Gravel; gray, 50% small-large subangular to angular gravel, 25% sand, 25% fines, loose, non-cohesive		14.5-16	100	5.4	5 4 2				15
			CH		moist	16-17.5	100		2 2 3				
135			CL	Fat Clay; brown with orange mottling, 10% coarse sand, 90% fines, soft, high plasticity, cohesive	moist	17.5-19	100		2 2 1				
	20			Lean Clay; gray brown, 5% small angular gravel, 5% very fine sand, 90% fines, stiff				4.2	2 3 4				20
130	25			End of boring at 20.5 ft bgs.									25

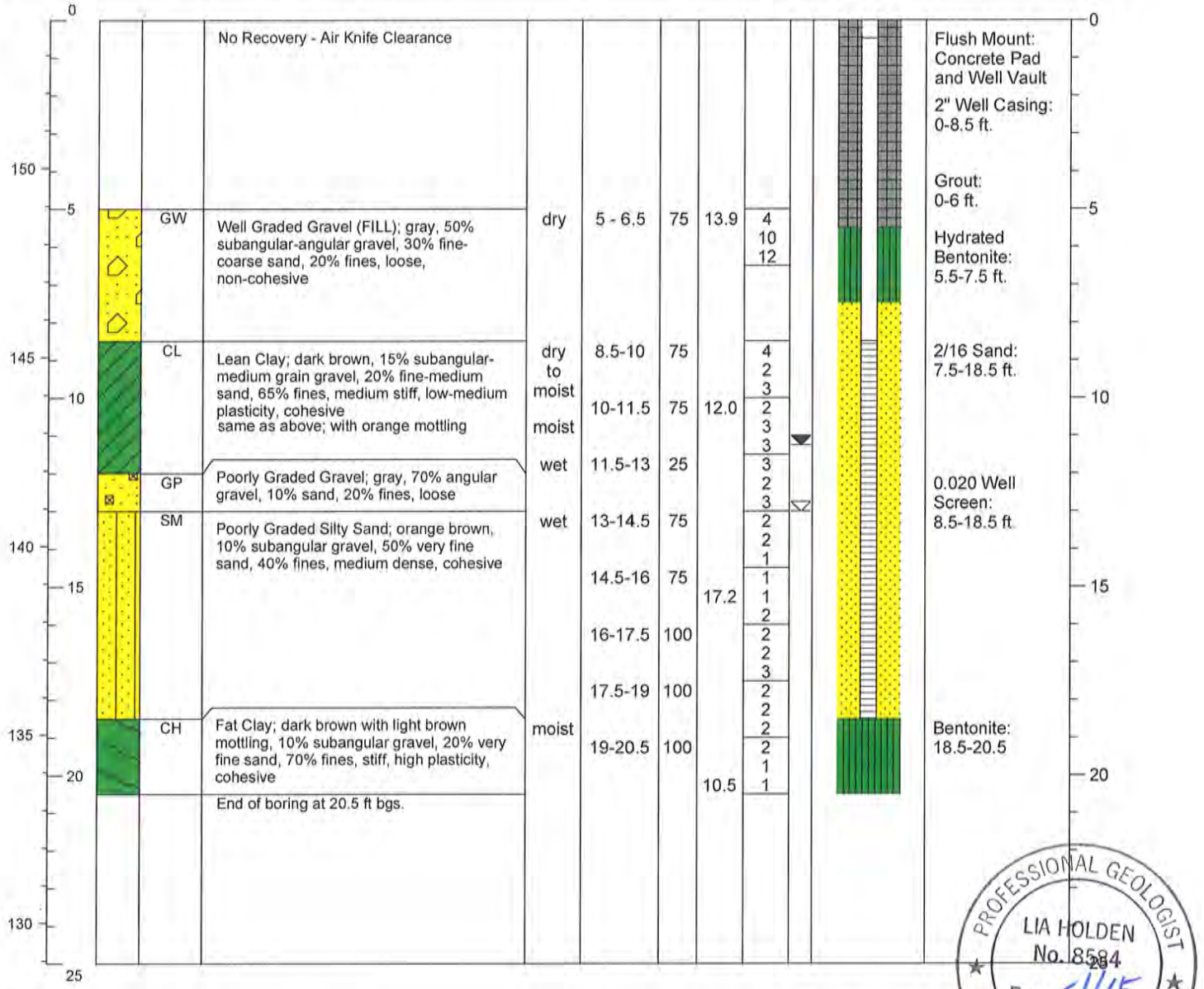
PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/15
STATE OF CALIFORNIA

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INOGEN

▽ First Encountered Groundwater ▼ Static Groundwater

Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			MW-3
Address 2 Fourth St & 34 Sixth St Santa Rosa California	Drilling Contractor Gregg Drilling	Ground Surface Elevation: 153.92	Top of Casing Elevation: 153.44
	Drilling Method Air Knife / Hollow Stem Auger	Boring Depth 20.5 ft.	Boring Diameter 8 in.
Logged By: R. Ransom; Approved By: L. Holden	Sampling Method Split Spoon	Well Depth: 18.5 ft.; Casing Type: SCH 40 PVC	Well Screen Interval: 8.5-18.5 ft.; Slot Size: 0.020
Antea Group Project Number UPR8248	Headspace Monitoring Device PID	Date Drilling Started 5/16/13	Date Drilling Completed 5/16/13



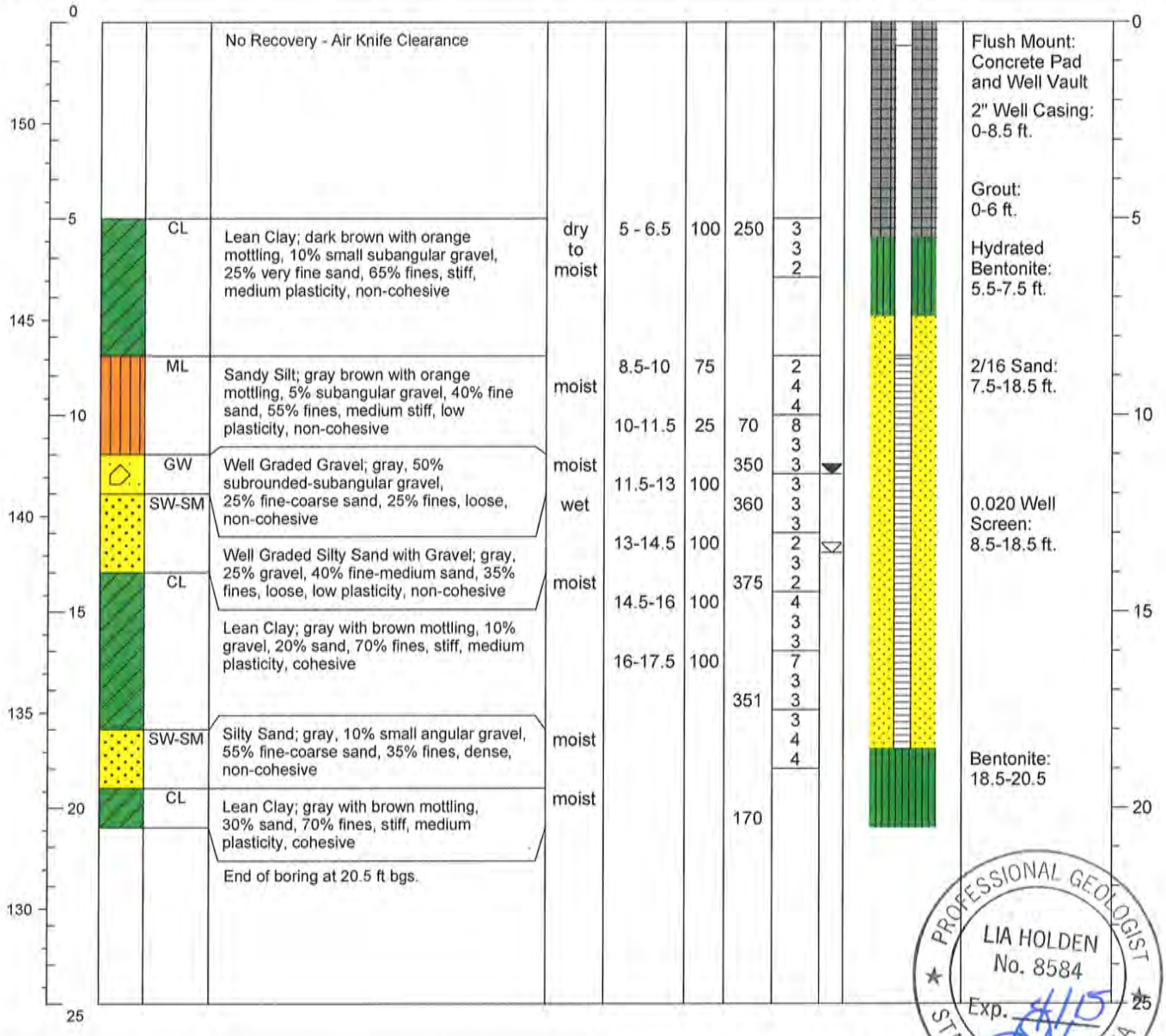
PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/15
STATE OF CALIFORNIA

▽ First Encountered Groundwater ▼ Static Groundwater

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INOGEN

Project Name	Monitoring Well Construction Log		Well Number
Union Pacific Railroad			MW-4
Address 2 Fourth St & 34 Sixth St Santa Rosa California	Drilling Contractor Gregg Drilling Drilling Method Air Knife / Hollow Stem Auger	Ground Surface Elevation: 152.58 Boring Depth 20.5 ft.	Top of Casing Elevation: 151.97 Boring Diameter 8 in.
Logged By / Approved By R. Ransom / L. Holden	Sampling Method Split Spoon	Well Depth / Casing Type 18.5 ft. / SCH 40 PVC	Well Screen Interval / Slot Size 8.5 - 18.5 ft. / 0.020
Antea Group Project Number UPR8248	Headspace Monitoring Device PID	Date Drilling Started 5/16/13	Date Drilling Completed 5/16/13



PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/15
STATE OF CALIFORNIA

antea group

INOGEN

▽ First Encountered Groundwater ▼ Static Groundwater



LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

SRMW-07 EXISTING MONITORING WELL

SRMW-10 DESTROYED MONITORING WELL

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE

(E) EXISTING
BGS BELOW GROUND SURFACE
CMP CORRUGATED METAL PIPE

N

0 20 FT
SCALE

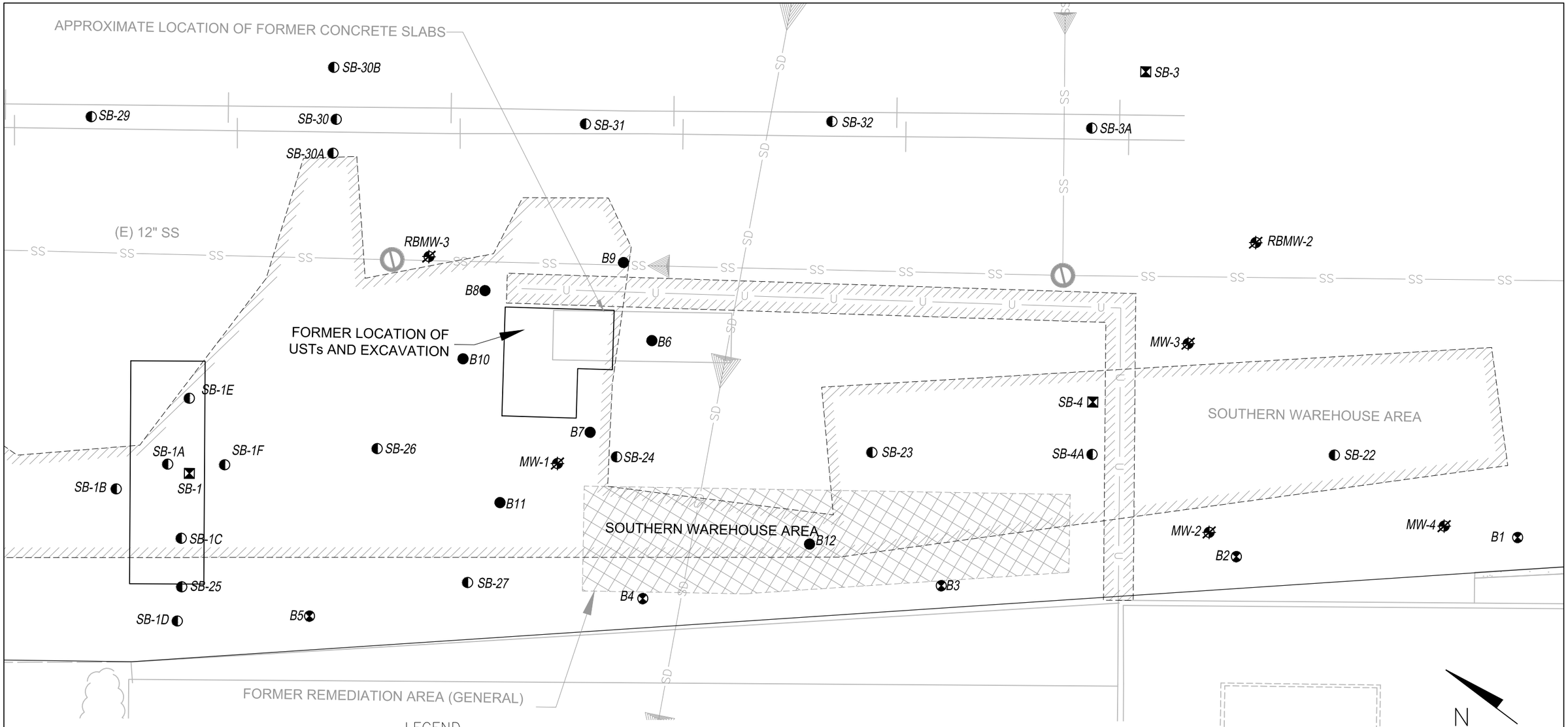
ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	RR	JH
DATE	REVIEWED BY	FILE NAME
7/19/13	LH	UPR8248-Site

antea group



ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	LH	JH
DATE	REVIEWED BY	FILE NAME
3/25/15	LH	UPR8248-Site

anteagroup

California Regional Water Quality Control Board
North Coast Region
John W. Corbett, Chairman

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

August 31, 2007

Mr. Mike Grant
Union Pacific Railroad
Manager Environmental Site Remediation
1408 Middle Harbor Road
Oakland, CA 94607

Dear Mr. Grant:

Subject: No Further Action

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case No. 1TSR196

On February 23, 2007, Regional Water Board staff identified items remaining to be completed prior to the issuance of a no further action letter. They included:

- Submittal of documentation showing proper groundwater monitoring well abandonment;
- Submittal of documentation showing completion of waste disposal activities;
- Compliance with the State Water Resources Control Board, Geotracker data base electronic submittal requirements; and
- A written commitment from the person, or persons who will be taking responsibility for the preparation and implementation of a Soil and Groundwater Management Plan.

The first three bulleted items were completed by Union Pacific Railroad. Based on the April 16, 2007 correspondence from Sonoma-Marin Area Rail Transit (SMART), the soil and groundwater management plan will be prepared and implemented by SMART.

Accordingly, no further action is required regarding corrective actions completed for known discharges to soil and groundwater on properties identified as APN 010-166-003 and 010-171-004.

The areas where soil removal previously occurred or where off site migration has occurred may be subject to further regulation, if disturbed during land use changes

and/or property development. Remaining shallow soil impacts, and potential encounters with currently unknown areas of impact must be addressed during the property development process, according to an approved soil and groundwater management plan.

Acceptable components of the soil and groundwater management plan were identified in our February 23, 2007 correspondence. We look forward to receipt and review of that plan in the near future.

This letter does not relate to rail road right of way land south of Third Street where unresolved soil and groundwater issues remain.

If you have any questions, you may call Joan Fleck of my staff at (707) 576-2675.

Sincerely,

Original Signed By:

Robert Klamt
Interim Executive Officer

083107_JEF_SPTCONFA.doc

cc: Fire Inspector Doug Dahme, Santa Rosa Fire Department
Fire Inspector Corey Vincent, Santa Rosa Fire Department
Mr. Jeffery Kolin, City Manager, P.O. Box 1678, Santa Rosa, CA 95402
Mr. John Nemeth, Rail Planning Manager, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Ms. Lilian Hames, Project Director, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Ms. Lucrecia Millia, Property Manager, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Ms. Cappie Garrett, 1104 McDonald Avenue, Santa Rosa, CA 95404
Mr. Richard Devine, Devine & Gong, Inc. 100 Bush Street, Suite 600, San Francisco, Ca 94104-3703
Mr. John Stewart, The John Stewart Company, 1388 Sutter Street, 11th Floor San Francisco, CA 94109
Mr. Michael Dieden, Creative Housing Associates, 8758 Venice Boulevard, Suite 101, Los Angeles, CA 90034
Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514

California Regional Water Quality Control Board
North Coast Region
John W. Corbett, Chairman

Linda S. Adams
Secretary for Environmental Protection

www.waterboards.ca.gov/northcoast
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone: (877) 721-9203 (toll free) • Office: (707) 576-2220 • FAX: (707) 523-0135

Arnold Schwarzenegger
Governor

June 18, 2007

Mr. Mike Grant
Union Pacific Railroad
Manager Environmental Site Remediation
1408 Middle Harbor Road
Oakland, CA 94607

Dear Mr. Grant:

Subject: ANNUAL ESTIMATION LETTER
File: Southern Pacific Transportation Company
Third Street
Case No. 1TSR196; (201-6200)

The California Water Code (Porter-Cologne), Section 13304, allows the Regional Water Board to recover reasonable expenses from a responsible party for overseeing site investigation and cleanup of unregulated discharges adversely affecting or threatening to affect State's waters. The Regional Water Board intends to continue to recover costs for regulatory oversight work conducted at this site in accordance with our prior correspondence on this matter. In compliance with AB2057, our agency is obligated to inform you every year of the following information regarding our recovery of oversight costs:

1. A detailed estimate of the work to be performed or services to be provided;
2. A statement of the expected outcome of that work;
3. The billing rates of all individuals and classes or employees expected to engage in the work; and
4. An estimate of all expected charges to be billed to you by this agency.

ESTIMATE OF WORK TO BE PERFORMED:

Regional Water Board staff estimate that the following work will be performed during fiscal year 2007/2008 on the Southern Pacific Transportation Company site:

- Evaluate the site status to assess compliance with Regional Water Board requirements and California Water Code;
- Meet with and provide written correspondence and telephone communication with representatives of Union Pacific and other responsible third parties and interested parties;
- Conduct internal communications (i.e., meetings, memos, etc.) regarding the project; and
- Provide regulatory oversight through the completion of the project.

STATEMENT OF EXPECTED OUTCOME

- Verify adequacy of final reports;
- Prepare meeting summaries, telephone conversation summaries, etc. to document the file record and site progress; and
- Complete no further action process.

BILLING RATES

Enclosure 1 is a summary of the billing rates for employees expected to perform the work. The names and classifications of employees that charge time to this site will be listed on the invoices. The average billing rate is about $125.00 per hour.

ESTIMATION OF EXPECTED CHARGES

Regional Water Board staff expects to charge about 8 hours of work related to this site during fiscal year 2007/2008 (July 1, 2007 through June 30, 2008). Based on the average billing rate of $125.00 per hour, the estimated billing charge for this site during fiscal year 2007/2008 is about $1,000.00.

If you have any questions, please call me at (707) 576-2675.

Sincerely,

Original Signed By:

Joan Fleck
Engineering Geologist

Enclosure: Billing Rates Description

061807_JEF_CostrecoveryUnionPacific

cc: Mr. David Ceccarelli, SCPProgram Coordinator, SWRCB, Division of Clean Water Programs 201-6200
Lynda Jacobsen

California Regional Water Quality Control Board
North Coast Region
John W. Corbett, Chairman

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Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

August 31, 2007

Mr. Mike Grant
Union Pacific Railroad
Manager Environmental Site Remediation
1408 Middle Harbor Road
Oakland, CA 94607

Dear Mr. Grant:

Subject: No Further Action

File: Southern Pacific Transportation Company, 3rd Street Property
Santa Rosa, Case No. 1TSR196

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- A written commitment from the person, or persons who will be taking responsibility for the preparation and implementation of a Soil and Groundwater Management Plan.

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Acceptable components of the soil and groundwater management plan were identified in our February 23, 2007 correspondence. We look forward to receipt and review of that plan in the near future.

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If you have any questions, you may call Joan Fleck of my staff at (707) 576-2675.

Sincerely,

Original Signed By:

Robert Klamt
Interim Executive Officer

083107_JEF_SPTCONFA.doc

cc: Fire Inspector Doug Dahme, Santa Rosa Fire Department
Fire Inspector Corey Vincent, Santa Rosa Fire Department
Mr. Jeffery Kolin, City Manager, P.O. Box 1678, Santa Rosa, CA 95402
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Ms. Lilian Hames, Project Director, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
Ms. Lucrecia Millia, Property Manager, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
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Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514

California Regional Water Quality Control Board
North Coast Region
Bob Anderson, Chairman

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Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

January 16, 2009

Mr. Mike Grant
Union Pacific Railroad
Manager Environmental Site Remediation
1408 Middle Harbor Road
Oakland, CA 94607

Sonoma Marin Rail Area Rail Transit
c/o Mr. Charles McGlashan
Chair SMART Board of Directors
750 Lindaro Street, Suite 200
San Rafael, CA 94901

Gentlemen:

Subject: Case Status
File: Southern Pacific Transportation Company, 3rd Street Property, Santa Rosa, Case No. 1TSR196

Regional Water Board staff have reviewed the November 2008 *Report of Findings Sonoma-Marin Area Rail Transit Property* report and the January 7, 2009 *Additional Information* prepared by EBA Engineering on behalf of New Railroad Square LLC. The work was conducted on properties identified as Assessor's Parcel Numbers 010-171-004 and 010-166-003 in Santa Rosa. The Phase II work was completed in relation to a proposed development project.

The results of the Phase II work included the discovery of an underground oil storage tank, shallow soil impacts, and groundwater impacts from petroleum and chlorinated hydrocarbons. The soil and groundwater impacts discovered in the vicinity of SB-1A represent new information regarding an onsite discharge; therefore, the case file has been re-opened.

We concur with the EBA Engineering recommendations to remove the underground oil storage tank under permit from the Santa Rosa Fire Department, prepare a work plan to address the soil and groundwater impacts in the vicinity of SB-1A, and prepare a soil and groundwater management plan to address the shallow soil impacts prior to and during property development. The underground storage tank must be removed as soon as possible. The work plan to address the soil and groundwater impacts in the vicinity of SB-1 is due within 60 days of issuance of this letter. The soil and groundwater

management plan must be submitted prior to property development. We also concur with the proposal to install groundwater monitoring wells after corrective actions have been conducted in the area of SB-1A. Based on the available information, it appears that off site migration has occurred to the west. The work plan must acknowledge and address this matter.

With regards to the widespread volatile organic compound (VOC) impacts, a potential MTBE source is 210 Fifth Street. I am currently researching historical land uses in the area east of the site for potential up gradient tetrachloroethene (PCE) discharge locations. With regards to groundwater impacts from petroleum, that appear to be the result of on site migration, I have forwarded copies of pertinent information for the SB-55-W area to ChevronTexaco, who is currently investigating a petroleum release at 101 Fifth Street. I am also exploring land use history for properties east of the SB-13-W sample location.

I look forward to removal of the underground storage tank and receipt of the work plan. If you have any questions I can be reached at (707) 576-2675.

Sincerely,

Joan Fleck
Engineering Geologist

011609_JEF_SMART

cc: Fire Inspector Doug Dahme, Santa Rosa Fire Department
Fire Inspector Corey Vincent, Santa Rosa Fire Department
Mr. Jeffery Kolin, City Manager, P.O. Box 1678, Santa Rosa, CA 95402
Mr. John Nemeth, Rail Planning Manager, SMART District Office, 4040 Civic Center Drive, Suite 200, San Rafael, CA 94903
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Salvador Family Partnership, 5582 Drakes Drive, Byron CA 94514
Mr. Paul Nelson, EBA Engineering, 825 Sonoma Avenue, Suite C, Santa Rosa, CA 95404

SMG

GEOMATRIX

Soil and Groundwater Investigation and Recommendation for Closure

Santa Rosa Station/Third Street Property
Option Property
Santa Rosa, California

Prepared for:

Union Pacific Railroad Company
49 Stevenson Street, 15th Floor
San Francisco, California 94105

June 2000

Project No. 2770.005

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GEOMATRIX

June 6, 2000
Project 2770.005

Ms. Joan Fleck
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Subject: Soil and Groundwater Investigation and
Recommendation for Site Closure
Santa Rosa Station/Third Street Property
Option Property
Santa Rosa, California

Dear Ms. Fleck:

On behalf of Union Pacific Railroad Company (UPRR) and the Northwestern Pacific Railroad Authority (NWPRA), Geomatrix Consultants, Inc. (Geomatrix) is submitting this report that documents results of soil and grab groundwater sampling recently performed at the subject site. The work was performed in accordance with our November 19, 1999 work plan and February 7, 2000 addendum to the work plan. The work plan and addendum were approved by the California Regional Water Control Board, North Coast Region (RWQCB). Additionally, this report summarizes the results of previous investigative work performed at the site, and presents our rationale for our recommendation that regulatory closure be authorized for the site at this time.

Please call John Moe of UPRR at (415) 541-7020, David Solomon of the NWPRA at (415) 257-4564, or the undersigned if you have any questions.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Susan Gallardo

Susan M. Gallardo, P.E.
Principal Engineer

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Enclosure

cc: John Moe, UPRR
David Solomon, NWPRA
Leah Goldberg, HMBVR

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SOIL AND GROUNDWATER INVESTIGATION AND RECOMMENDATION FOR CLOSURE

Union Pacific Railroad Company
Santa Rosa Station/Third Street Property
Option Property
Santa Rosa, California

1.0 INTRODUCTION

Geomatrix Consultants, Inc. (Geomatrix), has prepared this report to document the results of the soil and grab groundwater sampling event and chemical analysis program conducted at the former Santa Rosa Station, which is located along the Healdsburg segment of the Northwestern Pacific Railroad (NWPRR) corridor in Santa Rosa, California (Figure 1). This property, shown on Figure 2, is designated as an option sale property for the transaction between the Southern Pacific Transportation Company [SPTCo; currently Union Pacific Railroad (UPRR)] and the Northwestern Pacific Railroad Authority (NWPRA, a public joint powers authority composed of Golden Gate Bridge, Highway and Transportation District, County of Marin, and North Coast Railroad Authority). The objective of the soil and groundwater-sampling program was to provide additional characterization of potential environmental issues at the subject site and collect data necessary to move the site toward regulatory case closure. Geomatrix performed this work on behalf of UPRR and NWPRA in accordance with our November 18, 1999 work plan and February 7, 2000 addendum work plan. Both work plans were approved orally by the California Regional Water Quality Control Board, North Coast Region (RWQCB) staff (personal communication, Ms. Joan Fleck, March 3, 1999).

Site background, a description of the sampling program, a discussion of the findings, and recommendations are presented in the following sections.

2.0 SITE SETTING

The property is located in a primarily commercial area of Santa Rosa. The property is bordered by the NWPRR property to the south and east, warehouse facilities to the west, and residential and commercial areas to the north. The property is currently vacant with the exception of 1) a small railroad maintenance yard in the center of the site, which is used by Northwestern Pacific Railway Company, LLC, the current operator of freight services on the right-of-way; and 2) an enclosure in the northern part of the site where some privately-owned rail cars are stored. Active railroad tracks run along the eastern side of the site.

Based on past work performed by Geomatrix at the subject site and along the NWPRR immediately east of the property, the stratigraphy generally consists of fine-grained sediment (clay, sandy clay, and clay with sand) to a depth of 16 to 21 feet bgs. A clayey sand unit that ranged in thickness from 3 to 7 feet was encountered in borings located in the southeastern portion of the site at depths of 7 to 10 feet bgs; this clayey sand was also encountered in the western portion of the site at a depth of about 12 feet bgs, and was about 1.5 feet thick. A 4- to 6-foot thick poorly graded sand with gravel to clayey sand was encountered between 16.5 to 21 feet bgs.

Depth to groundwater was measured by Geomatrix on March 16, 1995 in one well located on the NWPRR south of the property and was approximately 11.5 feet below ground surface (bgs). Groundwater was encountered by Geomatrix during previous grab groundwater sampling activities at depths of approximately 10 to 12 feet bgs. Groundwater gradients are assumed to be west-southwest toward Santa Rosa Creek.

3.0 BACKGROUND

The Santa Rosa station formerly was used as a water and fuel station for the railroad. Within the southeastern portion of the option property was a turntable that was dismantled in 1925. A 3000-barrel[1] (126,000 gallons) above ground oil storage tank, two oil traps, and an oil column also were located along the western boundary of the option property (Figure 2). According to SPTCo records, these facilities were constructed between 1939 and 1945, and were removed in 1960. An office and fuel storage house is currently in the north-central portion of the option property; this structure is located within a fenced enclosure where various maintenance materials are stored.

Three USTs that were located immediately north-northwest of the fenced enclosure (10,000-gallon diesel UST, 10,000-gallon gasoline UST, and 230-gallon fuel oil UST) were removed in 1987. Canonie Environmental documented no apparent leakage from the USTs at the time of their removal.

In April 1990, the NCRWQCB drilled four borings in the western portion of the property and installed monitoring wells in two of the borings (designated MW-2 and MW-3, as shown on Figure 2; the borings were designated as B-1 and B-2). Monitoring well MW-3 was located approximately 100 feet downgradient (to the southwest) of the former fuel oil UST. Based on

[1] One barrel = 42 gallons

information presented in a July 1992 report by Industrial Compliance (IC), analytical results for samples collected from the RWQCB borings showed that no petroleum hydrocarbons were present in soil samples collected from soil boring B-1; however, oil and grease was present in the soil sample collected from boring B-1 at 12 feet bgs at a concentration of 200 milligrams per kilogram (mg/kg). Additionally, this sample contained low concentrations of polynuclear aromatic hydrocarbons (PNAs).[2] Soil samples collected at depths of 6 and 16 feet bgs from soil boring MW-3 contained petroleum hydrocarbons quantified as diesel (TPHd) at concentrations of 11 and 30 mg/kg, respectively.

No petroleum hydrocarbons were detected in the groundwater sample collected by the RWQCB from monitoring well MW-2; TPHd was detected at a concentration of 0.4 milligrams per liter (mg/l) in the groundwater sample collected at monitoring well MW-3.

Soil and grab groundwater samples were collected from five borings located near the former UST area by IC in 1992. The approximate sampling locations are shown on Figure 2. No detectable concentrations of petroleum hydrocarbons, benzene, toluene, ethylbenzene, or xylenes (BTEX), or PNAs were reported in any of the soil samples collected. Grab groundwater samples collected from the location of the former diesel and gasoline USTs did not contain petroleum hydrocarbons or BTEX above laboratory reporting limits. The grab groundwater sample collected from the former fuel oil tank location, designated as IC-B6 on Figure 2, reportedly contained TPHd at concentrations of 31 mg/l; no gasoline or BTEX were detected in the grab groundwater sample collected from IC-B6.

The RWQCB destroyed monitoring wells MW-2 and MW-3 in June 1995 (October 30, 1996, personal communication, Joan Fleck of the RQWCB).

In November 1996, Geomatrix performed an investigation of soil and groundwater at the site to evaluate potential significant environmental impacts resulting from historical features or features identified during previous investigations and to respond to a request by the RWQCB to perform additional characterization in the vicinity of the former underground fuel oil tank. Twelve borings (SRB20 through SRB31) were drilled and samples were analyzed for TPHd, total petroleum hydrocarbons quantified as motor oil (TPHm), PNAs, metals, and volatile

[2] The following PNAs were detected in the soil sample collected from RWQCB boring B-1 at 12 feet: naphthalene (2.08 mg/kg), 2-methylnaphthalene (1.15 mg/kg), acenaphthene (1.45 mg/kg), dibenzofuran (1.13 mg/kg), fluorene (1.38 mg/kg), phenanthrene (3.86 mg/kg), anthracene (0.577 mg/kg), fluoranthene (1.13 mg/kg), pyrene (1.13 mg/kg), benzo(a)anthracene (0.324 mg/kg), and bis(2-ethylhexyl)phthalate (0.327 mg/kg).

organic compounds (VOCs). Soil samples collected for analyses of TPHd, PNAs, and metals were composited vertically from each boring; discrete samples subsequently were analyzed if elevated concentrations of constituents were detected. Only discrete samples were analyzed for VOCs. The results of the previous samples are incorporated with results from the recent sampling program in Tables 1 through 4.

Petroleum hydrocarbons were detected in soil at elevated concentrations in boring SRB20 and SRB21, however the presence of petroleum hydrocarbons at these locations decreased with depth. Specifically, the shallower composite sample from SRB20 contained TPHm at a concentration of 900 mg/kg. Discrete samples from depths of 4.0 and 6.5 feet contained TPHm at concentrations of 69 mg/kg and less than 5 mg/kg, respectively. No TPHd was detected in soil samples from boring SRB20. In SRB21, TPHm was present at a concentration of 510 mg/kg in the shallow composite sample; no TPHm was detected in deeper, discrete samples from this boring. Shallow composite and deeper discrete soil samples from boring SRB21 contained TPHd, at a maximum concentration of 1,600 mg/kg. The concentration of TPHd in this boring decreased with depth and was not detected in the sample collected from 13.5 feet bgs. PNAs were detected in soil at concentrations below 1996 EPA screening criteria for industrial exposure.[3] Concentrations of PNAs detected at this time, as shown on Table 2, are also below current PRGs (USEPA, 1999). For example, the maximum detected concentration of benzo(a)pyrene was 0.026 mg/kg in the discrete sample collected from a depth of 12.5 feet bgs in boring SRB22; the current PRG for benzo(a)pyrene is 0.29 mg/kg. The highest PNA concentration detected was in the discrete soil sample collected from a depth of 7 feet bgs in boring SRB22. In this sample, flourene was detected at a concentration of 0.87 mg/kg; the PRG for flourene is 33,000 mg/kg. Metals concentrations in soil were within expected background concentrations and less than 10 times the soluble threshold limit concentration (STLC)[4] in all of the soil samples (discrete and composite). Concentrations of metals in soil samples also were below industrial PRGs.

No TPHd, TPHm, or VOCs were detected in groundwater above laboratory reporting limits.

The results of the 1996 sampling program indicated no significant environmental issues at the site. However, based on its review of the results of the November 1996 work, the RWQCB requested that additional issues be addressed before case closure would be considered. These

[3] United States Environmental Protection Agency (EPA), 1996, Region 9 Preliminary Remediation Goals, August 1.

[4] California Code of Regulations, Title 22, Section 66216.24.

items, which are the focus of the work described herein, include additional evaluation of: historical features, potential leachability of petroleum hydrocarbons, and groundwater quality at various site locations.

4.0 SAMPLING AND CHEMICAL ANALYSIS PROGRAM

Ten borings were advanced in the vicinity of historical site features and areas identified by the RWQCB (Figure 2) to collect soil and grab groundwater samples for chemical analysis. A description of the field and chemical analysis programs is presented below.

Prior to initiating the field effort, a drilling permit was obtained from the Sonoma County Department of Health Services (Appendix A). Underground utilities were identified by notifying Underground Service Alert, a regional subsurface notification center 48 hours prior to the start of field work and by contracting a private utility locator, Cruz Brothers Subsurface Locators, Inc., of Milpitas, California, to perform a utility clearance in the vicinity of the proposed boring locations.

4.1 FIELD METHODS

Geomatrix retained Precision Sampling, Inc. (Precision) of Richmond, California, a state-licensed drilling contractor to advance ten borings (SRB32[5] through SRB41) at the site on March 6 and 7, 2000. Based on field observations made at boring SRB39, borings SRB40 and SRB41 were added to the approved work plan to better characterize water quality near the former oil trap located along the western boundary of the property.

Borings were advanced to a maximum depth of 25 feet bgs using a XD-3, direct-push (DP) technology drill rig and the EnviroCore continuous sampling system. A continuous soil core was collected using a three-foot long continuous core barrel lined with clean stainless steel liners. Recovered soil was described and logged by a Geomatrix geologist using the American Society Testing and Material (ASTM) Standard D2488-90 and Munsell color designations (lithologic logs are included as Appendix B), and samples were collected for chemical analyses.

[5] A soil sample could not be recovered in the target sampling location of 4 to 4.5 feet bgs in boring SRB32 (see boring log in Appendix B). For this reason, boring SRB32A was drilled within approximately 2 feet to replace SRB32. Analytical results in tables are designated as from SRB32.

Drilling and sampling equipment was steam cleaned or triple washed with Alconox and distilled water before use at each boring location. During the drilling operation, an organic vapor monitor equipped with a photoionization detector (PID) was used as a screening instrument to evaluate the presence of volatile constituents in the recovered soil samples.

At each boring location where grab groundwater was proposed, a temporary well point was constructed of 1-inch-diameter, schedule 40 polyvinyl chloride (PVC) blank casing and 5 feet of 0.01-inch-slot schedule 40 PVC well screen. After the well point was placed within the borehole, Precision retracted up to five feet of Enviro-core drive casing to expose only the well screen to the water bearing zone. The depths at which grab groundwater samples were collected are shown on the boring logs presented in Appendix B. Following collection of soil and grab groundwater samples, borings SRB32 through SRB41 were grouted from total depth to ground surface with a Type I-II neat cement grout placed through a tremie pipe. The investigation-derived waste, equipment wash water and soil cuttings, generated during the field effort were placed in drums, labeled and stored on site within a locked enclosure pending analysis.

4.1.1 Soil Sampling

The sampling work plan prepared by Geomatrix initially proposed collecting soil samples at six locations at approximate depths of 1, 4, 7, and 9 feet below ground surface (bgs) and just above the water table, which was anticipated to occur at 10 to 12 feet bgs. Soil sample depths were slightly modified to 1, 4.5, 7.5, and 10.5 feet bgs. Soil samples were collected in 2-inch by 6-inch stainless steel liners sealed at each end with Teflon sheets and closed with plastic end caps and duct tape. All samples were placed in plastic ziploc bags and stored in an ice-chilled cooler for transport to the analytical laboratory under Geomatrix chain-of-custody procedures.

Additional soil samples were collected for further analysis of the presence of chromium on May 9, 2000. Four 5-foot borings (SRB33-A, SRB33-B, SRB34-A, and SRB34-B) were hand-augered within approximately 1 foot to the north and south of borings SRB33 and SRB34. Samples were collected at 1-foot intervals, placed in glass jars, and stored and transported as described above.

4.1.2 Grab Groundwater Samples

Geomatrix initially proposed to collect grab groundwater samples through temporarily installed well points from borings SRB34 through SRB39 (Figure 2). Based on field observations, SRB32, SRB40, and SRB41 were designated as additional grab groundwater sample locations.

Grab groundwater samples were obtained from temporary well points installed within the borings using a disposable bailer and bottom-emptying device with a stopcock to decant groundwater into laboratory-supplied 40-milliliter volatile organic analysis (VOA) vials preserved with hydrochloric acid and a peristaltic pump to extract groundwater into laboratory-supplied 1-liter amber bottles. Grab groundwater samples were labeled, placed in plastic bags, and stored in an ice-chilled cooler for transport to the analytical laboratory under Geomatrix chain-of-custody procedures.

4.2 ANALYTICAL METHODS

Soil and grab groundwater samples were submitted to Entech Analytical Labs, Inc., of Sunnyvale, California, a state-certified analytical laboratory, under Geomatrix chain-of-custody procedures. A copy of the laboratory analytical results and the chain-of-custody record is included in Appendix C.

Selected soil samples were analyzed for the following constituents:

- TPHd and TPHm by modified Environmental Protection Agency (EPA) Method 8015M: TPHd and TPHm analysis was performed following a silica gel cleanup procedures EPA Method 3630C;
- PNAs by EPA Method 8270 SIM;
- CAM 17 metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, vanadium, and zinc) by EPA Method 6000/7000 series; and
- waste extraction testing (WET) for simulated rainwater adjusted to a pH representative of local rainwater (rainwater WET).[6]

Grab groundwater samples collected were analyzed for the following constituents:

- TPHd and TPHm by modified EPA Method 8015M; TPHd and TPHm analysis was performed following a silica gel cleanup procedures (EPA Method 3630C);
- VOCs, including, methyl tertiary butyl ether (MTBE), and fuel oxygenates, by EPA Method 8260; and
- polynuclear aromatic compounds (PNAs) by EPA Method 8270 SIM.

[6] According to the California Department of Water Resources, the pH of rainwater in the Santa Rosa area is 5.5 (May 18, 19999 telephone conversation).

Grab groundwater samples for TPHd, TPHm, and PNA analysis were analyzed both with and without filtration using a 0.7 micron glass fiber filter. The purpose of the filtration was to minimize potential interferences associated with non-dissolved petroleum adhered to sediment entrained in groundwater (Foote, Zemo, and Gallardo, 1997; see Appendix D).

As described in the approved work plan, a sequential sampling methodology was implemented. Geomatrix requested analysis of shallow soil samples (collected at 1.0 and 4.5 feet bgs) from each boring. Soil samples collected from greater than 4.5 feet bgs and the bottom of each boring generally were held by the laboratory pending analytical results for the shallow soil samples submitted for analysis. At boring location SRB40, apparent odor was encountered between 4 and 13 feet bgs by Geomatrix field personnel; based on this field observation, the soil samples collected from 7.5 and 14.0 feet bgs were analyzed for TPHd, TPHm, and PNAs.

The need for additional analysis of deeper samples was implemented as follows:

- TPHd and TPHm: the next deeper sample was analyzed upon detection of TPHd or TPHm in a sample at concentrations of 50 milligrams per kilogram (mg/kg) or greater;
- PNAs: analysis of the next deeper sample was performed on a location by location basis, depending on the magnitude of the detected concentrations relative to PRGs and whether the detected PNAs decreased in concentration with depth; and
- Metals: analytical results were compared to ten times the Soluble Threshold Limit Concentration[7] (STLC) and the relative concentrations found in site soil; the deeper samples at those locations that exceeded these criteria were analyzed, except in boring SRB33, where soil was not recovered in the boring below 5 feet bgs (see lithologic log in Appendix B).

As described in the approved work plan, soil samples with the highest concentrations of TPH and PNAs were selected for leachability testing using a WET. WET testing for TPH was performed on the sample collected at 1-foot bgs from boring SRB36 and the sample collected at 7.5 feet bgs from boring SRB40. WET testing for PNAs was performed on the 1-foot samples collected from SRB32 and SRB40.[8]

[7] California Code of Regulations (CCR) Title 22 Section 66261.24

[8] In general, samples with higher PNA or TPH concentrations were selected for leachability testing. However, due to laboratory error, the 1-foot sample collected from boring SRB40 could not be analyzed for WET testing.

5.0 SITE STRATIGRAPHY

Observations during drilling of borings SRB32 through SRB41 are generally consistent with previous observations. The site is generally underlain by fill and/or aggregate baserock consisting of poorly graded sand with silt and gravel from the ground surface to approximately 1 to 4 feet bgs. The fill is underlain by interbedded fine-grained sediments [clay to sandy clay (CL)] to depths ranging between 4 and 20 feet bgs. A clayey sand unit was encountered in most borings at depths ranging between 7 and 18 feet bgs. The thickness of this unit ranged between 6 feet in the southeastern portion of the site to approximately 1 foot in the western portion of the site. Borings SRB36, SRB37, and SRB40 encountered a dark grayish brown clayey sand with gravel (SC) unit from about 19 feet bgs to the bottom of each boring (21 to 25 feet bgs). These observations are consistent with the documented lithology from previous borings SRB20, SRB21, and SRB22. Complete lithologic descriptions of subsurface materials encountered during the 1996 and recent investigations are presented in the boring logs in Appendix B.

Groundwater was encountered at depths between 7 and 14 feet bgs in all the borings except SRB37 and SRB40, which encountered water at 18 feet and 20 feet bgs, respectively.

6.0 LABORATORY ANALYTICAL RESULTS

Soil analytical results are summarized in Tables 1, 2, and 3. Groundwater analytical results are summarized on Table 4. Analytical laboratory data reports are included in Appendix C.

The analytical results for soil samples were compared to the Total Threshold Limit Concentration[1] (TTLC) and STLC; both criteria are used for establishing hazardous waste concentrations for disposal purposes. For this comparison, the total concentration of an individual metal was compared to 10 times its STLC.

The results also were compared to PRGs developed by the U.S. EPA Region 9 (U.S. EPA, 1999). PRGs represent the concentration of chemicals in soil associated with a target acceptable cancer risk level of $1x10^{-6}$ or a target non-cancer hazard index of 1.0. They are based on standard U.S. EPA estimates of exposure and toxicity. PRGs for soil are calculated based on both a residential land use and an industrial land use, and consider potential exposure to soil via ingestion, dermal contact and inhalation. Because current and foreseeable future use of the property is for commercial or industrial purposes, the industrial PRGs were used in this

evaluation. Analytical results for groundwater samples were compared to maximum contaminant levels (MCLs; Marshack, 1998), if established.

6.1 SOIL

6.1.1 Petroleum Hydrocarbons

Soil sample results for TPH analyses are presented on Table 1. TPHd was detected at five of the eight soil borings (SRB32, SRB33, SRB34, SRB36, and SRB40) at concentrations varying from 2.1 to 990 mg/kg. Detections of TPHd decreased with depth and were limited to shallow soils (less than 4.5 feet bgs) with one exception. At boring SRB40, TPHd was detected at elevated concentrations in the samples collected from 1.0 feet bgs (at 990 mg/kg) to 7.5 feet bgs (at 210 mg/kg); TPHd was not detected above laboratory report limits in the sample collected at 14.0 feet bgs.

TPHm was detected at four locations (borings SRB36, SRB39, SRB40, and SRB41) at concentrations varying from 40 to 1700 mg/kg. Detections of TPHm decreased with depth and were limited to shallow soils (less than 1.0 feet bgs) in borings SRB36 and SRB40. At boring SRB39, TPHm was detected at 720 mg/kg in the 1.0 foot sample; this elevated concentration was limited to shallow soil as demonstrated by the lower detections of TPHm at 51 and 49 mg/kg in the samples collected from 4.5 and 7.5 feet bgs, respectively. At boring SRB40, TPHm was detected at elevated concentrations in the samples collected from 1.0 feet bgs (at 1700 mg/kg) to 7.5 feet bgs (at 370 mg/kg); TPHm was not detected above laboratory report limits in the sample collected from this location at 14.0 feet bgs.

6.1.2 Polynuclear Aromatic Compounds

Results for PNA analysis of soil samples are presented in Table 2.

PNAs were detected at two locations (SRB32 and SRB33) in the sample collected from 1-foot bgs; PNAs were not detected above laboratory reporting limits (0.01 mg/kg) in the 4.5 foot bgs samples at both locations. At boring SRB32, PNAs were detected at concentrations varying from 0.073 mg/kg [dibenzo(a,h)anthracene] to 1.98 mg/kg (phenanthrene). In this sample, benzo(a)pyrene was present at a concentration of 0.526 mg/kg, which exceeds its industrial PRG of 0.29; however, the 95 percent upper confidence limit of the arithmetic mean (95% UCL), a value typically used as the representative concentration for risk assessment purposes, is 0.20 mg/kg, which is below the PRG. At boring SRB33, PNAs were detected at concentrations varying from 0.01 [benzo(g,h,i)perylene] to 0.028 (pyrene) mg/kg. PNAs were not detected above laboratory reporting limits in soil at any of the other six locations analyzed.

It should be noted that at three locations (SRB36, SRB39, and SRB40), the laboratory reporting limits were elevated in the samples collected at 1-foot bgs due to matrix interference;[9] however, standard laboratory reporting limits were achieved in the deeper samples analyzed at these locations.

6.1.3 Metals

Results for metals analysis of soil samples are presented in Table 3.

Metals were not detected above ten times the STLC with the exception of lead. Lead was detected at concentrations of 57 and 110 mg/kg in the sample collected from 1 foot bgs in borings SRB32 and SRB40, respectively. Lead was not detected above laboratory reporting limits in the next deeper sample at 4 feet bgs in boring SRB32; lead was detected at 7.4 mg/kg in the 4 feet bgs sample in boring SRB40.

Concentrations of arsenic detected in samples collected from borings SRB40 and SRB41 appeared elevated based on the relative concentrations of the samples collected across the site; however, these elevated concentrations were below ten times the STLC. Arsenic was detected at concentrations varying between 11 to 27 mg/kg; these concentrations are within the background range (9.3 to 31 mg/kg) found in Bay Area soils (LBNL, 1995). The upper tolerance limit (UTL) for arsenic at the site (16.2 mg/kg) is also below the UTL for the background data (LBNL, 1995), further indicating the results are consistent with background.

Chromium was also detected in borings SRB33 and SRB34 at concentrations that appeared elevated relative to other on-site detections. In these borings, chromium was detected at concentrations up to 630 mg/kg. In boring SRB34, the concentration of chromium decreased to 68 mg/kg (consistent with other on-site detections) in the sample collected at 7.5 feet bgs. No soil samples were collected below 4.5 feet bgs in boring SRB33. Chromium was not detected at concentrations exceeding ten times its STLC.

To further evaluate the concentrations and speciation of chromium at the site, additional samples near SRB33 and SRB34 were collected (SRB33-A, SRB33-B, SRB34-A, and SRB34-A). The results for total chromium in these samples, which were collected within 1 foot of the previous boring locations, are consistent with the concentrations of total chromium

[9] Matrix interference refers to "background" components in the sample that raise the baseline detection limit that could otherwise be achieved if the interfering components were not present. Such components could be natural, such as organic carbon, or introduced, such as petroleum.

detected across the site; the higher concentrations at SRB33 and SRB34 were not replicated (Table 3). Additionally, chromium (VI) was not detected in the additional samples.

The detected metals were also compared to current industrial PRGs. Each of the metals was either below its respective PRG (based on noncarcinogenic effects) or, as in the case of arsenic within expected background concentrations (Table 3).

6.2 RAINWATER WET

As indicated on Table 1, TPHd and TPHm were not detected above laboratory reporting limits in the rainwater WET tests for the samples collected at 1 foot bgs in boring SRB36 and at 7.5 foot bgs in boring SRB40. PNAs also were not detected above laboratory reporting limits in the rainwater WET tests for the samples collected at 1 foot bgs in boring SRB32 and at 7.5 foot bgs in boring SRB40 (Table 2).[10]

6.3 GROUNDWATER

Results for grab groundwater sampling are presented in Table 4.

TPHd was detected in two borings at 160 and 67 micrograms per liter (µg/l) in borings SRB34 and SRB36, respectively. TPHd was not detected above the laboratory reporting limit in the blind duplicate sample collected from boring SRB36 (labeled as SRB46). TPHm was detected in one boring (SRB34) at a concentration of 420 µg/l.

TPHd and TPHm were not detected above the laboratory reporting limits in the same samples, which were filtered with a 0.7 micron glass fiber filter prior to analysis. These data indicate that the detection of TPHd and TPHm in the unfiltered grab groundwater samples collected from borings SRB34 and SRB36 were likely due to the presence of non-dissolved petroleum adhered to sediment in the samples.

MTBE was detected at a concentration of 9.8 :g/l in the grab groundwater sample collected from boring SRB39. MTBE was not detected above laboratory reporting limits in groundwater samples collected at any other location. It should be noted that the detection of MTBE is downgradient (based on a groundwater flow direction to the west-southwest) of the La Rose Hotel, located at 101 5th Street. This site was formerly the location of a service station. At this site, elevated concentrations of gasoline and diesel (up to 59,000 µg/l and 6.9 µg/l,

[10] The leachability tests for TPH and PNAs from samples SRB36 and SRB32, respectively, were performed one day beyond their hold times.

respectively) have been detected in groundwater, as well as benzene, toluene, ethylbenzene and xylenes.[11] It is likely that the detection of MTBE in groundwater beneath the site can be attributed to this former service station.

PNAs and other VOCs were not detected above the laboratory reporting limits in the grab groundwater samples.

7.0 DISCUSSION

Based on the soil and grab groundwater analytical results, Geomatrix has developed the following conclusions.

Analytical results of soil and grab groundwater samples collected in the vicinity of historical site features, including the former fuel oil tank removed in 1987, suggest that use of these structures have not significantly impacted the site. These results are consistent with previous data generated at the site (Geomatrix, 1997). Specifically, TPHd and TPHmo were detected in shallow soil and limited vertically in extent. The presence of petroleum hydrocarbons primarily in shallow soil suggests that incidental surface spillage likely occurred. The absence of the TPHd and TPHmo at depth is consistent with the absence of these constituents in leachate from the rainwater WET. Similarly, PNAs were detected in shallow soil (1-foot bgs) at two locations, but were not detected in the next deeper samples (4.5-feet bgs). The presence of PNAs are not wide-spread and are at concentrations below their respective industrial PRGs.

Of the metals analyzed, only lead was detected in two shallow samples at concentrations that exceeded ten times its STLC; however, lead was below this criterion in the deeper samples. Metals, where detected, are present at concentrations below their respective industrial PRGs; arsenic is within its expected background concentration.

Grab groundwater analytical results indicate that former site operations have had little to no impact to site groundwater at the locations sampled. The detections of TPHd and TPHm in the two samples likely were affected by the presence of non-dissolved petroleum adhered to sediment in the samples; the evidence of this interference is exhibited by the absence of TPHd in the duplicate sample collected from SRB36 and the absence of TPHd and TPHm in the samples filtered with the 0.7 :m glass fiber filter. Although petroleum hydrocarbons reportedly may have been detected in grab groundwater during the IC investigation, the grab groundwater

[11] Information was obtained from RWQCB files in 1994. At this time, the data in the files was current to 1990. The current status of the La Rose Hotel site is not known.

sample collected from SRB39 (immediately adjacent and downgradient of the IC boring B-6) did not contain TPHd, TPHm, or PNAs above laboratory reporting limits. The presence of MTBE likely is not related to the former fuel oil tank and was not detected at other on-site locations. Based on its low concentration, MTBE has not significantly impacted groundwater beneath the site.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The results of this recent investigation are consistent with the results of previous investigative activities at the site. In general, these results indicate the presence of residual constituents primarily in shallow soil, and no significant impact to groundwater as a result of previous railroad operations. These constituents do not pose a health risk given a future commercial/industrial site use. Additionally, leachability testing indicates that petroleum hydrocarbons and PNAs do not present a long-term risk to groundwater. Given the data presented herein, we recommend no further action and request that regulatory closure be granted.

9.0 REFERENCES

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Tables

GEOMATRIX

TABLE 1

ANALYTICAL RESULTS FOR TPHd AND TPHm IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	TPHd	TPHm	TPHd (WET)[3] - µg/l	TPHm (WET)[3] - µg/l
SRB20						
	c[4]-1.0, 4.0, 6.5	11/15/96	<20	900	---[5]	---
	4.0	11/15/96	---	69	---	---
	6.5	11/15/96	---	<5	---	---
	c-9.0, 11.5, 14.0	11/15/96	<1	56	---	---
SRB21						
	c-1.5, 4.0	11/14/96	130	510	---	---
	7.0	11/14/96	1600	<100	---	---
	9.0	11/14/96	960	<50	---	---
	11.0	11/14/96	150	<5	---	---
	13.5	11/14/96	<1	<5	---	---
SRB22						
	c-1.5, 4.0, 7.0	11/14/96	<1	43	---	---
	10.5	11/14/96	<1	120	---	---
	12.5	11/14/96	67	210	---	---
	14.5	11/14/96	<1	<5	---	---
SRB23						
	c-1.5, 4.5, 7.5	11/14/96	5	28	---	---
	c-10.0, 13.0, 14.5	11/14/96	<1	<5	---	---
SRB24						
	1.0, 4.0, 6.5	11/15/96	<1	<5	---	---
	c-9.0, 11.5, 14.5	11/15/96	<1	<5	---	---
SRB25						
	1.5, 4.0, 6.5	11/15/96	<1	<5	---	---
	c-9.0, 11.5, 14.0	11/15/96	<1	<5	---	---
SRB26						
	c-1.5, 4.0, 6.5	11/14/96	<1	12	---	---
	c-10.5, 12.0, 14.5	11/14/96	<1	<5	---	---
SRB27						
	1.5	11/14/96	<1	72	---	---
	4.5	11/14/96	<1	<5	---	---
SRB28						
	c-1.5, 4.5 7.0	11/14/96	<1	130	---	---
	c-9.0, 11.5, 14.0	11/14/96	<1	<5	---	---

GEOMATRIX

TABLE 1

ANALYTICAL RESULTS FOR TPHd AND TPHm IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	TPHd	TPHm	TPHd (WET)[3] - µg/l	TPHm (WET)[3] - µg/l
SRB32						
	1.0	3/6/00	**160**	<65	--[4]	--
	4.5	3/7/00	**2.8**[6]	<13	--	--
	7.5	3/7/00	--	--	--	--
	10.5	3/7/00	--	--	--	--
SRB33						
	1.0	3/7/00	**2.3**[6]	<13	--	--
	4.5	3/7/00	<1	<13	--	--
SRB34						
	1.0	3/7/00	**2.1**[6]	<13	--	--
	4.5	3/7/00	**2.2**[6]	<13	--	--
	7.5	3/7/00	--	--	--	--
	10.5	3/7/00	--	--	--	--
SRB35						
	1.0	3/7/00	<1	<13	--	--
	4.5	3/7/00	<1	<13	--	--
	7	3/7/00	--	--	--	--
SRB36						
	1.0	3/6/00	**430**[6]	**780**	<50	<250
	4.5	3/6/00	<1	<13	--	--
	7.5	3/6/00	--	--	--	--
	10.5	3/6/00	--	--	--	--
	13.5	3/6/00	--	--	--	--
	19.5	3/6/00	--	--	--	--
SRB39						
	1.0	3/6/00	<20	**720**	--	--
	4.5	3/6/00	<1	**51**	--	--
	7.5	3/6/00	--	**49**	--	--
	10.5	3/6/00	--	--	--	--
	13.5	3/6/00	--	--	--	--
SRB40						
	1.0	3/7/00	**990**[6]	**1700**	--	--
	4.5	3/7/00	**130**[6]	**240**	--	--
	7.5	3/7/00	**210**[6]	**370**	<50	<250
	10.5	3/7/00	--	--	--	--
	14.0	3/7/00	<1	<13	--	--
	16.5	3/7/00	--	--	--	--
	19.5	3/7/00	--	--	--	--

TABLE 1

ANALYTICAL RESULTS FOR TPHd AND TPHm IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	TPHd	TPHm	TPHd (WET)[3] - µg/l	TPHm (WET)[3] - µg/l
SRB41						
	1.0	3/7/00	<1	**40**	--	--
	4.5	3/7/00	<1	<13	--	--
	7.5	3/7/00	--	--	--	--
	10.5	3/7/00	--	--	--	--

Notes:

1. Samples collected by Geomatrix Consultants, Inc. on November 14 and 15, 1996 and March 6 and 7, 2000. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California. Samples collected in 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California for TPHd and TPHm using EPA Method 8015M following silica gel cleanup procedure per method 3630C.
2. Depth measured in feet below ground surface.
3. Waste extraction test was performed using simulated rainwater; results are reported in micrograms per liter.
4. "c" denotes composite sample.
5. -- = not analyzed.
6. Lab sheet indicates that result is quantified as diesel; chromatographic pattern not typical of fuel.

Abbreviations:

TPHd = total petroleum hydrocarbons quantified as diesel
TPHm = total petroleum hydrocarbons quantified as motor oil
WET = waste extraction test

TABLE 2

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL[1]

Santa Rosa Option Property/Third Street

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h)anthra-cene	Benzo(ghi)-perylene	PNAs (WET)[3] - µg/l
SRB20																	
	c[4]-1.0, 4.0, 6.5	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	**0.028**	<0.017	<0.017	<0.017	**0.025**	**0.049**	<0.017	--[5]
	c-9.0, 11.5, 14.0	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB21																	
	c-1.5, 4.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	**0.027**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.075**	<0.034	**0.029**	--
	7.0	11/14/96	<0.083	**0.87**	**0.19**	**0.081**	**0.33**	**0.20**	**0.021**	**0.10**	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	9.0	11/14/96	<0.083	**0.63**	**0.18**	**0.078**	**0.088**	**0.18**	**0.038**	**0.33**	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	11.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	13.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB22																	
	c-1.5, 4.0, 7.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	10.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	12.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	**0.052**	<0.017	<0.017	**0.026**	<0.017	<0.034	0.045	--
	14.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	**0.020**	<0.034	<0.017	--
SRB23																	
	c-1.5, 4.5, 7.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	**0.025**	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	c-10.0, 13.0, 14.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB24																	
	c-1.0, 4.0, 6.5	11/15/96	<0.083	<0.017	**0.019**	<0.0083	<0.017	**0.04**	<0.017	<0.017	<0.017	<0.017	<0.017	**0.034**	<0.034	<0.017	--
	c-9.0, 11.5, 14.0	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB25																	
	c-1.5, 4.0, 6.5	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	c-9.0, 11.0, 14.0	11/15/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB26																	
	c-1.5, 4.0, 6.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	c-10.5, 12.0, 14.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB27																	
	1.5	11/14/96	<0.083	<0.017	**0.046**	<0.0083	<0.017	**0.032**	<0.017	**0.046**	**0.021**	<0.017	<0.017	<0.017	<0.034	**0.02**	--
	4.5	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB28																	
	c-1.5, 4.5, 7.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
	c-9.0, 11.5, 14.0	11/14/96	<0.083	<0.017	<0.0083	<0.0083	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.017	<0.034	<0.017	--
SRB32																	
	1.0	3/6/00	**0.609**	**0.739**	**1.98**	**0.106**	**0.739**	**0.797**	**0.329**	**0.424**	**0.582**	**0.158**	**0.526**	**0.455**	**0.073**	**0.706**	<0.2
	4.5	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	7.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL[1]

Santa Rosa Option Property/Third Street

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h)anthra-cene	Benzo(ghi)-perylene	PNAs (WET)[3] - µg/l
SRB33																	
	1.0	3/7/00	<0.01	<0.01	**0.011**	<0.01	**0.027**	**0.028**	**0.019**	**0.019**	**0.024**	<0.01	**0.018**	<0.01	<0.01	**0.01**	--
	4.5	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
SRB34																	
	1.0	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	4.5	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	7.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB35																	
	1.0	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	4.5	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	7.0	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB36																	
	1.0	3/6/00	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	--
	4.5	3/6/00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--
	7.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	19.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB39																	
	1.0	3/6/00	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--
	4.5	3/6/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	7.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB40																	
	1.0	3/7/00	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	--
	4.5	3/7/00	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--
	7.5	3/7/00	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14.0	3/7/00	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
	16.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	19.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 2

ANALYTICAL RESULTS FOR POLYNUCLEAR AROMATIC HYDROCARBONS IN SOIL[1]

Santa Rosa Option Property/Third Street

Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg), unless otherwise noted

Borehole	Depth[2]	Date Collected	Naph-thalene	Fluorene	Phenan-threne	Anthra-cene	Fluoran-thene	Pyrene	Benzo(a)-anthra-cene	Chrysene	Benzo(b)-fluoran-thene	Benzo(k)-fluoran-thene	Benzo(a)-pyrene	Indeno-(1,2,3-cd)-pyrene	Dibenzo-(a,h)anthra-cene	Benzo(ghi)-perylene	PNAs (WET)[3] - µg/l
SRB41																	
	1.0	3/7/00	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--
	4.5	3/7/00	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--
	7.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Industrial PRGs[6]			1.9E2	3.3E4	1.0E5[7]	3.9E5	3.0E4	5.4E4	2.9	2900	2.9	29	0.29	2.9	0.29	5.4E4[7]	--

Notes:

1. Samples collected by Geomatrix Consultants, Inc. on November 14 and 15, 1996 and March 6 and 7, 2000. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California using EPA Method 8310. Samples collected in 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California using EPA Method 8270SIM.
2. Depth measured in feet below ground surface.
3. Waste extraction test performed using simulated rainwater; results are reported in micrograms per liter (µg/l).
4. "c" denotes composite sample.
5. -- = not analyzed.
6. Industrial Preliminary Remediation Goals from U.S. EPA Region 9 (U.S. EPA 1999).
7. PRGs were not available for these constituents. Surrogate PRGs for a constituent with similar physical and chemical properties were used for the PRG comparison.

Abbreviations:
PNAs = polynuclear aromatic hydrocarbons
PRGs = preliminary remediation goals

TABLE 3

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Depth	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
SRB20																				
	c[2]-1.0, 4.0, 6.5	11/15/96	<1	2.6	150	0.4	<0.2	75	--[3]	17	25	14	<0.06	<0.2	130	<1	0.3	4	40	53
	c-9.0, 11.5, 14.0	11/15/96	<1	1.4	150	0.4	<0.2	49	--	14	21	7	<0.06	<0.2	80	<1	0.2	11	27	34
SRB21																				
	c-1.5, 4.0	11/14/96	<1	2.3	180	0.6	<0.2	82	--	18	31	9	<0.06	<0.2	110	<1	0.3	24	46	47
	7.0	11/14/96	<1	1.4	180	0.5	<0.2	81	--	17	31	8	<0.06	<0.2	120	<1	0.2	22	39	44
	9.0	11/14/96	<1	0.9	220	0.6	<0.2	92	--	18	32	9	<0.06	<0.2	130	<1	0.3	26	40	50
	11.0	11/14/96	<1	<0.5	160	0.4	<0.2	72	--	8.6	23	7	<0.06	<0.2	83	<1	0.2	17	25	40
	13.5	11/14/96	<1	<0.5	160	0.6	<0.2	56	--	14	23	8	<0.06	<0.2	92	<1	0.2	18	20	37
SRB22																				
	c-1.5, 4.0, 7.0	11/14/96	<1	1.9	150	0.4	<0.2	70	--	19	26	10	<0.06	<0.2	130	<1	0.3	8	43	48
	10.5	11/14/96	<1	4.6	180	0.4	<0.2	65	--	17	28	7	<0.06	<0.2	120	<1	0.2	20	37	44
	12.5	11/14/96	<1	2.1	180	0.5	<0.2	70	--	13	25	7	<0.06	<0.2	110	<1	0.2	22	33	42
	14.5	11/14/96	<1	<0.5	190	0.7	<0.2	63	--	18	28	9	<0.06	<0.2	100	<1	0.2	23	30	46
SRB23																				
	c-1.5, 4.5, 7.5	11/14/96	<1	3.1	130	0.4	<0.2	62	--	15	28	10	<0.06	<0.2	93	<1	0.2	22	52	46
	c-10, 13.0, 14.5	11/14/96	<1	3.2	73	0.3	<0.2	39	--	12	23	4	<0.06	<0.2	69	<1	0.2	15	35	34
SRB24																				
	c-1.0, 4.0, 6.5	11/15/96	<1	1.6	180	0.5	<0.2	69	--	18	29	18	<0.06	<0.2	100	<1	0.3	17	39	49
	c-9.0, 11.5, 14.0	11/15/96	<1	<0.5	180	0.5	<0.2	62	--	17	23	8	<0.06	<0.2	98	<1	0.2	16	29	36
SRB25																				
	c-1.5, 4.0, 6.5	11/15/96	<1	0.8	210	0.6	<0.2	76	--	21	29	8	<0.06	<0.2	130	<1	0.3	19	42	47
	c-9.0, 11.5, 14.0	11/15/96	<1	0.7	170	0.5	<0.2	64	--	11	23	7	<0.06	<0.2	97	<1	0.3	18	30	38
SRB26																				
	c-1.5, 4.0, 6.5	11/14/96	<1	2.8	180	0.5	<0.2	81	--	19	32	8	<0.06	<0.2	130	<1	0.3	23	47	47
	c-10.5, 12.0, 14.5	11/14/96	<1	1.5	190	0.6	<0.2	88	--	16	31	9	<0.06	<0.2	120	<1	0.2	26	41	49
SRB27																				
	1.5	11/14/96	0.6	7.6	57	0.3	<0.2	29	--	10	32	23	0.13	<0.2	40	<1	0.2	12	38	48
	4.5	11/14/96	<1	<0.5	180	0.6	<0.2	64	--	16	29	8	<0.06	<0.2	89	<1	0.2	20	43	46
SRB28																				
	c-1.5, 4.5, 7.0	11/14/96	<1	5	160	0.5	<0.2	73	--	16	32	11	0.12	<0.2	110	<1	0.2	22	47	49
	c-9.0, 11.5, 14.0	11/14/96	<1	2.2	180	0.5	<0.2	79	--	21	24	6	<0.06	<0.2	120	<1	0.2	21	36	41
SRB32																				
	1.0	3/6/00	<25	<5	110	<5	<5	170	--	<5	21	57	0.59	<5	80	<25	<5	<25	47	83
	4.5	3/7/00	<25	<5	150	<5	<5	53	--	17	17	<5	<0.05	<5	96	<25	<5	<25	45	55
	7.5	3/7/00	--[3]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Depth	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
SRB33																				
	1.0	3/7/00	<25	<5	160	<5	<5	470	--	29	20	13	0.083	<5	190	<25	<5	<25	56	54
	4.5	3/7/00	<25	<5	140	<5	<5	630	--	21	17	13	<0.05	<5	160	<25	<5	<25	62	55
SRB33A																				
	1.0	5/9/00	--	--	--	--	--	87	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/00	--	--	--	--	--	80	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB33B																				
	1.0	5/9/00	--	--	--	--	--	85	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/00	--	--	--	--	--	140	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB34																				
	1.0	3/7/00	<25	<5	150	<5	<5	320	--	16	18	23	<0.05	<5	92	<25	<5	<25	46	53
	4.5	3/7/00	<25	<5	160	<5	<5	440	--	20	19	10	<0.05	<5	140	<25	<5	<25	61	55
	7.5	3/7/00	--	--	--	--	--	68	--	--	--	--	--	--	130	--	--	--	--	--
	10.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB34A																				
	1.0	5/9/00	--	--	--	--	--	43	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/00	--	--	--	--	--	80	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB34B																				
	1.0	5/9/00	--	--	--	--	--	35	<0.1	--	--	--	--	--	--	--	--	--	--	--
	4.5	5/9/00	--	--	--	--	--	75	<0.1	--	--	--	--	--	--	--	--	--	--	--
SRB35																				
	1.0	3/7/00	<25	<5	190	<5	<5	61	--	21	22	15	<0.05	<5	97	<25	<5	<25	68	68
	4.5	3/7/00	<25	<5	170	<5	<5	93	--	21	20	8.7	0.056	<5	150	<25	<5	<25	68	71
	7	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	110	--	--	--	--	--
SRB36																				
	1.0	3/6/00	<25	<5	95	<5	<5	43	--	15	20	48	0.059	<5	97	<25	<5	<25	57	61
	4.5	3/6/00	<25	<5	200	<5	<5	85	--	30	22	<5	<0.05	<5	160	<25	<5	<25	66	67
	7.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	19.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB39																				
	1.0	3/6/00	<25	<5	57	<5	<5	31	--	<5	<5	77	0.17	<5	43	<25	<5	<25	33	55
	4.5	3/6/00	<25	<5	150	<5	<5	58	--	<5	<5	<5	0.1	<5	78	<25	<5	<25	39	48
	7.5	3/6/00	--	--	140	--	--	76	--	--	--	--	--	--	100	--	--	--	--	--
	10.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13.5	3/6/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TABLE 3

ANALYTICAL RESULTS FOR METALS IN SOIL[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in milligrams per kilogram (mg/kg)

Borehole	Depth	Date Collected	Antimony	Arsenic	Barium	Beryllium	Cadmium	Total Chromium	Chromium (VI)	Cobalt	Copper	Lead	Mercury	Molyb-denum	Nickel	Selenium	Silver	Thallium	Vana-dium	Zinc
SRB40																				
	1.0	3/7/00	<25	<5	56	<5	<5	22	--	8.9	56	110	0.093	<5	66	<25	<5	<25	24	44
	4.5	3/7/00	<25	14	160	<5	<5	110	--	22	30	7.4	0.058	<5	180	<25	<5	<25	67	60
	7.5	3/7/00	--	27	--	--	--	82	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/7/00	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	14	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	16.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	19.5	3/7/00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SRB41																				
	1.0	3/7/00	<25	11	82	<5	<5	53	--	14	31	18	<0.05	<5	76	<25	<5	<25	43	43
	4.5	3/7/00	<25	20	150	<5	<5	86	--	18	26	<5	<0.05	<5	140	<25	<5	<25	57	51
	7.5	3/7/00	--	22	--	--	--	--	--	--	--	--	--	--	140	--	--	--	--	--
	10.5	3/7/00	--	<5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Industrial PRGs[4]			820	2.7[5]	100,000	2200	810	100,000[6]	64	100,000	76,000	1000	610	10,000	41,000	10,000	10,000	--[7]	14,000	100,000
STLC (mg/l)[8]			15	5.0	100	0.75	1.0	560		80	25	5.0	0.2	350	20	1.0	5	7.0	24	250
TTLC (mg/kg)[9]			500	500	10,000	75	100	2500	500	8000	2500	1000	20	3500	2000	100	500	700	2400	5000

Notes:

1. Samples collected by Geomatrix Consultants, Inc. on November 14 and 15, 1996 and March 6 and 7, 2000. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California. Samples collected in 2000 were analyzed by Entech Analytical, Inc., of Sunnyvale, California.
2. "c" denotes composite sample.
3. -- = Sample not analyzed for this metal.
4. Industrial Preliminary Remediation Goals (PRGs) from U.S. EPA Region 9 (U.S. EPA 1999).
5. The industrial PRG for arsenic at cancer risk levels of $1x10^{-6}$ to $1x10^{-4}$ ranges between 3.0 mg/kg and 300 mg/kg, respectively. At $1x10^{-6}$ cancer risk, the PRG is less than background and therefore is not applicable.
6. The industrial PRG for chromium (III) is used, as speciation of chromium in borings SRB 33-A, SRB 33-B, SRB-34A, and SRB 34-B did not indicate the presence of chromium (VI).
7. PRGs were not available for these constituents. Surrogate PRGs for a constituent with similar physical and chemical properties were used for the PRG comparison.
8. STLC = Soluble Threshold Limit Concentration, California Code of Regulations, Title 22, Section 66216.24
9. TTLC = Total Threshold Limit Concentration, California Code of Regulations, Title 22, Section 66216.24

GEOMATRIX

TABLE 4

ANALYTICAL RESULTS FOR GRAB GROUNDWATER[1]

Santa Rosa Option Property/Third Street
Santa Rosa, California

Results reported in micrograms per liter (µg/l)

Borehole	Sample Date	TPHd	TPHd (f)	TPHm	TPHm (f)	PNAs	PNAs (f)	MTBE	VOCs[2]
SRB20	11/15/96	<50	--	<200	--	--	--	--	ND
SRB21	11/15/96	<50	--	<200	--	--	--	--	ND
SRB22	11/15/96	<50	--	<200	--	--	--	--	ND
SRB23	11/15/96	<50	--	<200	--	--	--	--	ND
SRB26	11/15/96	<50	--	<200	--	--	--	--	ND
SRB29	11/15/96	<50	--	<200	--	--	--	--	ND
SRB30	11/15/96	<50	--	<200	--	--	--	--	Acetone: 300
SRB31	11/15/96	<50	--	<200	--	--	--	--	ND
SRB32	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB33									
SRB34	3/7/00	**160**[3]	<50	**420**	<250	<0.2	<0.2	<5	ND
SRB35	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB36[4]	3/6/00	**67**[3]/<50	<50/<50	<250/<250	<250/<250	<0.2/<0.2	<0.2/<0.2	<5/<5	ND/ND
SRB37	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB38	3/6/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB39	3/7/00	<50	<50	<250	<250	<0.2	<0.2	**9.8**	ND
SRB40	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND
SRB41	3/7/00	<50	<50	<250	<250	<0.2	<0.2	<5	ND

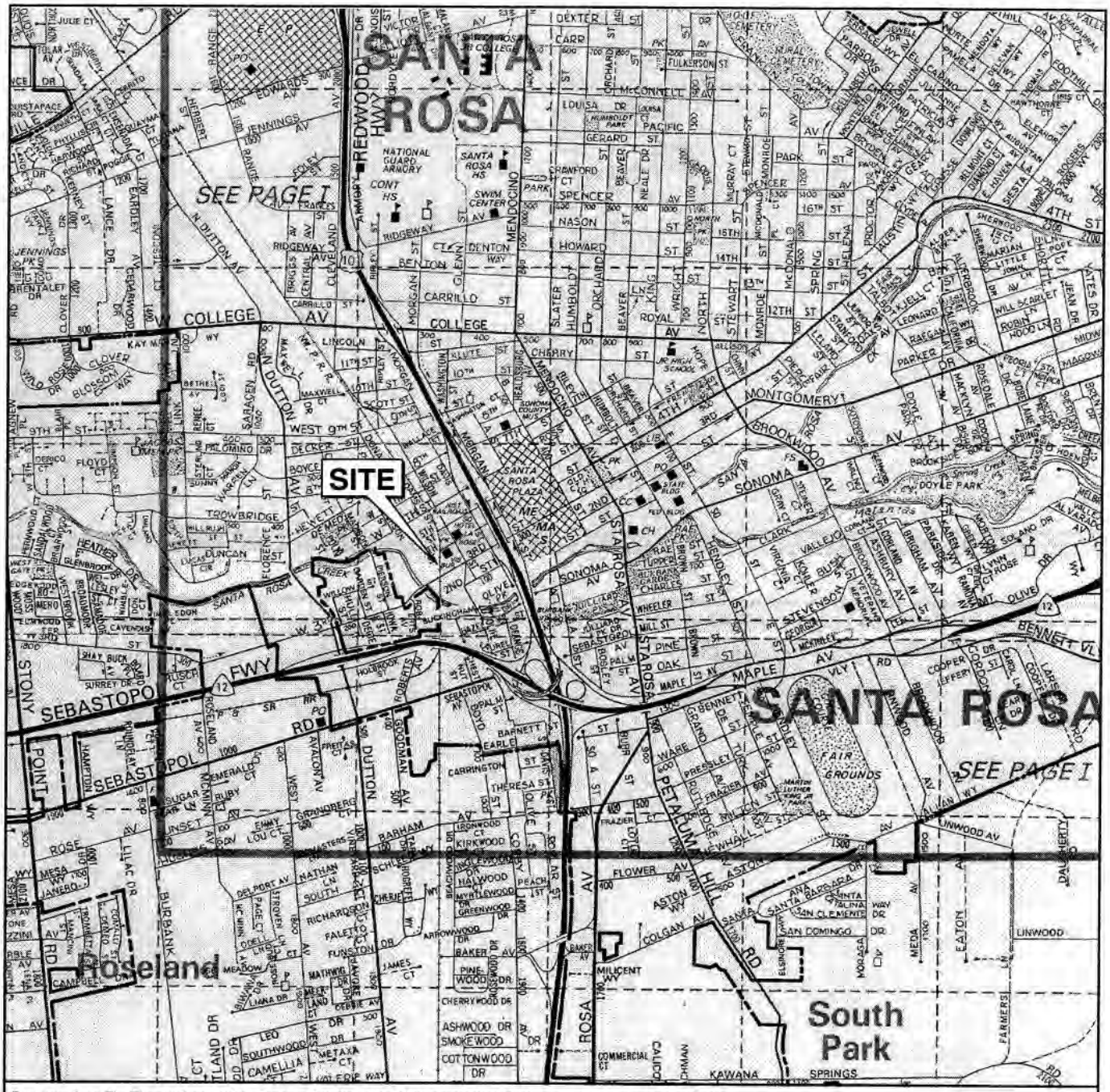
Notes:

1. Samples collected by Geomatrix Consultants, Inc. on November 14 and 15, 1996 and March 6 and 7, 2000. Samples collected in 1996 were analyzed by American Environmental Network of Pleasant Hill, California; TPHd and TPHm were analyzed using EPA Method 8015 following silica gel cleanup procedure EPA Method 3630C and VOCs were analyzed for using EPA Method 8240. Samples analyzed by Entech Analytical, Inc. of Sunnyvale, California and analyzed for TPHd and TPHm using EPA Method 8015M following silica gel cleanup procedure per method 3630C; PNAs using EPA Method 8270SIM; and VOCs including MTBE and other fuel oxygenates using EPA Method 8260. Samples that were collected in 2000 for TPHd, TPHm, and PNAs were analyzed before and after passing through a 0.7 micron galss fiber filter.
2. Chloroform was detected in equipment blank sample at a concentration of 9.6 µg/l.
3. Lab sheet indicates that result is quantified as diesel; chromatographic pattern not typical of fuel.
4. Results of sample/blink duplicate sample (labeled SRB46) are shown.

Abbreviations:

TPHd = total petroleum hydrocarbons quantified as diesel
TPHm = total petroleum hydrocarbons quantified as motor oil
f = filtered with 0.7 micron glass fiber filter
PNAs = polynuclear aromatic hydrocarbons
MTBE = methyl tertiary butyl ether
VOCs = volatile organic compounds
ND = not detected above laboratory reporting limits (for VOCs: 5 to 100 µg/l).

Figures



Base map from *The Thomas Bros. Guide, Sonoma County, 1998 Edition*. Reproduced with permission granted by THOMAS BROS. MAPS®. This map is copyrighted by THOMAS BROS. MAPS®. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission. All rights reserved.

0 2200 Feet

GEOMATRIX

SITE LOCATION MAP
Santa Rosa Station/Third Street Property
Option Property
Santa Rosa, California

Project No.
2770.005

Figure
1

SR:\2000-2900s\2770\2770.05\2770.005_fig_01.ai

SANTA ROSA CREEK

Warehouse

Warehouse

Blue Goose Antiques

MW-4

Area where sand piles and soil discoloration were observed

SRB36

SRB35

SRB21

SRB22

Oil trap

Oil trap

SRB34B

SRB33B

SRB34

SRB34A

SRB23

SRB41

SRB40

4-inch oil column

SRB26

Pump house

SRB33

3000-bbl above ground oil tank

SRB37

SRB20

SRB31

B-2

MW-3

GW-27

B-1

MW-2

SRB33A

Former fuel storage house, now fuel island

Approximate location of former 10,000-gallon underground diesel tank (removed)

IC-B2

IC-B1

SRB30

SRB29

GW-24

SRB38

SRB25

Fuel storage house

IC-B3

SRB24

SRB27

IC-B6

Pump house

SRB32

Fenced enclosure

IC-B4

Approximate location of former 10,000-gallon underground gasoline tank (removed)

SRB39

SRB28

Approximate location of former 230-gallon fuel oil tank (removed)

OPTION PROPERTY

JEFFERSON STREET

SIXTH STREET

ADAMS STREET

W. THIRD STREET

FOURTH STREET

Area where stockpiled drums with associated surface staining were observed

Station

MP 53.8

EXPLANATION

- MW-3 ⊕ Location of former monitoring well installed by NCRWQCB (April 1990)
- SRB20 Phase III boring location
- B-1 Soil boring installed by NCRWQCB (April 1990)
- GW-24 Former Mead Clark Lumber Monitoring Well
- SRB24 ☒ Soil only sampling location
- SRB29 ○ Grab groundwater only sampling location
- IC-B6 ◉ Approximate soil sampling location performed by Industrial Compliance (May 1992)
- **SRB38** ◐ Grab groundwater only sampling location (March 2000)
- **SRB33** ⧓ Soil only sampling location (March 2000)
- **SRB41** ⊕ Soil and grab groundwater sampling location (March 2000)
- Property sale boundary
- **SRB33A** ● Shallow soil boring (May 2000)

Notes:
1) Figure adapted from Northwestern Pacific Railroad (NWPRR) Valuation Map No. V-2/S-1.
2) Location of former Mead Clark monitoring wells is based on "Site Plan, Monitoring Well Locations" dated 15 August 1997, EnviroNet Consulting, Santa Rosa, California.

N

0 100 Feet

Approximate scale
Drawing is schematic

SITE PLAN AND SAMPLING LOCATIONS
Santa Rosa Station/Third Street Property
Option Property
Santa Rosa, California

GEOMATRIX	Project No. 2770.005	Figure 2

R:\2000-2900s\2770\2770.05\2770.005wpr\0001_fig_02.ai

Appendix A

APPENDIX A

County of Sonoma Department of Health Services Drilling Permit

Site ID # 1334 Permit # 2000-0110

Well type: [ ] Monitoring well [ ] Recovery extraction well [✓] Boring [ ] Injection well
[ ] Soil gas survey [ ] Hydropunch [ ] Air sparging/venting [ ] Other

Well depth ____ Boring depth ≈15 feet Hydro depth ____ Air sparging/venting depth ____

On-site well/boring 8 ID # SB832-SB839 # Off-site well/boring ____ ID # ____

Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address Santa Rosa Station - 9 4th Street, Santa Rosa, CA 95401

On-site Owner Union Pacific Railroad Company Phone 415-541-7020

Address 49 Stevenson, 15th Floor San Francisco, CA 94105 AP# 010-171-005

Responsible Party Union Pacific Railroad Company Phone 415-541-7020

Address 49 Stevenson, 15th Floor, San Francisco, CA 94105

Consultant Geomatrix Consultants, Inc. Phone 510-663-4100

Address 3101 Webster Street, 12th floor, Oakland, CA 94612 License #/Type [illegible]

Drilling Contractor Precision Sampling, Inc. Phone 510-237-4575

Address 1400 South 50th Street Richmond, CA 94804 C-57 License # 636387

Type of work: [ ] Initial investigation ____ # Wells [✓] Subsequent investigation 8 # Wells borings [ ] Destruct ____ # Wells

Groundwater investigation due to: [ ] Underground tank [ ] Surface impoundment [ ] Assessment
[ ] Surface disposal practice—specify involved industry ____
[✓] Other continuation of previous investigation work

SONOMA COUNTY
PUBLIC HEALTH

NA Chemical constituents TPH d/mo

soil cuttings Drums on site pending analysis Disposal method for development water NA

Direct Push Method of drill equip. rinsate containment Drums on site pending analysis

Abandonment method NA

2/22/00

001343D
WELL PER 296.00
TTLAMT 296.00
CHECKS 296.00
CHANGE 0.00

3428 #2 11:18

wells in relation to all sewer or septic lines.

cted within: 100 feet of a septic tank or leachfield? [ ] Yes [✓] No
50 feet of any sanitary sewer line? [ ] Yes [✓] No
25 feet of any private sanitary sewer line? [ ] Yes [✓] No

02/22/00

001343D
WELL PER 296.00
TTLAMT 296.00
CHECKS 296.00
CHANGE 0.00
3428 #2 11:18

ring wells must include *identification system* affixed to interior surface:

ication 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be *affixed* to the *exterior surface* security structure.

RWQCB approval Jean Fleck Date 2/29/00

WORKERS COMPENSATION CERTIFICATE

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 525-6565, 24 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Health Services and the owner a legible copy of the State Water Well Driller's Report within 15 days in order to obtain final approval on this well. I acknowledge that the application will become a permit *only* after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

[X] A currently effective certificate of Workers Compensation Insurance coverage is on file with this office, ***made out in the name of the Sonoma County Department of Health Services.***

Signature of Well Driller—*no proxies* _____ Date FEB 18, 2000

Insurance Carrier STATE FUND Expiration Date 2/1/01

Once all wells/borings are installed, submit a "Letter of Completion" to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH DIVISION

Permit approved by _____ Date 2/29/00

Constr. approved by _____ Observed? [ ] Yes [ ] No Well # _____ Date ___/___/___

CRF

2101 Webster Street
12th Floor
Oakland, CA 94612
(510) 663-4100 • FAX (510) 663-4141

GEOMATRIX

Transmittal

Sent Via: ☐ Messenger ☒ U.S. Mail ☐ Overnight Mail

Date: 3/9/2000

To: Mr. John Anderson
Sonoma County Department of
Environmental Health Services
1030 Center Drive, Suite A
Santa Rosa, Ca 95403-2067

From: Charles Rome
Staff Geologist

cc:

Project Number: 2770.005
Project Name: Santa Rosa Option Property (3rd Street Station)

Item	Description
1	Check for two additional borings ($74.00)
2	Boring Location Map

Remarks

Dear Mr. Anderson,

Enclosed please find a check for two additional borings that were completed outside the original scope of work. I have included a map showing the additional locations. Please call me if you have any questions or require additional information.

Sincerely,

Chris Rome

(2) boring 2/22/00 cc
1 boring 3/15/00 cc

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH DIVISION
1030 Center Drive, Suite A, Santa Rosa, CA 95403-2067
(707) 525-6565 www.sonoma-county.org

COPY

For Office Use Only

Amount paid	296	74
Receipt number	2-342B	2-531B
Payment date	2/22/00	3/15/00
Revenue code	1343	1343 cc

APPLICATION FOR MONITORING WELL PERMIT
for Regional Board Lead/Environmental Assessment

DEPARTMENT OF HEALTH SERVICES
FEB 22 2000
ENVIRONMENTAL HEALTH DIVISION

Site ID # 12511 Permit # 2856-HMW

Well type: [ ] Monitoring well [ ] Recovery extraction well [✓] Boring [ ] Injection well
[ ] Soil gas survey [ ] Hydropunch [ ] Air sparging/venting [ ] Other

Well depth ____ Boring depth ≈15 feet Hydro depth ____ Air sparging/venting depth ____

On-site well/boring 8/10 ID # SB832-SB839 # Off-site well/boring ____ ID # ____
(2 additional borings paged for 3/15/00 cc)
Submit legal right-of-entry/off-site well address/encroachment permit

On-site Address Santa Rosa Station - 9 4th Street, Santa Rosa, CA 95401

On-site Owner Union Pacific Railroad Company Phone 415-541-7020

Address 49 Stevenson, 15th Floor San Francisco, CA 94105 AP# 010-171-005

Responsible Party Union Pacific Railroad Company Phone 415-541-7020

Address 49 Stevenson, 15th Floor, San Francisco, CA 94105

SONOMA COUNTY PUBLIC HEALTH

Consultant: Matrix Consultants, Inc. Phone 510-663-4100

Address: 21 Webster Street, 12th floor, Oakland, CA 94612 License #/Type A/H82 609450 exp 8/2000

Driller: Precision Sampling, Inc. Phone 510-237-4575

Address: 100 South 50th Street Richmond, CA 94804 C-57 License # 636387

3/15/00

Initial investigation ____ # Wells [✓] Subsequent investigation 8 # Wells borings [ ] Destruct ____ # Wells

001343D WELL PER 74.00 TTLAMT 74.00 CHECKS 74.00 CHANGE 0.00
3:31B #2 12:33

Investigation due to: [ ] Underground tank [ ] Surface impoundment [ ] Assessment
[ ] Surface disposal practice—specify involved industry ____
[X] Other continuation of previous investigation work

001343D WELL PER 74.00 TTLAMT 74.00 CHECKS 74.00 CHANGE 66.60
529B #2 12:28

NA Chemical constituents TPH d/m/g 03/15/00

Soil cuttings Drum on site pending analysis Disposal method for development water NA

SONOMA COUNTY PUBLIC HEALTH

Direct Push Method of drill equip. rinsate containment Drum on site pending analysis

Abandonment method NA 3/15/00

Wells in relation to all sewer or septic lines.

001343D WELL PER 296.00 TTLAMT 296.00 CHECKS 296.00 CHANGE 0.00
342B #2 11:18

Located within: 100 feet of a septic tank or leachfield? [ ] Yes [✓] No
50 feet of any sanitary sewer line? [ ] Yes [✓] No
25 feet of any private sanitary sewer line? [ ] Yes [✓] No 02/22/00

2/22/00

001343D WELL PER 296.00 TTLAMT 296.00 CHECKS 296.00 CHANGE 0.00

Monitoring wells must include *identification system* affixed to interior surface:
Identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Number and well type shall be *affixed* to the *exterior surface* security structure.

001343D WELL PER 74.00 TTLAMT 74.00 CHECKS 74.00 CHANGE 0.00
529B #2 12:31

Signature Joni Flack Date 2/29/00

Appendix B

GEOMATRIX

APPENDIX B

Boring Logs – November 1996 and March 2000

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Boring Log Explanation Sheet**	
BORING LOCATION:	ELEVATION AND DATUM:	
DRILLING CONTRACTOR:	DATE STARTED:	DATE FINISHED:
DRILLING METHOD:	TOTAL DEPTH (ft.): --	MEASURING POINT:
DRILLING EQUIPMENT:	DEPTH TO WATER | FIRST	COMPL.
SAMPLING METHOD:	LOGGED BY:	
HAMMER WEIGHT: | DROP:	RESPONSIBLE PROFESSIONAL:	REG. NO.

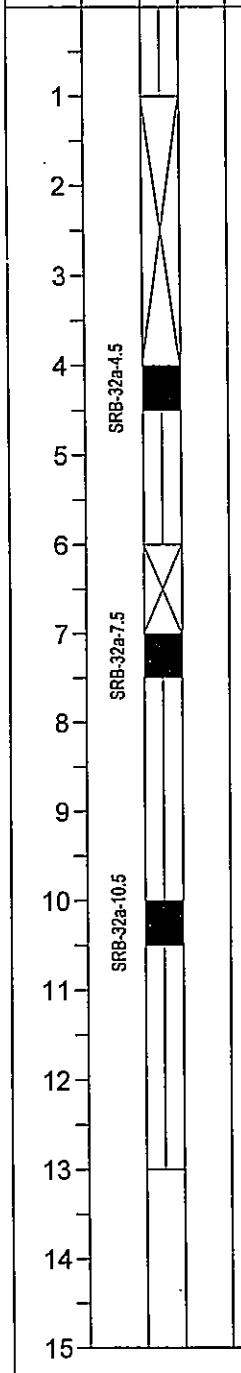
DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1–15	SRB-32-1.0				Notes 1.Soil descriptions are in accordance with the USCS as set forth by ASTM D2488-90 "Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)." 2.Soil color described according to Munsell Color Chart. 3.Dashed lines separating soil strata represent inferred boundaries between sampled intervals that may be abrupt or gradual transitions. Solid lines represent approximate boundaries observed within sample intervals. OVM = organic vapor meter, reading in parts per million. 7.NA = Not applicable. 8.ND = No data. Interval of recovered soil core collected with split-barrel sampler. Interval of recovered soil collected with split-spoon drive sampler. Interval of no recovery. Sample collected for chemical analysis and sample identification.	

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-32**
BORING LOCATION: 80 ft. east of railroad tracks, 165 ft. north of 3rd St.	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/6/00 / DATE FINISHED: 3/6/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 7.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER: FIRST ND / COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0	SRB-32-1.0			8.8	POORLY GRADED SAND with CLAY and GRAVEL (SP-SM): very dark grayish brown (10YR 3/2), moist, 50% fine to coarse sand, 40% fine to coarse gravel, 10% nonplastic fines very dark gray (10Y 3/N)	Sample 0-1.5 feet with modified California drive sampler [18" x 2.0'].
4					LEAN CLAY (CL): black (5Y 2.5/1), moist, 95% fines, 5% fine sand, medium plasticity, firm	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
7					Bottom of boring at 7.0 feet	Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.

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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-32a**
BORING LOCATION: 2 feet west of SRB-2	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/7/00 / DATE FINISHED: 3/7/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 13.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER: FIRST 12.0 / COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154



DESCRIPTION
NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.

Surface Elevation: Not surveyed

POORLY GRADED SAND with SILT and GRAVEL (SP-SM): very dark grayish brown (10YR 3/2), moist, 50% fine to coarse sand, 40% fine to coarse gravel, 10% nonplastic fines

LEAN CLAY (CL): black (5Y 2.5/1), moist, 90% fines, 10% fine sand, trace coarse sand, medium plasticity, hard

LEAN CLAY with SAND (CL): dark brown (10YR 3/3), moist, 80% fines, 20% fine sand, trace coarse sand, medium plasticity, hard

SANDY LEAN CLAY (CL): brown (10YR 4/3), moist, 65% fines, 35% fine to medium sand, trace coarse sand, low plasticity, firm

CLAYEY SAND (SC): dark brown (10YR 3/3), wet, 75% fine to coarse sand, 25% low plasticity fines

Bottom of boring at 13.0 feet

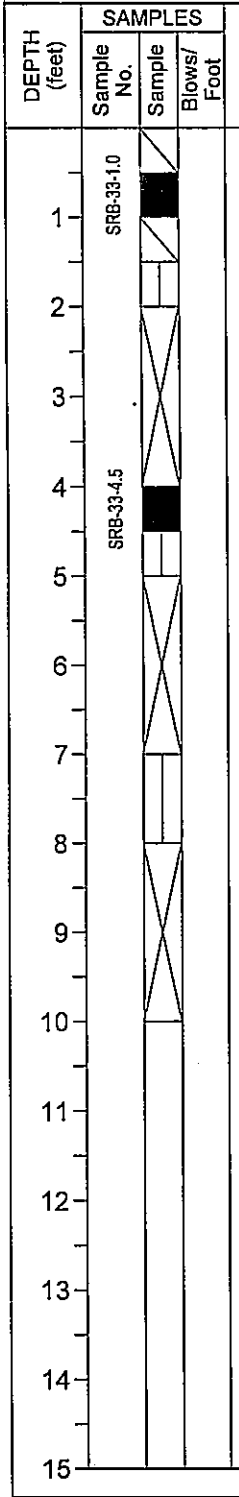
REMARKS

OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.

Grab groundwater sample SRB-32a collected through 5 ft. of 1-inch diameter Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 8 to 13 ft. bgs. Enviro-core drive casing retracted from bottom of boring to 10 ft. bgs to maintain surface seal.

Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.

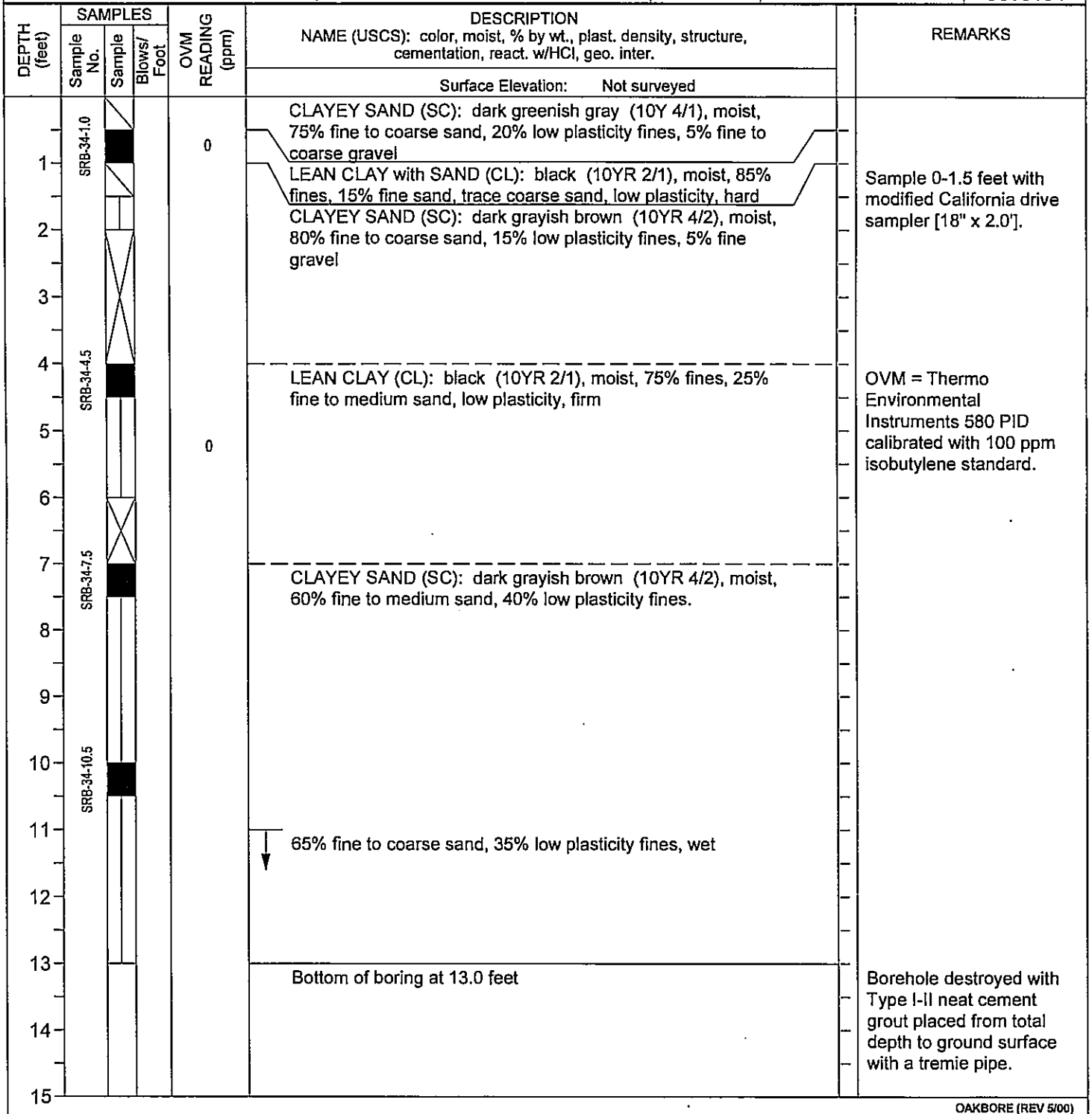
PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-33**
BORING LOCATION: 156 ft. south of 6th St., 78 ft. east of warehouse	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/7/00 / DATE FINISHED: 3/7/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 10.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER: FIRST 7.0 / COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154



DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
0	SRB-33-1.0			0	LEAN CLAY with SAND (CL): black (10YR 2/1), moist, 75% fines, 20% fine to coarse sand, 5% fine gravel, low plasticity, firm, contains brick fragments	
1					no brick fragments	Sample 0-1.5 feet with modified California drive sampler [18" x 2.0'].
2						
3						
4	SRB-33-4.5				POORLY GRADED SAND with CLAY (SP-SC): dark grayish brown (10YR 4/2), moist, 90% fine to coarse sand, 10% low plasticity fines, trace fine gravel	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
5						
6						
7					wet	
8						
9						
10					Bottom of boring at 10.0 feet	Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
11						
12						
13						
14						
15						

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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-34**
BORING LOCATION: 62 ft. south of 6th St., 50 ft. east of warehouse	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/7/00 / DATE FINISHED: 3/7/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 13.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER: FIRST 11.2 / COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154



OAKBORE (REV 5/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-35**
BORING LOCATION: 282 ft. south of 6th St., 30 ft. east of fence line	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/7/00 / DATE FINISHED: 3/7/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 13.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER: FIRST 7.0 / COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	SRB-35-1.0			0	LEAN CLAY (CL): black (10YR 2/1), moist, 95% fines, 5% fine sand, medium plasticity, firm, contains rootlets	
					no rootlets	
2						OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
3				0	trace fine gravel	
4	SRB-35-4.5				very dark gray (10YR 3/1)	
5					SANDY LEAN CLAY (CL): dark brown (10YR 3/3), moist, 65% fines, 30% fine to coarse sand, 5% fine gravel, low plasticity, firm	Grab groundwater sample SRB-35 collected through 5 ft. of 1-inch diameter Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 9 to 13 ft. bgs. Enviro-core drive casing retracted from bottom boring to 9 ft. bgs to maintain surface seal.
6				0		
7	SRB-35-7.0				CLAYEY SAND (SC): dark brown (10YR 3/3), wet, 70% fine to coarse sand, 25% low plasticity fines, 5% fine gravel	
8						
9						
10					SANDY LEAN CLAY (CL): dark gray (10YR 4/1), moist, 60% fines, 40% fine to coarse sand, trace fine gravel, low to medium plasticity, soft	
11				0		
12					75% fines, 25% fine to coarse sand	
13					Bottom of boring at 13.0 feet	Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
14						
15						

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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-36**
BORING LOCATION: 416 ft. south of 6th St., 25 ft. east of Blue Goose bldg.	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/6/00 / DATE FINISHED: 3/7/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 22.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER — FIRST: ND / COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO.: C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	SRB-36-1.0				SANDY LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 60% fines, 30% fine to coarse sand, 10% fine gravel, low plasticity, firm	Sample 0-1.5 feet with modified California drive sampler [18" x 2.0'].
2				0	LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 90% fines, 10% fine sand, low plasticity, firm	
3						
4	SRB-36-4.5					OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
5				0		
6						
7						
8				0	LEAN CLAY with SAND (CL): dark brown (10YR 3/3), moist, 80% fines, 20% fine sand, low plasticity, firm	
9						
10	SRB-36-10.5				75% fines, 25% fine sand	
11					CLAYEY SAND (SC): dark brown (10YR 3/3), 60% fine to medium sand, 40% low plasticity fines	
12				0	85% fines, 15% fine to coarse sand, hard	
13	SRB-36-13.5					
14				0		
15						

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-37**
BORING LOCATION: 81 ft. north of 3rd St., 12 ft. east of warehouse	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/6/00 / DATE FINISHED: 3/6/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 25.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER: FIRST 18.0 / COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION. NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1				0	POORLY GRADED SAND with SILT and GRAVEL (SP-SC): dark gray (10YR 4/1), moist, 50% fine to coarse sand, 40% fine to coarse gravel up to 2-inches in diameter, 10% nonplastic fines	
4					SANDY LEAN CLAY (CL): very dark grayish brown (10YR 3/2), moist, 65% fines, 30% fine to medium sand, 5% fine gravel, low to medium plasticity, soft	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
5				.0		
13					trace coarse gravel up to 2-inches in diameter	
14					LEAN CLAY (CL): brown (10YR 5/3), moist, 95% fines, 5% fine sand, medium plasticity, firm	
15				0		

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PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-37 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): (Cont.) greenish gray (5GY 5/1)	
17						Grab groundwater sample SRB-37 collected through 5 ft. of 1-inch diameter Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 20 to 25 ft. bgs. Enviro-core drive casing retracted from bottom of boring to 21 ft. bgs to maintain surface seal.
18				0		
19					CLAYEY SAND (SC): dark greenish gray (10GY 4/1), wet, 70% fine to coarse sand, 30% low plasticity fines, trace fine gravel	
20				0	CLAYEY SAND with GRAVEL (SC): dark grayish brown (10YR 4/2), wet, 65% fine to coarse sand, 20% low plasticity fines, 15% fine to coarse gravel	
21						
22						
23						
24						
25					bottom of boring at 25.0 feet	Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
26						
27						
28						
29						
30						
31						
32						
33						

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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-38**
BORING LOCATION: 85 ft. north of 3rd St., 45 ft. east of railroad tracks	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/6/00 / DATE FINISHED: 3/6/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 16.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-1	DEPTH TO WATER: FIRST 13.0 / COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
1					POORLY GRADED SAND with SILT and GRAVEL (SP-SM): very dark grayish brown (10YR 3/2), moist, 50% fine to coarse sand, 40% fine to coarse gravel, 10% nonplastic fines	
2				0	POORLY GRADED SAND (SP): grayish brown (10YR 5/2), moist, 95% fine to medium sand, 5% fines	
3					LEAN CLAY with SAND (CL): black (10YR 2/1), moist, 80% fines, 20% fine sand, low plasticity, firm	
4						OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
5				0		
6						
7						
8						
9						
10					SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 60% fines, 40% fine to medium sand, low plasticity, soft	
11						
12					LEAN CLAY (CL): dark grayish brown (10YR 4/2), 90% fines, 10% fine sand, low to medium plasticity, hard	
13					CLAYEY SAND (SC): dark gray (10YR 4/1), wet, 60% fine to coarse sand, 40% low plasticity fines	
14					LEAN CLAY (CL): dark gray (10YR 4/1), moist, 90% fines, 10% fine sand, low to medium plasticity, hard	
15						

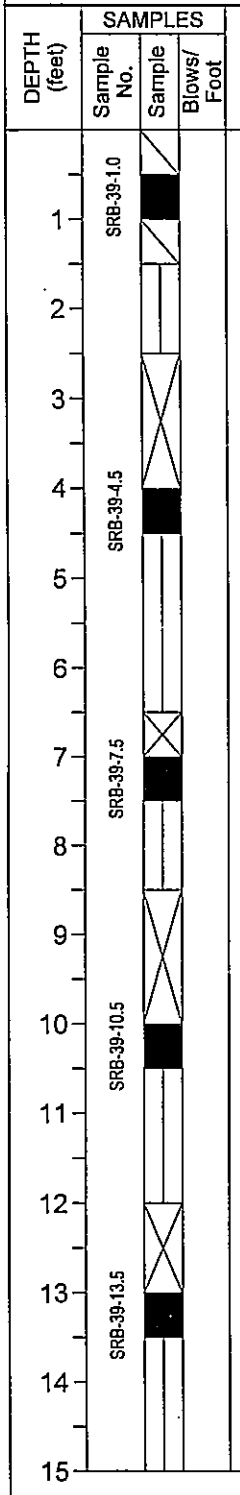
PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-38 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					LEAN CLAY (CL): (Cont.) Bottom of boring at 16.0 feet	Grab groundwater sample SRB-38 collected through 5 ft. of 1-inch diameter Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 11 to 16 ft. bgs. Enviro-core drive casing retracted from bottom of boring to 12 ft. bgs to maintain surface seal. Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBORE (REV 5/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-39**	
BORING LOCATION: 418 ft. south of 6th St., 100 ft. east of railroad tracks	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/6/00	DATE FINISHED: 3/6/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 16.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER — FIRST: 13.8	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome	
HAMMER WEIGHT: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154



OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
	Surface Elevation: Not surveyed	
0	ASPHALTIC CONCRETE POORLY GRADED SAND with SILT and GRAVEL (SP-SM): very dark grayish brown (10YR 3/2), moist, 50% fine to coarse sand, 40% fine to coarse gravel, 10% nonplastic fines	
0	yellowish brown (10YR 5/4)	Sample 0-1.5 feet with modified California drive sampler [18" x 2.0'].
	LEAN CLAY (CL): black (5Y 2.5/1), moist, 95% fines, 5% fine sand, low to medium plasticity, firm	
	black (10YR 2/1), 5% fine to coarse sand	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
	LEAN CLAY with SAND (CL): dark brown (10YR 3/3), moist, 80% fines, 20% fine to coarse sand, low plasticity, firm	
	CLAYEY SAND (SC): dark gray (5Y 4/1), wet, 60% fine to coarse sand, 35% low plasticity fines, 5% fine gravel	

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-39 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16					CLAYEY SAND (SC): (Cont.) LEAN CLAY with SAND (CL): dark gray (5Y 4/1), 75% fines, 25% fine sand, low plasticity fines Bottom of boring at 16.0 feet	Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-40**
BORING LOCATION: 25 feet south of SRB-36	ELEVATION AND DATUM: Not surveyed; datum is ground surface
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/7/00 / DATE FINISHED: 3/7/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 21.0 / MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER: FIRST ND / COMPL. NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome
HAMMER WEIGHT: NA / DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E. / REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation: Not surveyed	REMARKS
0	SRB-40-1.0			0	SANDY LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 60% fines, 30% fine to coarse sand, 10% fine to coarse gravel, low plasticity, firm	
1					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 90% fines, 10% fine sand, low plasticity, firm	Sample 0-1.5 feet with modified California drive sampler [18" x 2.0'].
2						
3						
4	SRB-40-4.5				very dark gray (N 3/N), 85% fines, 10% fine sand, 5% fine gravel, trace coarse sand	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
5				1.3		
6						
7	SRB-40-7.5					
8				2.8	mottled dark gray (N 4/N) and dark grayish brown (10YR 4/2)	Geomatrix attempts to collect grab groundwater sample SRB-40 through 5 ft. of 1-inch diameter Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 16 to 21 ft. bgs. Enviro-core drive casing retracted from bottom of boring to 16 ft. bgs to maintain surface seal. No groundwater recovered. Stainless steel sacrificial sampling point driven to 21 ft at adjacent companion boring. Galvanized steel pipe retracted to 16 ft. Groundwater sample SRB-40 collected.
9						
10	SRB-40-10.5				CLAYEY SAND (SC): dark gray (N 4/N), moist, 65% fine sand, 35% low plasticity fines	
11				2.3		
12						
13					LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 90% fines, 10% fine sand, low plasticity, firm	
14	SRB-40-14.0			0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-40 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16	SRB-40-16.5				LEAN CLAY (CL): (Cont.)	
17						
18					SANDY LEAN CLAY (CL): dark grayish brown (10YR 4/2), moist, 65% fines, 35% fine to coarse sand, low plasticity, hard	
19	SRB-40-19.5				CLAYEY SAND with GRAVEL (SC): dark grayish brown (10YR 4/2), moist, 55% fine to coarse sand, 25% low plasticity fines, 20% fine gravel	
20						
21					Bottom of boring at 21.0 feet	Sampling refusal at 21 feet
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25						Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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PROJECT: SANTA ROSA STATION Santa Rosa, California	**Log of Boring No. SRB-41**	
BORING LOCATION: 25 feet south of SRB-40	ELEVATION AND DATUM: Not surveyed; datum is ground surface	
DRILLING CONTRACTOR: Precision Sampling, Incorporated	DATE STARTED: 3/7/00	DATE FINISHED: 3/7/00
DRILLING METHOD: Direct push	TOTAL DEPTH (ft.): 16.0	MEASURING POINT: Ground surface
DRILLING EQUIPMENT: XD-3	DEPTH TO WATER — FIRST: 11.5	COMPL.: NA
SAMPLING METHOD: Enviro-core sampling system [3'x 1 5/8"]	LOGGED BY: C. Rome	
HAMMER WEIGHT: NA — DROP: NA	RESPONSIBLE PROFESSIONAL: S. Gallardo, P.E.	REG. NO. C038154

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
					Surface Elevation: Not surveyed	
1	SRB-41-1.0			0	SANDY LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 60% fines, 30% fine to coarse sand, 10% fine to coarse gravel, low plasticity, firm	
2					LEAN CLAY (CL): very dark gray (10YR 3/1), moist, 90% fines, 10% fine sand, low plasticity, firm	Sample 0-1.5 feet with modified California drive sampler [18" x 2.0'].
3						
4	SRB-41-4.5				LEAN CLAY with SAND (CL): very dark gray (10YR 3/1), moist, 75% fines, 25% fine to coarse sand, low plasticity, firm	OVM = Thermo Environmental Instruments 580 PID calibrated with 100 ppm isobutylene standard.
5				0		
6						
7	SRB-41-7.5					
8						
9				0		
10	SRB-41-10.5					
11				0		
12					CLAYEY SAND (SC): dark brown (10YR 3/3), wet, 80% fine to coarse sand, 20% low plasticity fines	
13					LEAN CLAY (CL): dark gray (10YR 4/1), moist, 90% fines, 10% fine sand, low plasticity, firm	
14				0		
15						

PROJECT: SANTA ROSA STATION
Santa Rosa, California

Log of Boring No. SRB-41 (cont'd)

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter.	REMARKS
16				0	LEAN CLAY (CL): (Cont.) Bottom of boring at 16.0 feet	Grab groundwater sample SRB-41 collected through 5 ft. of 1-inch diameter Sch. 40 PVC screen (0.020-inch slot size) placed in borehole from 11 to 16 ft. bgs. Enviro-core drive casing retracted from bottom of boring to 11 ft. bgs to maintain surface seal. Borehole destroyed with Type I-II neat cement grout placed from total depth to ground surface with a tremie pipe.
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OAKBORE (REV 5/00)

PROJECT: SANTA ROSA STATION Santa Rosa, California		**Boring Log Changes**	
BORING LOCATION:		ELEVATION AND DATUM:	
DRILLING CONTRACTOR:		DATE STARTED:	DATE FINISHED:
DRILLING METHOD:		TOTAL DEPTH (ft.): --	MEASURING POINT:
DRILLING EQUIPMENT:		DEPTH TO WATER	FIRST / COMPL.
SAMPLING METHOD:		LOGGED BY:	
HAMMER WEIGHT:	DROP:	RESPONSIBLE PROFESSIONAL:	REG. NO.

DEPTH (feet)	SAMPLES: Sample No.	SAMPLES: Sample	SAMPLES: Blows/ Foot	OVM READING (ppm)	DESCRIPTION NAME (USCS): color, moist, % by wt., plast. density, structure, cementation, react. w/HCl, geo. inter. Surface Elevation:	REMARKS
1					Arrows adjusted on drawing files for borings SRB-32, 33, 35, and 37. Make future edits and printouts in the following files: I:\Project\2000s\2770.05\gINT\SRB-32.GDW I:\Project\2000s\2770.05\gINT\SRB-33.GDW I:\Project\2000s\2770.05\gINT\SRB-35.GDW I:\Project\2000s\2770.05\gINT\SRB-37.GDW	
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Appendix C

APPENDIX C

Analytical Laboratory Reports and Chain-of-Custody Records

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 15, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19381	**Date Collected:**	3/6/00
Project Name:	Santa Rosa	**Date Received:**	3/6/00
Project Number:	2770.005	**P.O. Number:**	Invoice UP directly
Project Notes:			

On March 06, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	EPA 8260B	EPA 8260B
	EPA 8270 PAH SIMS-ATL	EPA 8270
	TPH as Diesel w/ Si-Gel Column	EPA 8015 MOD. (Extractable)
	TPH as Diesel w/ Si-Gel Column + Filter	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column + Filter	EPA 8015 MOD. (Extractable)

Case Narrative: Due to the limitation of LIMS software, the Hexacosane surrogate recovery limits reported reflect normal TPH-extractrables surrogate limits rather than silica gel cleanup limits. The correct surrogate control limits for silica gel cleanup are 53-119 rather than 65-135

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-002 **Client Sample ID:** SRB-37

Sample Time: 11:50 AM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	78	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	78	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19381 **Lab Sample ID:** 19381-004 **Client Sample ID:** SRB-39

Sample Time: 1:00 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	87	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	87	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-002 **Client Sample ID:** SRB-37

Sample Time: 11:50 AM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/13/00	3/14/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	108	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/13/00	3/14/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	108	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-004 **Client Sample ID:** SRB-39

Sample Time: 1:00 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/10/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	80	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/10/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	80	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-001 **Client Sample ID:** SRB-37

Sample Time: 11:20 AM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/13/00	WMS000311	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-001 **Client Sample ID:** SRB-37

Sample Time: 11:20 AM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Carbon Disulfide	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Carbon Tetrachloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Chlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Chloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Chloroform	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Chloromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
cis-1,2-Dichloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
cis-1,3-Dichloropropene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
cis-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
Dibromochloromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Dibromomethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Dichlorodifluoromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Diisopropyl Ether	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Ethyl Benzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Ethyl Methacrylate	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Hexachlorobutadiene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Iodomethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Isopropylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Methacrylonitrile	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Methyl Methacrylate	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Methyl-t-butyl Ether	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Methylene Chloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
n-Butylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
n-Propylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Naphthalene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
p-Isopropyltoluene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Pentachloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Propionitrile	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
sec-Butylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Styrene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
tert-Butanol	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
tert-Butyl Ethyl Ether	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
tert-Butylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Tetrachloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-001 **Client Sample ID:** SRB-37

Sample Time: 11:20 AM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
trans-1,2-Dichloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
trans-1,3-Dichloropropene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
trans-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
Trichloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Trichlorofluoromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Vinyl Chloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Xylenes, Total	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	94	79 - 125
Dibromofluoromethane	109	78 - 132
Toluene-d8	103	81 - 114

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Enteeh Analytical Labs, Inc. (CA ELAP #2346)

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-003 **Client Sample ID:** SRB-39

Sample Time: 12:40 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dihromo-3-Chloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/11/00	WMS000311	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-003 **Client Sample ID:** SRB-39

Sample Time: 12:40 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Disulfide	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Tetrachloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroform	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,2-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,3-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromochloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dichlorodifluoromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Diisopropyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Benzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Methacrylate	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Hexachlorobutadiene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Iodomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Isopropylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methacrylonitrile	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl Methacrylate	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl-t-butyl Ether	9.8		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methylene Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Propylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Naphthalene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
p-Isopropyltoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Pentachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Propionitrile	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
sec-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Styrene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butanol	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butyl Ethyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Tetrachloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Client

Certified Analytical Report

Order ID: 19381 **Lab Sample ID:** 19381-003 **Client Sample ID:** SRB-39

Sample Time: 12:40 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,2-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,3-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Trichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Trichlorofluoromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Vinyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Xylenes, Total	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	92	79 - 125
Dibromofluoromethane	107	78 - 132
Toluene-d8	100	81 - 114

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/14/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Hexanone	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Acetone	ND	1	100	100	µg/L	3/11/00	WMS000311	EPA 8260B
Acrylonitrile	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Allyl Chloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzyl Chloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromochloromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromodichloromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromoform	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/14/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Disulfide	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Tetrachloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroform	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,2-Dichloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,3-Dichloropropene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,4-Dichloro-2-butene	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromochloromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromomethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dichlorodifluoromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Diisopropyl Ether	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Benzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Methacrylate	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Hexachlorobutadiene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Iodomethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Isopropylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methacrylonitrile	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl Methacrylate	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl-t-butyl Ether	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methylene Chloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Butylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Propylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Naphthalene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
p-Isopropyltoluene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Pentachloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Propionitrile	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
sec-Butylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Styrene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Amyl Methyl Ether	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butanol	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butyl Ethyl Ether	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Tetrachloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/14/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,2-Dichloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,3-Dichloropropene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Trichloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Trichlorofluoromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Vinyl Chloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Xylenes, Total	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	94	79 - 125
Dibromofluoromethane	104	79 - 125
Toluene-d8	102	79 - 125

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

March 10, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: Geomatrix Consultants
Lab No.: 42289-001/003

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants
Date Received: 03/07/00
Matrix: Liquid
Units: µg/l
Extraction Method: 3510

EPA Method 8270 SIM (PNA's only)

Lab No.:		Method Blank		42289-001									
Client Sample I.D.:		–		19381-002 SRB-37 Unfiltered									
Date Sampled:		–		03/06/00									
QC Batch #:		S008270W070		S008270W070									
Date Extracted:		03/08/00		03/08/00									
Date Analyzed:		03/08/00		03/08/00									
Analyst Initials:		HL		HL									
Dilution Factor:		1		1									
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND	0.2	ND								
Acenaphthylene	0.2	0.2	ND	0.2	ND								
Acenaphthene	0.2	0.2	ND	0.2	ND								
Fluorene	0.2	0.2	ND	0.2	ND								
Phenanthrene	0.2	0.2	ND	0.2	ND								
Anthracene	0.2	0.2	ND	0.2	ND								
Fluoranthene	0.2	0.2	ND	0.2	ND								
Pyrene	0.2	0.2	ND	0.2	ND								
Benzo[a]anthracene	0.2	0.2	ND	0.2	ND								
Chrysene	0.2	0.2	ND	0.2	ND								
Benzo[b]fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo[k]fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo[a]pyrene	0.2	0.2	ND	0.2	ND								
Indeno[1,2,3-cd]pyrene	0.2	0.2	ND	0.2	ND								
Dibenz[a,h,]anthracene	0.2	0.2	ND	0.2	ND								
Benzo[g,h,i]perylene	0.2	0.2	ND	0.2	ND								
Surrogate Recovery													
Surrogate Recovery		%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4		38	24- 93	57	24- 93								
Nitrobenzene-d5		42	18-118	57	18-118								
2-Fluorobiphenyl		47	27-113	57	27-113								
Terphenyl-d14		66	19-115	81	19-115								

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/13/00

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants
Date Received: 03/07/00
Matrix: Liquid
Units: µg/l
Extraction Method: 3510

EPA Method 8270 SIM (PNA's only)

Lab No.:	42289-002F											
Client Sample I.D.:	19381-004 SRB-39											
	Unfiltered											
Date Sampled:	03/06/00											
QC Batch #:	S008270W070											
Date Extracted:	03/08/00											
Date Analyzed:	03/08/00											
Analyst Initials:	HL											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo[a]anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo[b]fluoranthene	0.2	0.2	ND										
Benzo[k]fluoranthene	0.2	0.2	ND										
Benzo[a]pyrene	0.2	0.2	ND										
Indeno[1,2,3-cd]pyrene	0.2	0.2	ND										
Dibenz[a,h,]anthracene	0.2	0.2	ND										
Benzo[g,h,i]perylene	0.2	0.2	ND										

Surrogate Recovery

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	59	24- 93										
Nitrobenzene-d5	46	18-118										
2-Fluorobiphenyl	56	27-113										
Terphenyl-d14	74	19-115										

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: C. Persaud Date: 03/13/00

Compton Persaud
Department Supervisor

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants
Date Received: 03/07/00
Matrix: Liquid
Units: µg/l
Extraction Method: 3510

EPA Method 8270 SIM (PNA's only)

Lab No.:		Method Blank		42289-001									
Client Sample I.D.:		--		19381-002 SRB-37 Filtered									
Date Sampled:		--		03/06/00									
QC Batch #:		S008270W070		S008270W070									
Date Extracted:		03/08/00		03/08/00									
Date Analyzed:		03/08/00		03/08/00									
Analyst Initials:		HL		HL									
Dilution Factor:		1		1									
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND	0.2	ND								
Acenaphthylene	0.2	0.2	ND	0.2	ND								
Acenaphthene	0.2	0.2	ND	0.2	ND								
Fluorene	0.2	0.2	ND	0.2	ND								
Phenanthrene	0.2	0.2	ND	0.2	ND								
Anthracene	0.2	0.2	ND	0.2	ND								
Fluoranthene	0.2	0.2	ND	0.2	ND								
Pyrene	0.2	0.2	ND	0.2	ND								
Benzo[a]anthracene	0.2	0.2	ND	0.2	ND								
Chrysene	0.2	0.2	ND	0.2	ND								
Benzo[b]fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo[k]fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo[a]pyrene	0.2	0.2	ND	0.2	ND								
Indeno[1,2,3-cd]pyrene	0.2	0.2	ND	0.2	ND								
Dibenz[a,h,]anthracene	0.2	0.2	ND	0.2	ND								
Benzo[g,h,i]perylene	0.2	0.2	ND	0.2	ND								
Surrogate Recovery													
Surrogate Recovery		%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4		38	24- 93	60	24- 93								
Nitrobenzene-d5		42	18-118	70	18-118								
2-Fluorobiphenyl		47	27-113	65	27-113								
Terphenyl-d14		66	19-115	91	19-115								

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/17/00

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - WATER(ug/L)

Method : D:\HPCHEM\1\METHODS\SSIM0308.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Thu Mar 09 15:28:32 2000
Response via : Initial Calibration

Non-Spiked Sample: S0308009.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0308011.D	S0308012.D
Sample :	M-BLANK,S008270W070,MS	M-BLANK,S008270W070,MSD
Acq Time:	8 Mar 2000 9:31 pm	8 Mar 2000 10:08 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	350	350	70	70	0	17	46- 94
Pyrene	0.0	500	394	413	79	83	5	16	36-114

QCBATCH# S008270W070

Reviewed/Approved by: C. Persaud Date: 03/13/00
Compton Persaud
Department Supervisor

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Spikes

QC Batch #: DW000307SiO2(Column) Date analyzed: 03/11/00
Matrix: Liquid Date extracted: 03/09/00
Units: µg/L Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<50.0	1000	ND	894	89	833	83	7.0	25	56-121
Hexocosane(S.S.)				100%	100%		97%				53-119

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds
Laboratory Control Sample

QC Batch #: WMS000311
Matrix: Liquid
Units: µg/L

Date analyzed: 03/11/00
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
1,1- Dichloroethene	8240/8260	40	ND	39.0	98	38.6	97	1.0	25	50-150
Methyl-tert-butyl ether	8240/8260	40	ND	47.1	118	38.9	97	19.1	25	50-150
Benzene	8240/8260	40	ND	44.3	111	44.6	112	0.7	25	50-150
Trichloroethene	8240/8260	40	ND	38.8	97	40.5	101	4.3	25	50-150
Toluene	8240/8260	40	ND	40.3	101	43.7	109	8.1	25	50-150
Chlorobenzene	8240/8260	40	ND	41.1	103	43.5	109	5.7	25	50-150
Surrogates										
Dibromofluoromethane	8240/8260		104%	114%		98%				65-135
MTBE-d3	8240/8260		101%	115%		90%				65-135
Toluene -d8	8240/8260		102%	96%		96%				65-135
4-Bromofluorobenzene	8240/8260		94%	106%		104%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds
Matrix Spike and Matrix Spike Duplicate

QC Batch #: WMS000311
Matrix: Liquid
Units: µg/L

Date analyzed: 03/11/00
Spiked Sample: 19501-025

PARAMETER	Method #	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
1,1- Dichloroethene	8240/8260	25.0	ND	17.1	**68**	19.1	**76**	11.0	25	50-150
Methyl-tert-butyl ether	8240/8260	25.0	ND	23.1	**92**	25.6	**102**	10.3	25	50-150
Benzene	8240/8260	25.0	ND	25.0	**100**	26.3	**105**	5.1	25	50-150
Trichloroethene	8240/8260	25.0	ND	21.7	**87**	23.4	**94**	7.5	25	50-150
Toluene	8240/8260	25.0	ND	24.0	**96**	24.9	**100**	3.7	25	50-150
Chlorobenzene	8240/8260	25.0	ND	24.9	**100**	25.7	**103**	3.2	25	50-150
Surrogates										
Dibromofluoromethane	8240/8260		105%	102%		102%				65-135
MTBE-d3	8240/8260		101%	100%		105%				65-135
Toluene -d8	8240/8260		95%	99%		98%				65-135
4-Bromofluorobenzene	8240/8260		88%	107%		104%				65-135

Calculated Recoveries Outside of Control Limits:

Definition of Terms:

na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery

Chain-of-Custody Record

003755

Date: 2/6/2000 | Page 1 of 1

Project No.: 2770.005

Samplers (Signature:) Todd Logan

19381

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 x	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only) ①	Method 8015M (Gasoline)	Method 8015M (Diesel) ①	Method 8015M (Motor Oil) ①	Silica Gel Cleanup	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
001 2/6/00	1120	SRB-37				X							W	N	Y	Y	3	Please Bill Union Pacific Direct - Contact: John Moe Contract No.: 707311 - 5 day turnaround - Firm, May request additional Analysis
002 2/6/00	1150	SRB-37						X					W	N	N	Y	4	x include MTBE and
2/6/00	1150	SRB-37								X	X	X	W	N	N	Y	4	Fuel Oxygenates for
003 2/6/00	1240	SRB-39				X							W	N	Y	Y	3	EPA 8260
004 2/6/00	1300	SRB-39						X					W	N	N	Y	4	
2/6/00	1300	SRB-39								X	X	X	W	N	N	Y	4	
																		① Please use a 0.7 Micron glass filter Prior to analysis 0.1 2 of each 4 samples taken for PNAs (8270 SIM) and TPHd/TPHmo (8015M).

Laboratory: Entech

Turnaround Time: 5 day (Firm)

Results to: Penny Tse

Total No. of Containers: 22

Relinquished by (Signature):	Date:	Relinquished By (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment:
Todd Logan	2/6/00		2/6			Lab Pick-up
Printed Name: Todd Logan	Time: 1325	Printed Name: Geoff Nash #375	Time: 1300	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix		Company: Entech		Company:		
Received by:	Date: 2/6	Received by:	Date: 2/6/00	Received by:	Date:	
Printed Name: Geoff Chapin #175	Time: 1325	Printed Name: Eugene F. Gracia	Time: 1535	Printed Name:	Time:	
Company: Entech		Company: Entech		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/6/00	3/13/00	19381

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19381-002	SRB-37	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/6/00	11:50 AM	Amber Jar	(4)
19381-004	SRB--39	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/6/00	1:00 PM	Amber Jar	(4)

19381

Relinquished By:	Received By:	Date:	Time:
Mara Gusis	Golden State	3/06/00	1800
Relinquished By:	Received By:	Date:	Time:
	Dianne Galvan	3-7-00	0900
Relinquished By:	Received By:	Date:	Time:

Notes: Filter Blank on hold, if hits please run. 2 sets of Ambers per sample. 1 set Filtered the other set is not; ~~Run the set that has been filtered for 8270 PAH-SIMS.~~ MG 3/6

Run Both sets

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

April 03, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19426	**Date Collected:**	3/7/00
Project Name:	Santa Rosa	**Date Received:**	3/8/00
Project Number:	2770.005	**P.O. Number:**	Invoice UP
Project Notes:			

On March 08, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	EPA 8270 SIM-ATL	EPA 8270

Case Narrative: Due to the limitations of LIMS software, the Hexacosane recovery limits reported reflect normal TPH-Extractable surrogate limits rather than silica gel column cleanup limits. The correct surrogate control limits for silica gel column cleanup are 53-119 rather than 65-135

For EPA 8270 PAH SIMS analysis on sample 19426-003 (SRB-40-7.5), a rainwater STLC (DI water buffered to pH 5.5) was performed on 3/20/00 at Entech Analytical Laboratories. After filteration, the extract was submitted to ATL (ELAP#1868) on 3/24/00 for EPA 8270-PAH SIMS analysis. The analytical results and all associated QC is included in the following report.

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 28, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19426	**Date Collected:**	3/7/00
Project Name:	Santa Rosa	**Date Received:**	3/8/00
Project Number:	2770.005	**P.O. Number:**	Invoice UP
Project Notes:			

On March 08, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Arsenic	EPA 6010B
	Chromium	EPA 6010B
	Nickel	EPA 6010B
	TPH as Diesel, STLC Rainwater	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil, STLC Rainwater	EPA 8015 MOD. (Extractable)

Case Narrative: Due to the limitations of LIMS software, the Hexacosane recovery limits reported reflect normal TPH-Extractable surrogate limits rather than silica gel column cleanup limits. The correct surrogate control limits for silica gel column cleanup are 53-119 rather than 65-135

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/28/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-003 **Client Sample ID:** SRB-40-7.5

Sample Time: 1:57 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	ug/L	3/27/00	3/28/00	DW000318COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	88	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Comment: Sample extracted with STLC Rainwater

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/27/00	3/28/00	DW000318COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	88	75 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Comment: Sample extracted with STLC Rainwater

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/27/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-003 **Client Sample ID:** SRB-40-7.5

Sample Time: 1:57 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	27	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B
Chromium	82	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B
Nickel	140	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B

Order ID: 19426 **Lab Sample ID:** 19426-010 **Client Sample ID:** SRB-41-7.5

Sample Time: 3:55 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	22	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B
Nickel	140	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

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March 21, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19426	**Date Collected:**	3/7/00
Project Name:	Santa Rosa	**Date Received:**	3/8/00
Project Number:	2770.005	**P.O. Number:**	Invoice UP
Project Notes:			

On March 08, 2000, sample was received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	EPA 8270 PAH SIMS-ATL	EPA 8270
	EPA 8270 SIM-ATL	EPA 8270
	TPH as Diesel w/ Si-Gel C/U (Column)	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column	EPA 8015 MOD. (Extractable)

Case Narrative: Due to the limitations of LIMS software, the Hexacosane recovery limits reported reflect normal TPH-Extractable surrogate limits rather than silica gel column cleanup limits. The correct surrogate control limits for silica gel column cleanup are 53-119 rather than 65-135

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

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Sincerely,

Michelle L. Anderson
Lab Director

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/20/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-003 **Client Sample ID:** SRB-40-7.5

Sample Time: 1:57 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	210	x	1	1	1	mg/Kg	3/14/00	3/15/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	106	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	370		1	13	13	mg/Kg	3/14/00	3/15/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	106	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19426 **Lab Sample ID:** 19426-005 **Client Sample ID:** SRB-40-14.0

Sample Time: 2:19 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/14/00	3/15/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	98	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/14/00	3/15/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	98	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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March 16, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19426	**Date Collected:**	3/7/00
Project Name:	Santa Rosa	**Date Received:**	3/8/00
Project Number:	2770.005	**P.O. Number:**	Invoice UP
Project Notes:			

On March 08, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	CAM 17 TTLC	EPA 6010B
		EPA 7471
	EPA 8270 SIM-ATL	EPA 8270
	TPH as Diesel w/ Si-Gel C/U (Column)	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column	EPA 8015 MOD. (Extractable)

Case Narrative: Due to the limitations of LIMS software, the Hexacosane recovery limits reported reflect normal TPH-Extractable surrogate limits rather than silica gel column cleanup limits. The correct surrogate control limits for silica gel column cleanup are 53-119 rather than 65-135

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

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Lab Director

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/16/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-001 **Client Sample ID:** SRB-40-1.0

Sample Time: 1:35 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	990	x	50	1	50	mg/Kg	3/10/00	3/13/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	61	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	1700		50	13	650	mg/Kg	3/10/00	3/13/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	61	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19426 **Lab Sample ID:** 19426-002 **Client Sample ID:** SRB-40-4.5

Sample Time: 1:43 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	130	x	5	1	5	mg/Kg	3/10/00	3/15/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	103	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	240		5	13	65	mg/Kg	3/10/00	3/15/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	103	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/16/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-008 **Client Sample ID:** SRB-41-1.0

Sample Time: 3:37 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/10/00	3/13/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	96	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	40		1	13	13	mg/Kg	3/10/00	3/13/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	96	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19426 **Lab Sample ID:** 19426-009 **Client Sample ID:** SRB-41-4.5

Sample Time: 3:48 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/10/00	3/14/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	96	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/10/00	3/14/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	96	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Attn: Penny Tse

Date: 3/16/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-001 **Client Sample ID:** SRB-40-1.0

Sample Time: 1:35 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Arsenic	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Barium	56	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Beryllium	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Cadmium	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Chromium	22	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Cobalt	8.9	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Copper	56	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Lead	110	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Mercury	0.0930	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Nickel	66	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Selenium	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Silver	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Thallium	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Vanadium	24	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Zinc	44	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/16/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-002 **Client Sample ID:** SRB-40-4.5

Sample Time: 1:43 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Arsenic	14	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Barium	160	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Beryllium	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Cadmium	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Chromium	110	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Cobalt	22	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Copper	30	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Lead	7.4	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Mercury	0.0580	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Nickel	180	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Selenium	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Silver	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Thallium	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Vanadium	67	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Zinc	60	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/16/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-008 **Client Sample ID:** SRB-41-1.0

Sample Time: 3:37 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Arsenic	11	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Barium	82	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Beryllium	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Cadmium	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Chromium	53	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Cobalt	14	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Copper	31	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Lead	18	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Mercury	ND	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Nickel	76	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Selenium	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Silver	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Thallium	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Vanadium	43	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Zinc	43	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/16/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-009 **Client Sample ID:** SRB-41-4.5

Sample Time: 3:48 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Arsenic	20	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Barium	150	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Beryllium	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Cadmium	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Chromium	86	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Cobalt	18	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Copper	26	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Lead	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Mercury	ND	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Nickel	140	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Selenium	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Silver	ND	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Thallium	ND	5	5	25	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Vanadium	57	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B
Zinc	51	5	1	5	mg/Kg	3/10/00	3/15/00	SM000306	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Matrix Spike and Matrix Spike Duplicate
METHOD: EPA 6010

QC Batch #: SM000313
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/17/00
Date Digested: 03/16/00
Digestion Method: EPA 3050
Spiked Sample: 19536-001

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	**SP %R**	SPD mg/kg	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	11.	**22**	23.	**45**	68.0	25.0	64-102
Arsenic	6010	<1.0	50.	8.4	41.	**66**	26.	**36**	43.7	25.0	64-115
Barium	6010	<1.0	50.	637.0	nc	**nc**	nc	**nc**	nc	25.0	75-113
Beryllium	6010	<1.0	50.	0.0	48.	**95**	46.	**92**	3.1	25.0	71-110
Cadmium	6010	<1.0	50.	0.0	46.	**91**	44.	**89**	2.9	25.0	70-100
Chromium	6010	<1.0	50.	350.2	nc	**nc**	nc	**nc**	nc	25.0	68-112
Cobalt	6010	<1.0	50.	6.4	54.	**96**	53.	**93**	2.2	25.0	59-114
Copper	6010	<1.0	50.	33.5	78.	**89**	76.	**85**	2.5	25.0	75-109
Lead	6010	<1.0	50.	64.9	80.	**30**	89.	**48**	10.5	25.0	64-115
Molybdenum	6010	<1.0	50.	0.0	46.	**92**	47.	**94**	2.5	25.0	69-113
Nickel	6010	<1.0	50.	18.9	68.	**98**	70.	**101**	2.3	25.0	60-112
Selenium	6010	<1.0	50.	0.0	41.	**83**	41.	**82**	0.1	25.0	67-103
Silver	6010	<1.0	25.	0.0	44.	**177**	45.	**181**	2.5	25.0	65-111
Thallium	6010	<1.0	50.	0.0	59.	**118**	59.	**118**	0.2	25.0	70-109
Vanadium	6010	<1.0	50.	43.6	94.	**101**	92.	**96**	2.6	25.0	69-114
Zinc	6010	<1.0	50.	98.3	153.	**110**	149.	**101**	2.9	25.0	69-119

Calculated Recoveries Outside of Control Limits:
Antimony
Arsenic
Barium
Chromium
Lead
Silver

Definition of Terms:

- na: Not Analyzed in QC batch
- nc: Not Calculated
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes
METHOD: EPA 6010

QC Batch #: SM000313
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/20/00
Date Digested: 03/17/00
Digestion Method: EPA 3050
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	49.	**98**	50.	**99**	1.6	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	44.	**87**	43.	**86**	0.7	25.0	75-125
Barium	6010	<1.0	50.	0.0	50.	**100**	50.	**101**	0.1	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	51.	**102**	51.	**102**	0.3	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	49.	**97**	49.	**99**	1.3	25.0	75-125
Chromium	6010	<1.0	50.	0.0	51.	**101**	51.	**102**	0.4	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	52.	**105**	53.	**105**	0.3	25.0	75-125
Copper	6010	<1.0	50.	0.0	46.	**92**	46.	**92**	0.0	25.0	75-125
Lead	6010	<1.0	50.	0.0	49.	**98**	50.	**100**	1.9	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	51.	**103**	52.	**103**	0.7	25.0	75-125
Nickel	6010	<1.0	50.	0.0	51.	**103**	52.	**105**	1.5	25.0	75-125
Selenium	6010	<1.0	50.	0.0	47.	**95**	49.	**98**	3.0	25.0	75-125
Silver	6010	<1.0	50.	0.0	44.	**88**	44.	**88**	0.1	25.0	75-125
Thallium	6010	<1.0	50.	0.0	47.	**94**	51.	**102**	8.4	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	50.	**101**	51.	**101**	0.2	25.0	75-125
Zinc	6010	<1.0	50.	0.0	49.	**97**	49.	**98**	0.7	25.0	75-125

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Matrix Spike/Matrix Spike Duplicate

QC Batch #: DS000307(column) — Date analyzed: 03/13/00
Matrix: Solid — Date extracted: 03/10/00
Units: mg/Kg — Quality Control Sample: 19426-001

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	SP %R	SPD mg/Kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	nc	nc	nc	nc	nc	nc	30	50-150
Hexocosane				61%	69%		67%				53-119

Calculated Recovery Outside of Control Limits:

Definition of Terms:

- MB: Method Blank
- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Spikes

QC Batch #: DW000318SiO2(Column)
Matrix: Liquid
Units: µg/L

03/28/00
03/27/00
Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP %R	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<50.0	1000	ND	867	87	25	59-121
Hexocosane(S.S.)				111%	91%			53-119

Method Blank and LCS Filtered through 0.70 micron filter prior to extraction and analysis.

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY
Laboratory Control Spikes

QC Batch #: DS000307(column) | Date analyzed: 03/11/00
Matrix: Solid | Date extracted: 03/10/00
Units: mg/Kg | Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	**SP %R**	SPD mg/Kg	**SPD %R**	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	17	**68**	16	**63**	7.9	30	50-150
Hexocosane				82%	81%		82%				53-119

Calculated Recovery Outside of Control Limits:

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Matrix Spike and Matrix Spike Duplicate
METHOD: EPA 6010

QC Batch #: SM000306
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/15/00
Date Digested: 03/15/00
Digestion Method: EPA 3050
Spiked Sample: 19426-001

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	17.	**33**	16.	**32**	2.4	25.0	64-102
Arsenic	6010	<1.0	50.	0.0	41.	**82**	51.	**101**	20.6	25.0	64-115
Barium	6010	<1.0	50.	56.1	118.	**123**	151.	**190**	24.9	25.0	75-113
Beryllium	6010	<1.0	50.	0.0	40.	**80**	47.	**94**	16.4	25.0	71-110
Cadmium	6010	<1.0	50.	0.0	40.	**79**	46.	**92**	14.8	25.0	70-100
Chromium	6010	<1.0	100.	22.1	167.	**145**	167.	**145**	0.1	25.0	68-112
Cobalt	6010	<1.0	50.	8.9	56.	**95**	66.	**114**	15.3	25.0	66-114
Copper	6010	<1.0	50.	56.4	75.	**38**	93.	**74**	21.4	25.0	75-109
Lead	6010	<1.0	50.	107.3	96.	**-22**	121.	**27**	22.5	25.0	64-115
Molybdenum	6010	<1.0	50.	0.0	39.	**77**	45.	**89**	14.4	25.0	69-113
Nickel	6010	<1.0	100.	66.4	175.	**108**	191.	**125**	8.9	25.0	72-112
Selenium	6010	<1.0	50.	0.0	34.	**67**	43.	**87**	25.4	25.0	67-103
Silver	6010	<1.0	50.	0.0	40.	**80**	47.	94	16.0	25.0	71-111
Thallium	6010	<1.0	50.	0.0	49.	97	61.	**123**	22.8	25.0	70-106
Vanadium	6010	<1.0	50.	24.4	88.	**128**	105.	**162**	17.4	25.0	69-114
Zinc	6010	<1.0	50.	44.4	115.	**141**	132.	**175**	13.7	25.0	69-119

Calculated Recoveries Outside of Control Limits:

Antimony *Selenium*
Barium *Thallium*
Chromium *Vanadium*
Lead *Zinc*

Definition of Terms:

- na: Not Analyzed in QC batch
- nc: Not Calculated
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes
METHOD: EPA 6010

QC Batch #: SM000306
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/15/00
Date Digested: 03/15/00
Digestion Method: EPA 3050
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	45.	**91**	47.	**93**	2.7	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	41.	**82**	45.	**91**	10.5	25.0	75-125
Barium	6010	<1.0	50.	0.0	47.	**93**	50.	**99**	5.9	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	45.	**90**	47.	**93**	3.7	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	43.	**87**	47.	**94**	7.9	25.0	75-125
Chromium	6010	<1.0	50.	0.0	47.	**93**	46.	**93**	0.6	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	47.	**93**	51.	**103**	9.4	25.0	75-125
Copper	6010	<1.0	50.	0.0	44.	**88**	49.	**99**	11.8	25.0	75-125
Lead	6010	<1.0	50.	0.0	44.	**88**	48.	**96**	9.0	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	46.	**93**	51.	**103**	10.1	25.0	75-125
Nickel	6010	<1.0	50.	0.0	46.	**93**	47.	**93**	0.3	25.0	75-125
Selenium	6010	<1.0	50.	0.0	45.	**91**	43.	**86**	4.9	25.0	75-125
Silver	6010	<1.0	50.	0.0	46.	**92**	45.	**90**	1.2	25.0	75-125
Thallium	6010	<1.0	50.	0.0	44.	**88**	47.	**93**	6.3	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	47.	**94**	51.	**103**	9.0	25.0	75-125
Zinc	6010	<1.0	50.	0.0	46.	**92**	48.	**95**	3.9	25.0	75-125

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY
MATRIX SPIKE
METHOD: EPA 7471

QC Batch #: SHG000305
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/14/00
Quality Control Sample: 19411-001

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	**SP %R**	SPD mg/kg	**SPD %R**	RPD	QC LIMITS %R
Mercury	7471	<0.10	0.20	0.59	0.77	**90**	0.72	**66**	31.5	65-135

Calculated Recoveries Outside of Control Limits:
RPD for Mercury

Definition of Terms:

MB: Method Blank
SA: Spike Added
SR: Sample Result
SP: Spike Result
SP (%R) Spike % Recovery
SPD Spike Duplicate Result
SPD (%R) Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spike
METHOD: EPA 7471

QC Batch #: SHG000305
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/14/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	**SP %R**	SPD mg/kg	**SPD %R**	RPD	QC LIMITS %R
Mercury	7471	<0.10	0.20	0.00	0.18	**92**	0.18	**88**	3.9	44-145

Definition of Terms:

MB: Method Blank
SA: Spike Added
SR: Sample Result
SP: Spike Result
SP (%R) Spike % Recovery
SPD Spike Duplicate Result
SPD (%R) Spike Duplicate % Recovery

Chain-of-Custody Record

003763

Date: 3/7/00 | Page 1 of 1

Project No.: 2770.005

Samplers (Signature): Chuck Rome

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM 17 Metals	Hold	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/7/00	1335	SRB-40-1.0					X			X	X	X	X		S	-	-	Y	1
	1343	SRB-40-4.5					X			X	X	X	X		S	-	-	Y	1
	1357	SRB-40-7.5	3/13/00				X			X	X	X		X	S	-	-	Y	1
	1405	SRB-40-10.5												X	S	-	-	Y	1
	1419	SRB-40-14.0	3/13/00				X			X	X	X		X	S	-	-	Y	1
	1430	SRB-40-16.5												X	S	-	-	Y	1
	1450	SRB-40-19.5												X	S	-	-	Y	1
	1537	SRB-41-1.0					X			X	X	X	X		S	-	-	Y	1
	1548	SRB-41-4.5					X			X	X	X	X		S	-	-	Y	1
	1555	SRB-41-7.5												X	S	-	-	Y	1
	1602	SRB-41-10.5												X	S	-	-	Y	1

CR 3/7/00

REMARKS

Additional Comments

Bill to Directly - Contact Johnnie Contract # 707 311

- 5 Day turn Firm, may request additional analyses
- Silica gel cleanup on samples for diesel + motor oil

Laboratory: Entech

Turnaround Time: 5 Day Firm

Results to: Penny Tse

Total No. of Containers: 11

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment:
Chuck Rome	3/8/00					Lab Pick up
Printed Name: Charles Rome	Time:	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix	0845	Company:		Company:		
Received by:	Date:	Received by:	Date:	Received by:	Date:	
Printed Name:	Time:	Printed Name:	Time:	Printed Name:	Time:	
Company:		Company:		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

03/13/00 MON 09:11 FAX 510 663 4141 GEOMATRIX OAKLAND 002

FAX

from **Geomatrix Consultants, Inc.**
2101 Webster Street, 12th Floor, Oakland, CA 94612
www.geomatrix.com

GEOMATRIX

Date: 3/16/00

Number of pages including cover sheet: 12

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To:		**From:**	
Allan Aks		Penny Tse	
Entech		Project Engineer	
Fax Phone:	408-735-1554	Fax Phone:	510-663-4141
Phone:	408-735-1550	Phone:	510-663-4100
cc:		Direct dial:	
		Email:	
		Project No.:	2770.005
		Project Name:	Santa Rosa Option Property

REMARKS:

☐ Hard copy to follow ☒ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

REVISED

Allan,

Attached are amended COCs for the following analysis:

COC#3764 – Sample SRB32-1.0 (19411-001) for for modified leachability testing for simulated rainwater [using deionized water adjusted to pH 5.5] (Rainwater WET) for PNAs

Sample SRB36-1.0 (19411-002) for Rainwater WET for TPHm

Sample SRB36-7.5 (19411-011) for Nickel (6010)

Sample SRB35-7.0 (19411-017) for Nickel (6010)

COC # 3758 - Sample SRB34-7.5 (19411-018) for Chromium and Nickel (6010)

COC #3763 - Sample SRB40-1.0(19426-001) for Rainwater WET for TPHm and PNAs

Sample SRB40-7.5(19426-003) for PNAs (8270SIM) & arsenic, chromium, and nickel (6010)

Sample SRB40-14.0(19426-005) for PNAs (8270SIM)

Sample SRB41-7.5 (19426-010) for ~~chromium~~ arsenic and nickel (6010)

Please contact me if you have any questions pertaining to the Rainwater WET test procedures.

\\sf3\ptss\2770\entech-fax.doc

Chain-of-Custody Record

003763

Date: 3/7/00 | Page | of |

Project No.: 2770.005

Samplers (Signature:) Chuck Romo

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM 17 Metals	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
3/7/00	1335	SRB-40-10					X			X	X	X	X	S	–	–	Y	1	Bill UP Directly - Contact Johnnie Contract # 707 311
	1343	SRB-40-15					X			X	X	X	X	S	–	–	Y	1	-5 Day turn Firm, may request additional analytes
	1357	SRB-40-7.5				X	X						X	S	–	–	Y	1	-Sil gel cleanup on samples for diesel + motor oil
	1405	SRB-40-10.5				X								S	–	–	Y	1	
	1417	SRB-40-14.2				X								S	–	–	Y	1	
	1430	SRB-40-16.5												S	–	–	Y	1	
	1450	SRB-40-19.5												S	–	–	Y	1	
	1537	SRB-41-10					X			X	X	X	X	S	–	–	Y	1	
	1548	SRB-41-15					X			X	X	X	X	S	–	–	Y	1	
	1555	SRB-41-7.5											X	S	–	–	Y	1	
	1602	SRB-41-10.5												S	–	–	Y	1	

CAR 3/7/00

Laboratory: Entech

Turnaround Time: 5 Day Firm

Results to: Penny Tse

Total No. of Containers: 11

Relinquished by (Signature):	Date: 3/7/00	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment: Lab Pick up	
Printed Name: Chuck Romo	Time: 0845	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:	
Company: Geomatrix		Company:		Company:			
Received by:	Date:	Received by:	Date:	Received by:	Date:		
Printed Name: E. Cathcart	Time:	Printed Name:	Time:	Printed Name:	Time:		
Company: Entech		Company:		Company:			

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

03/17/00 FRI 07:32 FAX 510 663 4141 GEOMATRIX OAKLAND 002

Chain-of-Custody Record

003763

Date: 3/7/00

Page 1 of 1

Project No.: 2770.005

Samplers (Signature:) Chuck Rome

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM 17 Metals	Hold	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
9426																					Bill UP Directly - Contact Johnnie Contract # 707 311
001	3/7/00	1335	SRB-40-1.0					X			X	X	X	X		S	-	-	Y	1	- 5 Day turn Firm, may request additional analyses
002		1343	SRB-40-4.5					X			X	X	X	X		S	-	-	Y	1	- Sil gel cleanup on
003		1357	SRB-40-7.5												X	S	-	-	Y	1	samples for diesel +
004		1405	SRB-40-10.5												X	S	-	-	Y	1	motor oil
005		1417	SRB-40-14.0												X	S	-	-	Y	1	
006		1430	SRB-40-16.5												X	S	-	-	Y	1	
007		1450	SRB-40-19.5												X	S	-	-	Y	1	
008		1537	SRB-41-1.0					X			X	X	X	X		S	-	-	Y	1	
009		1548	SRB-41-4.5					X			X	X	X	X		S	-	-	Y	1	
010		1555	SRB-41-7.5												X	S	-	-	Y	1	
011		1602	SRB-41-10.5												X	S	-	-	X	1	
							CR														
							3/7/00														

Laboratory: Entech

Turnaround Time: 5 Day Firm

Results to: Penny Tse

Total No. of Containers: 11

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment:
Chuck Rome	3/8/00					Lab Pick up
Printed Name: Charles Rome	Time: 0845	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix		Company:		Company:		
Received by:	Date:	Received by:	Date:	Received by:	Date:	
Printed Name: E. Cattheran	Time:	Printed Name:	Time:	Printed Name:	Time:	
Company: Entech		Company:		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

April 07, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19426	**Date Collected:**	3/7/00
Project Name:	Santa Rosa	**Date Received:**	3/8/00
Project Number:	2770.005	**P.O. Number:**	Invoice UP
Project Notes:			

On March 08, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Arsenic	EPA 6010B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 4/7/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19426 **Lab Sample ID:** 19426-004 **Client Sample ID:** SRB-40-10.5

Sample Time: 2:05 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	ND	20	0.25	5	mg/Kg	4/3/00	4/4/00	SM000402	EPA 6010B

Order ID: 19426 **Lab Sample ID:** 19426-011 **Client Sample ID:** SRB-41-10.5

Sample Time: 4:02 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Arsenic	ND	20	0.25	5	mg/Kg	4/3/00	4/4/00	SM000402	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle D. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes
METHOD: EPA 6010

QC Batch #: SM000402
Matrix: Solid
Units: mg/kg

Date Analyzed: 04/06/00
Date Digested: 04/04/00
Digestion Method: EPA 3050
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	46.	**93**	46.	**92**	0.9	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	42.	**83**	41.	**83**	0.9	25.0	75-125
Barium	6010	<1.0	50.	0.0	46.	**92**	46.	**92**	0.3	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	47.	**95**	47.	**95**	0.3	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	45.	**91**	46.	**92**	1.2	25.0	75-125
Chromium	6010	<1.0	50.	0.0	50.	**100**	50.	**100**	0.4	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	48.	**96**	49.	**98**	1.2	25.0	75-125
Copper	6010	<1.0	50.	0.0	45.	**90**	45.	**90**	0.0	25.0	75-125
Lead	6010	<1.0	50.	0.0	49.	**98**	50.	**99**	1.7	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	50.	**99**	50.	**99**	0.3	25.0	75-125
Nickel	6010	<1.0	50.	0.0	51.	**102**	52.	**103**	1.1	25.0	75-125
Selenium	6010	<1.0	50.	0.0	43.	**87**	43.	**87**	0.1	25.0	75-125
Silver	6010	<1.0	50.	0.0	46.	**92**	46.	**93**	0.4	25.0	75-125
Thallium	6010	<1.0	50.	0.0	48.	**97**	51.	**102**	5.4	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	48.	**96**	48.	**96**	0.4	25.0	75-125
Zinc	6010	<1.0	50.	0.0	47.	**94**	47.	**95**	0.9	25.0	75-125

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Matrix Spike and Matrix Spike Duplicate
METHOD: EPA 6010

QC Batch #: SM000402
Matrix: Solid
Units: mg/kg

Date Analyzed: 04/06/00
Date Digested: 04/04/00
Digestion Method: EPA 3050
Spiked Sample: 19840-001

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	115.4	135.	38	174.	117	25.4	25.0	64-102
Arsenic	6010	<1.0	50.	0.0	37.	74	35.	71	4.2	25.0	64-115
Barium	6010	<1.0	50.	0.0	45.	91	44.	88	3.2	25.0	75-113
Beryllium	6010	<1.0	50.	0.0	45.	90	44.	88	2.6	25.0	71-110
Cadmium	6010	<1.0	50.	0.0	45.	90	44.	89	0.9	25.0	70-100
Chromium	6010	<1.0	50.	0.0	48.	95	47.	94	1.7	25.0	68-112
Cobalt	6010	<1.0	50.	0.0	46.	93	46.	91	1.4	25.0	59-114
Copper	6010	<1.0	50.	0.0	48.	95	45.	91	4.8	25.0	75-109
Lead	6010	<1.0	50.	0.0	45.	89	44.	88	1.5	25.0	64-115
Molybdenum	6010	<1.0	50.	0.0	45.	90	45.	90	0.5	25.0	69-113
Nickel	6010	<1.0	50.	0.0	51.	101	48.	97	4.7	25.0	60-112
Selenium	6010	<1.0	50.	0.0	34.	67	36.	72	6.2	25.0	67-103
Silver	6010	<1.0	50.	0.0	47.	93	46.	91	2.5	25.0	65-111
Thallium	6010	<1.0	50.	0.0	52.	104	47.	93	10.5	25.0	70-109
Vanadium	6010	<1.0	50.	0.0	45.	90	44.	88	2.3	25.0	69-114
Zinc	6010	<1.0	50.	0.0	49.	98	48.	97	1.4	25.0	69-119

Calculated Recoveries Outside of Control Limits:
Antimony

Definition of Terms:

- na: Not Analyzed in QC batch
- nc: Not Calculated
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

FAX

from **Geomatrix Consultants, Inc.**
2101 Webster Street, 12th Floor, Oakland, CA 94612
www.geomatrix.com

GEOMATRIX

Date: 3/31/00

Number of pages including cover sheet: 2

The information in this telecopy is intended for the named recipient(s) only. It may contain privileged and confidential matter. If you have received this telecopy in error, please notify the sender immediately. Thank you.

To:

Allan Aks
Entech

Fax Phone: **408-735-1554**
Phone: **408-735-1550**
cc:

From:

Penny Tse
Project Engineer

Fax Phone: **510-663-4141**
Phone: **510-663-4100**
Direct dial:
Email:
Project No.: 2770.005
Project Name: Santa Rosa Option Property

REMARKS:

☐ Hard copy to follow ☒ Urgent ☒ For your review ☐ Reply ASAP ☐ Please comment

Allan,

Attached are amended COCs for the following analysis:

COC #3763 - Sample SRB40-10.5(19426-004) for arsenic (6010)
Sample SRB41-10.5 (19426-011) for arsenic (6010)

Please contact me if you have any questions

Chain-of-Custody Record

003763

Date: 3/7/00 | Page 1

Project No.: 2770.005

Samplers (Signature:) Chl Rome

ANALYSES

REMARKS

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM 17 Metals	Hold Arsenic	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
426																					Bill UP Directly - Contact Johnny Contract # 707 311
001	3/7/00	1335	SRB-40-1.0					X			X	X	X	X		S	-	-	Y	1	- 5 Day turn firm, may request additional analyses
002		1343	SRB-40-4.5					X			X	X	X	X		S	-	-	Y	1	- Sil gel cleanup on
003		1357	SRB-40-7.5											X		S	-	-	Y	1	samples for diesel +
004		1405	SRB-40-10.5											X		S	-	-	Y	1	motor oil
005		1417	SRB-40-14.5											X		S	-	-	Y	1	
006		1430	SRB-40-16.5											X		S	-	-	Y	1	
007		1450	SRB-40-19.5											X		S	-	-	Y	1	
008		1537	SRB-41-1.0					X			X	X	X			S	-	-	Y	1	
009		1548	SRB-41-4.5					X			X	X	X			S	-	-	Y	1	
310		1555	SRB-41-7.5											X		S	-	-	Y	1	
611		1602	SRB-41-10.5											X		S	-	-	Y	1	

CR 3/7/00

Laboratory: Entech

Turnaround Time: 5 Day Firm

Results to: Penny Tse

Total No. of Containers: 11

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Chl Rome	3/10/00				
Printed Name: Charles Rome	Time: 0845	Printed Name:	Time:	Printed Name:	Time:
Company: Geomatrix		Company:		Company:	
Received by:	Date:	Received by:	Date:	Received by:	Date:
Printed Name: E. Kathleen	Time:	Printed Name:	Time:	Printed Name:	Time:
Company: Entech		Company:		Company:	

Method of Shipment: Lab Pick up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

03/31/00 FRI 16:16 FAX 510 663 4141 GEOMATRIX OAKLAND 002

March 16, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: Geomatrix Consultants
Lab No.: 42400-001/011

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3550B
Matrix:	Solid
Units:	ug/kg

EPA Method 8270C SIM (PAH's only)

Lab No.:	Method Blank	42400-001										
Client Sample I.D.:	--	19426-001 SRB-40-1.0										
Date Sampled:	--	03/07/00										
QC Batch #:	S008270S076	S008270S076										
Date Extracted:	03/10/00	03/10/00										
Date Analyzed:	03/14/00	03/14/00										
Analyst Initials:	SC	SC										
Dilution Factor:	1	300 *										

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND	3000	ND								
Acenaphthylene	10	10	ND	3000	ND								
Acenaphthene	10	10	ND	3000	ND								
Fluorene	10	10	ND	3000	ND								
Phenanthrene	10	10	ND	3000	ND								
Anthracene	10	10	ND	3000	ND								
Fluoranthene	10	10	ND	3000	ND								
Pyrene	10	10	ND	3000	ND								
Benzo(a)anthracene	10	10	ND	3000	ND								
Chrysene	10	10	ND	3000	ND								
Benzo(b)fluoranthene	10	10	ND	3000	ND								
Benzo(k)fluoranthene	10	10	ND	3000	ND								
Benzo(a)pyrene	10	10	ND	3000	ND								
Indeno(1,2,3-cd)pyrene	10	10	ND	3000	ND								
Dibenzo(a,h)anthracene	10	10	ND	3000	ND								
Benzo(ghi)perylene	10	10	ND	3000	ND								

Surrogate Recovery	%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4	59	17-97	DO	17-97								
Nitrobenzene-d5	60	20-100	DO	20-100								
2-Fluorobiphenyl	63	21-114	DO	21-114								
Terphenyl-d14	80	17-130	DO	17-130								

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed
* = Dilution due to sample matrix
DO = Diluted Out

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - SOIL(ug/Kg)

Method : D:\HPCHEM\1\METHODS\SSIM0308.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Thu Mar 09 15:28:32 2000
Response via : Initial Calibration

Non-Spiked Sample: S0317003.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0317005.D	S0317006.D
Sample :	M-BLANK,S008270S080,MS	M-BLANK,S008270S080,MSD
Acq Time:	17 Mar 2000 2:18 pm	17 Mar 2000 2:56 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	321	309	63	60	4	19	39-103
Pyrene	0.0	500	435	438	85	86	1	17	24-124

QCBATCH# S008270S080

Reviewed/Approved by: C-Persaud Date: 03/30/00
Compton Persaud
Department Supervisor

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3550B
Matrix:	Soil
Units:	ug/kg

EPA Method 8270C SIM (PAH's only)

Lab No.:		LCS											
Client Sample I.D.:		—											
Date Sampled:		—											
QC Batch #:		S008270S076											
Date Extracted:		03/10/00											
Date Analyzed:		03/14/00											
Analyst Initials:		SC											
Dilution Factor:		1											
ANALYTE	MDL	%Rec	Limits	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	70	11-182										
Acenaphthylene	10	71	11-182										
Acenaphthene	10	71	11-182										
Fluorene	10	75	11-182										
Phenanthrene	10	87	11-182										
Anthracene	10	73	11-182										
Fluoranthene	10	81	11-182										
Pyrene	10	81	11-182										
Benzo(a)anthracene	10	74	11-182										
Chrysene	10	86	11-182										
Benzo(b)fluoranthene	10	85	11-182										
Benzo(k)fluoranthene	10	93	11-182										
Benzo(a)pyrene	10	73	11-182										
Indeno(1,2,3-cd)pyrene	10	55	11-182										
Dibenzo(a,h)anthracene	10	55	11-182										
Benzo(ghi)perylene	10	56	11-182										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	57	17-97										
Nitrobenzene-d5	58	20-100										
2-Fluorobiphenyl	62	21-114										
Terphenyl-d14	79	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - Soil (ug/Kg)

Method : D:\HPCHEM\1\METHODS\SSIM0308.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Thu Mar 09 15:28:32 2000
Response via : Initial Calibration

Non-Spiked Sample: S0313040.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0313035.D	S0313036.D
Sample :	42398-004,S008270S076,MS	42398-004,S008270S076,MSD
Acq Time:	14 Mar 2000 8:54 am	14 Mar 2000 9:32 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	317	308	63	62	2	19	39-103
Pyrene	0.0	500	437	430	87	86	1	17	24-124

QCBATCH# S008270S076

Reviewed/Approved by: C. Persaud Date: 03/16/00
Compton Persaud
Department Supervisor

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/8/00	3/15/00	19426

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19426-001	SRB-40-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	1:35 PM	ILVER SLEEV	
19426-002	SRB-40-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	1:43 PM	ILVER SLEEV	
19426-008	SRB-41-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	3:37 PM	ILVER SLEEV	
19426-009	SRB-41-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	3:48 PM	ILVER SLEEV	

19926-003
-004
-005
-006
-007
-[redacted]010
-011

On hold

19426-003 off hold.
19426-005 ↓
Run for 8270-SIM.
Due 3/20/00. MB 3/13.

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/8/00	1800
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Notes:

March 31, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: Geomatrix Consultants
Lab No.: 42786-001

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

Client:
Attn:

Client's Project:
Date Received:
Matrix:
Units:
Extraction Method:

Lab No.:
Client Sample I.D.:
Date Sampled:
QC Batch #:
Date Extracted:
Date Analyzed:
Analyst Initials:
Dilution Factor:
ANALYTE
Naphthalene
Acenaphthylene
Acenaphthene
Fluorene
Phenanthrene
Anthracene
Fluoranthene
Pyrene
Benzo[a]anthracene
Chrysene
Benzo[b]fluoranthene
Benzo[k]fluoranthene
Benzo[a]pyrene
Indeno[1,2,3-cd]pyrene
Dibenz[a,h,]anthracene
Benzo[g,h,i]perylene

Surrogate Recovery
1,2-Dichlorobenzene-d4
Nitrobenzene-d5
2-Fluorobiphenyl
Terphenyl-d14

MDL = Method Detectic
ND = Not Detected (B
DLR = MDL x Dilution I
NA = Not Analyzed

Approved/Reviewed By:

The cover letter is an integ

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for t use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorizatio

Spike Recovery and RPD Summary Report - WATER (ng/L)

Method : D:\HPCHEM\1\METHODS\SSIM0323.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Fri Mar 24 10:26:31 2000
Response via : Initial Calibration

Non-Spiked Sample: S0329023.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0329025.D	S0329026.D
Sample :	MS BLANK, S008270W095, MS	MSD BLANK, S008270W095, MSD
Acq Time:	29 Mar 2000 10:07 pm	29 Mar 2000 10:45 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	316	293	63	58	8	17	46- 94
Pyrene	0.0	500	348	336	69	67	4	16	36-114

QCBATCH#008270W-095

Reviewed / Approved by: C. Persaud Date: 03/31/00
Compton Persaud
Department Supervisor

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 . Tel: 562 989-4045 Fax: 562 989-4040

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/24/00	3/31/00	19426

Sample Number:	Customer Sample Number:	Matrix: Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19426-003	SRB-40-7.5	Liquid ~~Solid~~ EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	1:57 PM	SS tube	

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/24/00	1800
Relinquished By:	Received By:	Date:	Time:
	Sue Clark	3/27/00	8:45
Relinquished By:	Received By:	Date:	Time:

Notes: This is STLC rainwater extract
If hits, please run filter blank, call for work order #

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 10, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Dear Penny Tse,

Enclosed is the original hard copy report for Lab Project # 19426 your Project #: 2770.005. Please insert these pages in your report package.

Sincerely,

Andrea M. Edwards

March 21, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: Geomatrix Consultants
Lab No.: 42400-001/011

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants

Date Received: 03/09/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

Date Amended: 03/21/00

EPA Method 8270C SIM (PAH's only)

Lab No.:		Method Blank		42400-005									
Client Sample I.D.:		--		19426-003									
Date Sampled:		--		03/07/00									
QC Batch #:		S008270S080		S008270S080									
Date Extracted:		03/14/00		03/14/00									
Date Analyzed:		03/17/00		03/17/00									
Analyst Initials:		SC		SC									
Dilution Factor:		1		5 *									
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND	50	ND								
Acenaphthylene	10	10	ND	50	ND								
Acenaphthene	10	10	ND	50	ND								
Fluorene	10	10	ND	50	ND								
Phenanthrene	10	10	ND	50	ND								
Anthracene	10	10	ND	50	ND								
Fluoranthene	10	10	ND	50	ND								
Pyrene	10	10	ND	50	ND								
Benzo(a)anthracene	10	10	ND	50	ND								
Chrysene	10	10	ND	50	ND								
Benzo(b)fluoranthene	10	10	ND	50	ND								
Benzo(k)fluoranthene	10	10	ND	50	ND								
Benzo(a)pyrene	10	10	ND	50	ND								
Indeno(1,2,3-cd)pyrene	10	10	ND	50	ND								
Dibenzo(a,h)anthracene	10	10	ND	50	ND								
Benzo(ghi)perylene	10	10	ND	50	ND								

Surrogate Recovery	%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4	59	17-97	37	17-97								
Nitrobenzene-d5	62	20-100	8**	20-100								
2-Fluorobiphenyl	63	21-114	48	21-114								
Terphenyl-d14	80	17-130	132**	17-130								

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

* = Dilution due to sample matrix
** = Matrix interfernce

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/21/00

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants

Date Received: 03/09/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

Date Amended: 03/21/00

EPA Method 8270C SIM (PAH's only)

Lab No.:	42400-007											
Client Sample I.D.:	19426-005											
Date Sampled:	03/07/00											
QC Batch #:	S008270S080											
Date Extracted:	03/14/00											
Date Analyzed:	03/17/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	ND										
Anthracene	10	10	ND										
Fluoranthene	10	10	ND										
Pyrene	10	10	ND										
Benzo(a)anthracene	10	10	ND										
Chrysene	10	10	ND										
Benzo(b)fluoranthene	10	10	ND										
Benzo(k)fluoranthene	10	10	ND										
Benzo(a)pyrene	10	10	ND										
Indeno(1,2,3-cd)pyrene	10	10	ND										
Dibenzo(a,h)anthracene	10	10	ND										
Benzo(ghi)perylene	10	10	ND										

Surrogate Recovery	%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4	59	17-97	42	17-97								
Nitrobenzene-d5	60	20-100	55	20-100								
2-Fluorobiphenyl	63	21-114	55	21-114								
Terphenyl-d14	80	17-130	78	17-130								

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/21/00

The cover letter is an integral part of this analytical report.

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/8/00	3/15/00	19426

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19426-001	SRB-40-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	1:35 PM	ILVER SLEEV	
19426-002	SRB-40-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	1:43 PM	ILVER SLEEV	
19426-008	SRB-41-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	3:37 PM	ILVER SLEEV	
19426-009	SRB-41-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	3:48 PM	ILVER SLEEV	

19426-003
-004
-005
-006
-007
-[redacted]010
-011

on hold

19426-003 off hold.
19426-005
Run for 8270-SIM.
Due 3/20/00. MB 3/13.

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/8/00	1800
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Notes:

Chain-of-Custody Record

003763

Date: 3/7/00 | Page 1 of 1

Project No.: 2770.005

Samplers (Signature:)

Chuck Rome

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM 17 Metals Hold	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/7/00	1335	SRB-40-1.0					X			X	X	X		S	-	-	Y	1
"	1343	SRB-40-4.5					X			X	X	X		S	-	-	Y	1
"	1357	SRB-40-7.5											X	S	-	-	Y	1
"	1405	SRB-40-10.5											X	S	-	-	Y	1
"	1419	SRB-40-14.0											X	S	-	-	Y	1
"	1430	SRB-40-16.5											X	S	-	-	Y	1
"	1450	SRB-40-19.5											X	S	-	-	Y	1
"	1537	SRB-41-1.0					X			X	X	X		S	-	-	Y	1
"	1548	SRB-41-4.5					X			X	X	X		S	-	-	Y	1
"	1535	SRB-41-7.5											X	S	-	-	Y	1
"	1602	SRB-41-10.5											X	S	-	-	X	1
						CR 3/7/00												

REMARKS

Additional Comments

Bill UP Directly - Contact John Mee
Contract # 707 311

- 5 Day turn firm, may request additional analyses
- Sil gel cleanup on samples for diesel + motor oil

Laboratory: Entech

Turnaround Time: 5 Day Firm

Results to: Penny Tse

Total No. of Containers: 11

Relinquished by (Signature):	Date: 3/8/00	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Printed Name: Charles Rome	Time: 0845	Printed Name:	Time:	Printed Name:	Time:
Company: Geomatrix		Company:		Company:	
Received by:	Date:	Received by:	Date:	Received by:	Date:
Printed Name: E. Gallegos	Time:	Printed Name:	Time:	Printed Name:	Time:
Company: Entech		Company:		Company:	

Method of Shipment: Lab Pick up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 15, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19427	**Date Collected:**	3/7/00
Project Name:	Santa Rosa	**Date Received:**	3/8/00
Project Number:	2770.005	**P.O. Number:**	
Project Notes:			

On March 08, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	EPA 8260B	EPA 8260B
	EPA 8270 PAH SIMS-ATL	EPA 8270
	TPH as Diesel w/ Si-Gel Column	EPA 8015 MOD. (Extractable)
	TPH as Diesel w/ Si-Gel Column + Filter	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column + Filter	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number:
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19427 **Lab Sample ID:** 19427-002 **Client Sample ID:** SRB-40

Sample Time: 6:50 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	104	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	104	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19427 **Lab Sample ID:** 19427-004 **Client Sample ID:** SRB-41

Sample Time: 5:05 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	101	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	101	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number:
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19427 **Lab Sample ID:** 19427-002 **Client Sample ID:** SRB-40

Sample Time: 6:50 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/13/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	112	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/13/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	112	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number:
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19427 **Lab Sample ID:** 19427-004 **Client Sample ID:** SRB-41

Sample Time: 5:05 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/13/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	133	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/13/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	133	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number:
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19427 **Lab Sample ID:** 19427-001 **Client Sample ID:** SRB-40

Sample Time: 6:20 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/15/00	WMS000314	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/15/00	WMS000314	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/15/00	WMS000314	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/15/00	WMS000314	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/15/00	WMS000314	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/8/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number:
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19427 **Lab Sample ID:** 19427-003 **Client Sample ID:** SRB-41

Sample Time: 4:30 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
trans-1,2-Dichloroethene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
trans-1,3-Dichloropropene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
trans-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/15/00	WMS000314	EPA 8260B
Trichloroethene	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Trichlorofluoromethane	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Vinyl Chloride	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B
Xylenes, Total	ND		1	5	5	µg/L	3/15/00	WMS000314	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96	79 - 125
Dibromofluoromethane	102	78 - 132
Toluene-d8	99	81 - 114

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

March 14, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: Geomatrix Consultants
Lab No.: 42399-001/002

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3510C**
Matrix:	**Liquid**
Units:	**ug/L**

EPA Method 8270 SIM (PAH's only)

Lab No.:	Method Blank		42399-001									
Client Sample I.D.:	--		19427-002 SRB-40 Filtered									
Date Sampled:	--		03/07/00									
QC Batch #:	S008270W079		S008270W079									
Date Extracted:	03/13/00		03/13/00									
Date Analyzed:	03/14/00		03/14/00									
Analyst Initials:	SC		SC									
Dilution Factor:	1		1									

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND	0.2	ND								
Acenaphthylene	0.2	0.2	ND	0.2	ND								
Acenaphthene	0.2	0.2	ND	0.2	ND								
Fluorene	0.2	0.2	ND	0.2	ND								
Phenanthrene	0.2	0.2	ND	0.2	ND								
Anthracene	0.2	0.2	ND	0.2	ND								
Fluoranthene	0.2	0.2	ND	0.2	ND								
Pyrene	0.2	0.2	ND	0.2	ND								
Benzo(a)anthracene	0.2	0.2	ND	0.2	ND								
Chrysene	0.2	0.2	ND	0.2	ND								
Benzo(b)fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo(k)fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo(a)pyrene	0.2	0.2	ND	0.2	ND								
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND	0.2	ND								
Dibenzo(a,h)anthracene	0.2	0.2	ND	0.2	ND								
Benzo(ghi)perylene	0.2	0.2	ND	0.2	ND								

Surrogate Recovery	%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4	39	24- 93	45	24- 93								
Nitrobenzene-d5	46	18-118	57	18-118								
2-Fluorobiphenyl	46	27-113	54	27-113								
Terphenyl-d14	59	19-115	62	19-115								

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Compton Persaud

Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3510C**
Matrix:	**Liquid**
Units:	**ug/L**

EPA Method 8270 SIM (PAH's only)

Lab No.:	Method Blank	42399-001										
Client Sample I.D.:	--	19427-002 SRB-40										
		Unfiltered										
Date Sampled:	--	03/07/00										
QC Batch #:	S008270W079	S008270W079										
Date Extracted:	03/13/00	03/13/00										
Date Analyzed:	03/14/00	03/14/00										
Analyst Initials:	SC	SC										
Dilution Factor:	1	1										
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND	0.2	ND								
Acenaphthylene	0.2	0.2	ND	0.2	ND								
Acenaphthene	0.2	0.2	ND	0.2	ND								
Fluorene	0.2	0.2	ND	0.2	ND								
Phenanthrene	0.2	0.2	ND	0.2	ND								
Anthracene	0.2	0.2	ND	0.2	ND								
Fluoranthene	0.2	0.2	ND	0.2	ND								
Pyrene	0.2	0.2	ND	0.2	ND								
Benzo(a)anthracene	0.2	0.2	ND	0.2	ND								
Chrysene	0.2	0.2	ND	0.2	ND								
Benzo(b)fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo(k)fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo(a)pyrene	0.2	0.2	ND	0.2	ND								
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND	0.2	ND								
Dibenzo(a,h)anthracene	0.2	0.2	ND	0.2	ND								
Benzo(ghi)perylene	0.2	0.2	ND	0.2	ND								

Surrogate Recovery	%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4	39	24-93	57	24-93								
Nitrobenzene-d5	46	18-118	61	18-118								
2-Fluorobiphenyl	46	27-113	63	27-113								
Terphenyl-d14	59	19-115	66	19-115								

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Water
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:		LCS											
Client Sample I.D.:		--											
Date Sampled:		--											
QC Batch #:		S008270W079											
Date Extracted:		03/13/00											
Date Analyzed:		03/14/00											
Analyst Initials:		SC											
Dilution Factor:		1											
ANALYTE	MDL	%Rec	Limits	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	80	9-147										
Acenaphthylene	0.2	84	9-147										
Acenaphthene	0.2	79	9-147										
Fluorene	0.2	83	9-147										
Phenanthrene	0.2	84	9-147										
Anthracene	0.2	84	9-147										
Fluoranthene	0.2	87	9-147										
Pyrene	0.2	84	9-147										
Benzo(a)anthracene	0.2	86	9-147										
Chrysene	0.2	93	9-147										
Benzo(b)fluoranthene	0.2	89	9-147										
Benzo(k)fluoranthene	0.2	100	9-147										
Benzo(a)pyrene	0.2	86	9-147										
Indeno(1,2,3-cd)pyrene	0.2	61	9-147										
Dibenzo(a,h)anthracene	0.2	62	9-147										
Benzo(ghi)perylene	0.2	62	9-147										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	50	24- 93										
Nitrobenzene-d5	68	18-118										
2-Fluorobiphenyl	60	27-113										
Terphenyl-d14	80	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - WATER(ug/L)

Method : D:\HPCHEM\1\METHODS\SSIM0308.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Thu Mar 09 15:28:32 2000
Response via : Initial Calibration

Non-Spiked Sample: S0313025.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0313038.D	S0313039.D
Sample :	M-BLANK,S008270W079,MS	M-BLANK,S008270W079,MSD
Acq Time:	14 Mar 2000 10:47 am	14 Mar 2000 11:25 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	374	365	74	72	2	17	46- 94
Pyrene	0.0	500	409	417	80	82	2	16	36-114

QCBATCH# S008270W079

Reviewed/Approved by: C. Persaud Date: 03/14/00
Compton Persaud
Department Supervisor

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Spikes

QC Batch #: DW000309SiO2(Column)
Matrix: Liquid
Units: µg/L

Date analyzed: 03/11/00
Date extracted: 03/10/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<50.0	1000	ND	833	83	894	89	7.0	25	58-121
Hexocosane(S.S.)				100%	99%		94%				53-119

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds
Laboratory Control Sample

QC Batch #: WMS000314
Matrix: Liquid
Units: µg/L

Date analyzed: 03/14/00
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
1,1- Dichloroethene	8240/8260	40	ND	38.8	97	36.9	92	5.0	25	50-150
Methyl-tert-butyl ether	8240/8260	40	ND	36.9	92	36.1	90	2.2	25	50-150
Benzene	8240/8260	40	ND	42.4	106	39.6	99	6.8	25	50-150
Trichloroethene	8240/8260	40	ND	39.7	99	38.9	97	2.0	25	50-150
Toluene	8240/8260	40	ND	38.7	97	41.7	104	7.5	25	50-150
Chlorobenzene	8240/8260	40	ND	40.1	100	40.0	100	0.2	25	50-150
Surrogates										
Dibromofluoromethane	8240/8260		96%	93%		87%				65-135
MTBE-d3	8240/8260		94%	87%		88%				65-135
Toluene -d8	8240/8260		97%	92%		99%				65-135
4-Bromofluorobenzene	8240/8260		99%	101%		95%				65-135

Definition of Terms:

na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/8/00	3/14/00	19427

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19427-002	SRB-40	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	6:50 PM	Amber Jar	
19427-004	SRB-41	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	5:05 PM	Amber Jar	

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/8/00	1800
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Notes: ~~Filter Blank on hold,if hits please run.~~ cancel per MG 3/10 Filter Blank is now 19471
2 sets of ambers per sample. 1 set is filtered,the otherset is not.
Run both sets!

Chain-of-Custody Record

003759

Date: 3/7/00 | Page 1 of 1

Project No.: 2770.005

Samplers (Signature:) Todd Loan

19427

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 *	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only) ①	Method 8015M (Gasoline)	Method 8015M (Diesel) ①	Method 8015M (Motor Oil) ①	Silica Gel Cleanup	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/7/00	1820	SRB-40				X							W	N	Y	Y	3
3/7/00	1850	SRB-40						X					W	N	N	Y	3
3/7/00	1850	SRB-40								X	X	X	W	N	N	Y	3
3/7/00	1630	SRB-41				X							W	N	Y	Y	3
3/7/00	1705	SRB-41						X					W	N	N	Y	3
3/7/00	1705	SRB-41								X	X	X	W	N	N	Y	3

001 002 003 004 005

ANALYSES

REMARKS

Additional Comments

- Please Bill Union Pacific directly - Contact: John Moe Contract No.: 707311
- 5 day Turnaround - Firm
May require additional analysis

* Include MTBE and fuel Oxygenates for EPA 8260

① Please use a 0.7 micron glass filter on 1 of each 3 samples taken for PNAs (8270 SIM) and for TPH-d/TPH-mo (8015M)

Clarification: Perform filtered + unfiltered analysis for TPH + PNAs

Laboratory: Entech

Turnaround Time: 5 day - Firm

Results to: Penny Tse

Total No. of Containers: 18

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Todd Loan	3/8/00				
Printed Name: Todd Loan	Time:	Printed Name:	Time:	Printed Name:	Time:
Company: Geomatrix	0815	Company:		Company:	
Received by:	Date:	Received by:	Date:	Received by:	Date:
Printed Name:	Time:	Printed Name:	Time:	Printed Name:	Time:
Company:		Company:		Company:	

Method of Shipment: Lab Pick-up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

03/08/00 WED 15:52 FAX 510 663 4141 GEOMATRIX OAKLAND 005

Chain-of-Custody Record

003759

Date: 3/7/00 | Page 1 of 1

Project No.: 2770.005

Samplers (Signature:) Todd Loan

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 *	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only) (1)	Method 8015M (Gasoline)	Method 8015M (Diesel) (1)	Method 8015M (Motor Oil) (1)	Silica Gel Cleanup									Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
																				19427					
3/7/00	1820	SRB-40				X														001	W	N	Y	Y	3
3/7/00	1850	SRB-40						X												002	W	N	N	Y	3
3/7/00	1850	SRB-40								X	X	X									W	N	N	Y	3
3/7/00	1630	SRB-41				X														003	W	N	Y	Y	3
3/7/00	1705	SRB-41						X												004	W	N	N	Y	3
3/7/00	1705	SRB-41								X	X	X									W	N	N	Y	3

Laboratory: Entech

Turnaround Time: 5 day - Firm

Results to: Penny Tse

Total No. of Containers: 18

REMARKS

Additional Comments

- Please Bill Union Pacific directly. Contact: John Moe Contract No.: 707311
- 5 day Turnaround - Firm May require additional analysis

* Include MTBE and fuel Oxygenates for EPA 8260

(1) Please use a 0.7 Micron glass filter on 1 of each 3 samples taken for PNAs (8270 SIM) and for TPHd/TPHmo (8015M)

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Todd Loan	3/8/00				
Printed Name: Todd Loan	Time:	Printed Name:	Time:	Printed Name:	Time:
Company: Geomatrix	0815	Company:		Company:	
Received by:	Date:	Received by:	Date:	Received by:	Date:
Printed Name: Eugene Fobian	Time:	Printed Name:	Time:	Printed Name:	Time:
Company: Entech		Company:		Company:	

Method of Shipment: Lab Pick-up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/8/00	3/14/00	19427

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19427-002	SRB-40	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	6:50 PM	Amber Jar	
19427-004	SRB-41	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	5:05 PM	Amber Jar	

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/8/00	1800
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Notes: Filter Blank on hold,if hits please run.
2 sets of ambers per sample. 1 set is filtered,the otherset is not.
Run both sets!

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/8/00	3/14/00	19427

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19427-002	SRB-40	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	6:50 PM	Amber Jar	
19427-004	SRB-41	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	5:05 PM	Amber Jar	

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/8/00	1800
Relinquished By:	Received By: Diane Galvan	Date: 3-9-00	Time: 0900
Relinquished By:	Received By:	Date:	Time:

Notes: Filter Blank on hold,if hits please run.
2 sets of ambers per sample. 1 set is filtered,the otherset is not.
Run both sets!

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 15, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order: 19409
Project Name: Santa Rosa
Project Number: 2770.005
Project Notes:

Date Collected: 3/6/00
Date Received: 3/7/00
P.O. Number: Invoice Union Pacific

On March 07, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	EPA 8260B	EPA 8260B

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-014 **Client Sample ID:** Trip Blank

Sample Time: **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/15/00	WMS000315	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-014 **Client Sample ID:** Trip Blank

Sample Time: **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Carbon Disulfide	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Carbon Tetrachloride	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Chlorobenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Chloroethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Chloroform	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Chloromethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
cis-1,2-Dichloroethene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
cis-1.3-Dichloropropene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
cis-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
Dibromochloromethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Dibromomethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Dichlorodifluoromethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Diisopropyl Ether	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Ethyl Benzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Ethyl Methacrylate	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Hexachlorobutadiene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Iodomethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Isopropylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Methacrylonitrile	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Methyl Methacrylate	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Methyl-t-butyl Ether	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Methylene Chloride	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
n-Butylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
n-Propylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Naphthalene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
p-Isopropyltoluene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Pentachloroethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Propionitrile	ND		1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
sec-Butylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Styrene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
tert-Butanol	ND		1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
tert-Butyl Ethyl Ether	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
tert-Butylbenzene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Tetrachloroethene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-014 **Client Sample ID:** Trip Blank

Sample Time: **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
trans-1,2-Dichloroethene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
trans-1,3-Dichloropropene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
trans-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
Trichloroethene	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Trichlorofluoromethane	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Vinyl Chloride	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Xylenes, Total	ND		1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	96	79 - 125
Dibromofluoromethane	100	78 - 132
Toluene-d8	100	81 - 114

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/15/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1,1-Trichloroethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1,2-Trichloroethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1-Dichloroethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1-Dichloroethene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,1-Dichloropropene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2,3-Trichlorobenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2,3-Trichloropropane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2,4-Trichlorobenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2,4-Trimethylbenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dibromoethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dichlorobenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dichloroethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,2-Dichloropropane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,3,5-Trimethylbenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,3-Dichlorobenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,3-Dichloropropane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
1,4-Dichlorobenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
2,2-Dichloropropane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
2-Butanone (MEK)	ND	1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
2-Chloroethyl-vinyl Ether	ND	1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
2-Chlorotoluene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
2-Hexanone	ND	1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
4-Chlorotoluene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND	1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
Acetone	ND	1	100	100	µg/L	3/15/00	WMS000315	EPA 8260B
Acrylonitrile	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Allyl Chloride	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Benzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Benzyl Chloride	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Bromobenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Bromochloromethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Bromodichloromethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Bromoform	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/15/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Carbon Disulfide	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Carbon Tetrachloride	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Chlorobenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Chloroethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Chloroform	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Chloromethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
cis-1,2-Dichloroethene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
cis-1,3-Dichloropropene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
cis-1,4-Dichloro-2-butene	ND	1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
Dibromochloromethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Dibromomethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Dichlorodifluoromethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Diisopropyl Ether	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Ethyl Benzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Ethyl Methacrylate	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Hexachlorobutadiene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Iodomethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Isopropylbenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Methacrylonitrile	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Methyl Methacrylate	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Methyl-t-butyl Ether	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Methylene Chloride	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
n-Butylbenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
n-Propylbenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Naphthalene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
p-Isopropyltoluene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Pentachloroethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Propionitrile	ND	1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
sec-Butylbenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Styrene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
tert-Amyl Methyl Ether	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
tert-Butanol	ND	1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
tert-Butyl Ethyl Ether	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
tert-Butylbenzene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Tetrachloroethene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/15/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
trans-1,2-Dichloroethene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
trans-1,3-Dichloropropene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	1	20	20	µg/L	3/15/00	WMS000315	EPA 8260B
Trichloroethene	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Trichlorofluoromethane	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Vinyl Chloride	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B
Xylenes, Total	ND	1	5	5	µg/L	3/15/00	WMS000315	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	97	79 - 125
Dibromofluoromethane	96	79 - 125
Toluene-d8	99	79 - 125

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 14, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19409	**Date Collected:**	3/6/00
Project Name:	Santa Rosa	**Date Received:**	3/7/00
Project Number:	2770.005	**P.O. Number:**	Invoice Union Pacific
Project Notes:			

On March 07, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Liquid	EPA 8260B	EPA 8260B
	EPA 8270 PAH SIMS-ATL	EPA 8270
	TPH as Diesel w/ Si-Gel Column	EPA 8015 MOD. (Extractable)
	TPH as Diesel w/ Si-Gel Column + Filter	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column + Filter	EPA 8015 MOD. (Extractable)

Case Narrative: Due to the limitation of LIMS software, the Hexacosane surrogate recovery limits reported reflect normal TPH-extractrables surrogate limits rather than silica gel cleanup limits. The correct surrogate control limits for silica gel cleanup are 53-119 rather than 65-135

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-002 **Client Sample ID:** SRB-38
Sample Time: 3:20 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	99	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	99	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19409 **Lab Sample ID:** 19409-004 **Client Sample ID:** SRB-36
Sample Time: 5:25 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	67	x	1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	90	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	90	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-006 **Client Sample ID:** SRB-46

Sample Time: 6:40 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	91	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	91	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19409 **Lab Sample ID:** 19409-007 **Client Sample ID:** EQB-3-00

Sample Time: 9:00 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	96	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	96	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-009 **Client Sample ID:** SRB-32

Sample Time: 10:50 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	99	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	99	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19409 **Lab Sample ID:** 19409-011 **Client Sample ID:** SRB-35

Sample Time: 11:40 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	95	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	95	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

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Environmental Analysis Since 1983

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Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-013 **Client Sample ID:** SRB-34

Sample Time: 1:40 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	160	x	1	50	50	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	92	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	420		1	250	250	µg/L	3/9/00	3/11/00	DW000309COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	92	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-002 **Client Sample ID:** SRB-38

Sample Time: 3:20 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/10/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	111	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/10/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	111	65 - 135

Comment: TPH-Motol Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-004 **Client Sample ID:** SRB-36

Sample Time: 5:25 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/10/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	117	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/10/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	117	65 - 135

Comment: TPH-Motol Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-006 **Client Sample ID:** SRB-46

Sample Time: 6:40 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/10/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	104	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/10/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	104	65 - 135

Comment: TPH-Motol Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-007 **Client Sample ID:** EQB-3-00

Sample Time: 9:00 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/14/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	114	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/14/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	114	65 - 135

Comment: TPH-Motol Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Order ID: 19409 **Lab Sample ID:** 19409-009 **Client Sample ID:** SRB-32

Sample Time: 10:50 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	106	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	106	65 - 135

Comment: TPH-Motol Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Order ID: 19409 **Lab Sample ID:** 19409-011 **Client Sample ID:** SRB-35

Sample Time: 11:40 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	108	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	108	65 - 135

Comment: TPH-Motol Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Order ID: 19409 **Lab Sample ID:** 19409-013 **Client Sample ID:** SRB-34

Sample Time: 1:40 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	µg/L	3/9/00	3/11/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	122	65 - 135

Comment: Surrogate recovery out of control limits due to matrix interference

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/9/00	3/11/00	DW000309FIL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	122	65 - 135

Comment: Surrogate recovery out of control limits due to matrix interference

Comment: TPH-Motol Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod); Sample filtered through 0.7 micron filter prior to extraction

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

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Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-001 **Client Sample ID:** SRB-38

Sample Time: 2:50 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/13/00	WMS000311	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-001 **Client Sample ID:** SRB-38

Sample Time: 2:50 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Carbon Disulfide	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Carbon Tetrachloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Chlorobenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Chloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Chloroform	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Chloromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
cis-1,2-Dichloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
cis-1,3-Dichloropropene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
cis-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
Dibromochloromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Dibromomethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Dichlorodifluoromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Diisopropyl Ether	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Ethyl Benzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Ethyl Methacrylate	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Hexachlorobutadiene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Iodomethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Isopropylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Methacrylonitrile	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Methyl Methacrylate	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Methyl-t-butyl Ether	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Methylene Chloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
n-Butylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
n-Propylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Naphthalene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
p-Isopropyltoluene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Pentachloroethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Propionitrile	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
sec-Butylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Styrene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
tert-Butanol	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
tert-Butyl Ethyl Ether	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
tert-Butylbenzene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Tetrachloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-001 **Client Sample ID:** SRB-38

Sample Time: 2:50 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
trans-1,2-Dichloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
trans-1,3-Dichloropropene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
trans-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/13/00	WMS000311	EPA 8260B
Trichloroethene	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Trichlorofluoromethane	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Vinyl Chloride	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B
Xylenes, Total	ND		1	5	5	µg/L	3/13/00	WMS000311	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	93	79 - 125
Dibromofluoromethane	106	78 - 132
Toluene-d8	102	81 - 114

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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CA ELAP# 2346

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Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-003 **Client Sample ID:** SRB-36

Sample Time: 5:00 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/11/00	WMS000311	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-003 **Client Sample ID:** SRB-36

Sample Time: 5:00 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Disulfide	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Tetrachloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroform	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,2-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,3-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromochloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dichlorodifluoromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Diisopropyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Benzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Methacrylate	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Hexachlorobutadiene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Iodomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Isopropylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methacrylonitrile	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl Methacrylate	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl-t-butyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methylene Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Propylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Naphthalene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
p-Isopropyltoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Pentachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Propionitrile	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
sec-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Styrene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butanol	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butyl Ethyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Tetrachloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-003 **Client Sample ID:** SRB-36

Sample Time: 5:00 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,2-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,3-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Trichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Trichlorofluoromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Vinyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Xylenes, Total	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	89	79 - 125
Dibromofluoromethane	106	78 - 132
Toluene-d8	96	81 - 114

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-005 **Client Sample ID:** SRB-46

Sample Time: 6:00 PM **Sample Date:** 3/6/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,2-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,3-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Trichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Trichlorofluoromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Vinyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Xylenes, Total	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	90	79 - 125
Dibromofluoromethane	107	78 - 132
Toluene-d8	96	81 - 114

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

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Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-007 **Client Sample ID:** EQB-3-00

Sample Time: 9:00 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/11/00	WMS000311	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-008 **Client Sample ID:** SRB-32

Sample Time: 10:30 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/11/00	WMS000311	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-008 **Client Sample ID:** SRB-32

Sample Time: 10:30 AM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Disulfide	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Tetrachloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chlorobenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroform	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,2-Dichloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,3-Dichloropropene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromochloromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dichlorodifluoromethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Diisopropyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Benzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Methacrylate	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Hexachlorobutadiene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Iodomethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Isopropylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methacrylonitrile	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl Methacrylate	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl-t-butyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methylene Chloride	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Propylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Naphthalene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
p-Isopropyltoluene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Pentachloroethane	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Propionitrile	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
sec-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Styrene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butanol	ND		1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butyl Ethyl Ether	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butylbenzene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Tetrachloroethene	ND		1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-012 **Client Sample ID:** SRB-34

Sample Time: 1:20 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND		1	20	20	µg/L	3/12/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND		1	20	20	µg/L	3/12/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
2-Hexanone	ND		1	20	20	µg/L	3/12/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND		1	20	20	µg/L	3/12/00	WMS000311	EPA 8260B
Acetone	ND		1	100	100	µg/L	3/12/00	WMS000311	EPA 8260B
Acrylonitrile	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Allyl Chloride	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Benzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Benzyl Chloride	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Bromobenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Bromochloromethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Bromodichloromethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Bromoform	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-012 **Client Sample ID:** SRB-34

Sample Time: 1:20 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Carbon Disulfide	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Carbon Tetrachloride	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Chlorobenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Chloroethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Chloroform	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Chloromethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
cis-1,2-Dichloroethene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
cis-1,3-Dichloropropene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
cis-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/12/00	WMS000311	EPA 8260B
Dibromochloromethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Dibromomethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Dichlorodifluoromethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Diisopropyl Ether	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Ethyl Benzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Ethyl Methacrylate	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Hexachlorobutadiene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Iodomethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Isopropylbenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Methacrylonitrile	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Methyl Methacrylate	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Methyl-t-butyl Ether	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Methylene Chloride	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
n-Butylbenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
n-Propylbenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Naphthalene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
p-Isopropyltoluene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Pentachloroethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Propionitrile	ND		1	20	20	µg/L	3/12/00	WMS000311	EPA 8260B
sec-Butylbenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Styrene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
tert-Amyl Methyl Ether	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
tert-Butanol	ND		1	20	20	µg/L	3/12/00	WMS000311	EPA 8260B
tert-Butyl Ethyl Ether	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
tert-Butylbenzene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Tetrachloroethene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 19409 **Lab Sample ID:** 19409-012 **Client Sample ID:** SRB-34

Sample Time: 1:20 PM **Sample Date:** 3/7/00 **Matrix:** Liquid

Parameter	Result	Flag	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
trans-1,2-Dichloroethene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
trans-1,3-Dichloropropene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
trans-1,4-Dichloro-2-butene	ND		1	20	20	µg/L	3/12/00	WMS000311	EPA 8260B
Trichloroethene	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Trichlorofluoromethane	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Vinyl Chloride	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B
Xylenes, Total	ND		1	5	5	µg/L	3/12/00	WMS000311	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	91	79 - 125
Dibromofluoromethane	107	78 - 132
Toluene-d8	98	81 - 114

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/14/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
1,1,1,2-Tetrachloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,1-Trichloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2,2-Tetrachloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1,2-Trichloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,1-Dichloropropene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,3-Trichloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2,4-Trimethylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromo-3-Chloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dibromoethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,2-Dichloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3,5-Trimethylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,3-Dichloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
1,4-Dichlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2,2-Dichloropropane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Butanone (MEK)	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chloroethyl-vinyl Ether	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
2-Chlorotoluene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
2-Hexanone	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
4-Chlorotoluene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
4-Methyl-2-Pentanone(MIBK)	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Acetone	ND	1	100	100	µg/L	3/11/00	WMS000311	EPA 8260B
Acrylonitrile	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Allyl Chloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Benzyl Chloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromochloromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromodichloromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Bromoform	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/14/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Bromomethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Disulfide	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Carbon Tetrachloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chlorobenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloroform	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Chloromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,2-Dichloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,3-Dichloropropene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
cis-1,4-Dichloro-2-butene	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromochloromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dibromomethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Dichlorodifluoromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Diisopropyl Ether	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Benzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Ethyl Methacrylate	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Hexachlorobutadiene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Iodomethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Isopropylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methacrylonitrile	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl Methacrylate	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methyl-t-butyl Ether	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Methylene Chloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Butylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
n-Propylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Naphthalene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
p-Isopropyltoluene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Pentachloroethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Propionitrile	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
sec-Butylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Styrene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Amyl Methyl Ether	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butanol	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butyl Ethyl Ether	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
tert-Butylbenzene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Tetrachloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Date: 3/14/00

Certified Analytical Report

Lab Sample ID: Method Blank **Matrix:** Liquid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Toluene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,2-Dichloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,3-Dichloropropene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
trans-1,4-Dichloro-2-butene	ND	1	20	20	µg/L	3/11/00	WMS000311	EPA 8260B
Trichloroethene	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Trichlorofluoromethane	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Vinyl Chloride	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B
Xylenes, Total	ND	1	5	5	µg/L	3/11/00	WMS000311	EPA 8260B

Surrogate	Surrogate Recovery	Control Limits (%)
4-Bromofluorobenzene	94	79 - 125
Dibromofluoromethane	104	79 - 125
Toluene-d8	102	79 - 125

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Liquid
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	Method Blank		42396-001									
Client Sample I.D.:	--		19409-002 SRB-38									
			Filtered									
Date Sampled:	--		03/06/00									
QC Batch #:	S008270W078		S008270W078									
Date Extracted:	03/11/00		03/11/00									
Date Analyzed:	03/13/00		03/13/00									
Analyst Initials:	SC		SC									
Dilution Factor:	1		1									

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND	0.2	ND								
Acenaphthylene	0.2	0.2	ND	0.2	ND								
Acenaphthene	0.2	0.2	ND	0.2	ND								
Fluorene	0.2	0.2	ND	0.2	ND								
Phenanthrene	0.2	0.2	ND	0.2	ND								
Anthracene	0.2	0.2	ND	0.2	ND								
Fluoranthene	0.2	0.2	ND	0.2	ND								
Pyrene	0.2	0.2	ND	0.2	ND								
Benzo(a)anthracene	0.2	0.2	ND	0.2	ND								
Chrysene	0.2	0.2	ND	0.2	ND								
Benzo(b)fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo(k)fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo(a)pyrene	0.2	0.2	ND	0.2	ND								
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND	0.2	ND								
Dibenzo(a,h)anthracene	0.2	0.2	ND	0.2	ND								
Benzo(ghi)perylene	0.2	0.2	ND	0.2	ND								

Surrogate Recovery	%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4	39	24-93	58	24-93								
Nitrobenzene-d5	48	18-118	56	18-118								
2-Fluorobiphenyl	46	27-113	71	27-113								
Terphenyl-d14	55	19-115	83	19-115								

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Co. Persaud
Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Liquid
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-001											
Client Sample I.D.:	19409-002 SRB-38											
	Unfiltered											
Date Sampled:	03/06/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	61	24- 93										
Nitrobenzene-d5	53	18-118										
2-Fluorobiphenyl	69	27-113										
Terphenyl-d14	76	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Liquid
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-002											
Client Sample I.D.:	19409-004 SRB-36											
	Filtered											
Date Sampled:	03/06/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	59	24-93										
Nitrobenzene-d5	50	18-118										
2-Fluorobiphenyl	66	27-113										
Terphenyl-d14	77	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Compton Persaud
Department Supervisor

Date: 03/17/00

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants

Date Received: 03/09/00
Extraction Method: 3510C
Matrix: Liquid
Units: ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-002											
Client Sample I.D.:	19409-004 SRB-36											
	Unfiltered											
Date Sampled:	03/06/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	63	24- 93										
Nitrobenzene-d5	51	18-118										
2-Fluorobiphenyl	69	27-113										
Terphenyl-d14	72	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3510C**
Matrix:	**Liquid**
Units:	**ug/L**

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-003											
Client Sample I.D.:	19409-006 SRB-46											
	Filtered											
Date Sampled:	03/06/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	50	24- 93										
Nitrobenzene-d5	51	18-118										
2-Fluorobiphenyl	65	27-113										
Terphenyl-d14	80	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants

Date Received: 03/09/00
Extraction Method: 3510C
Matrix: Liquid
Units: ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-003											
Client Sample I.D.:	19409-006 SRB-46											
	Unfiltered											
Date Sampled:	03/06/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	55	24- 93										
Nitrobenzene-d5	46	18-118										
2-Fluorobiphenyl	64	27-113										
Terphenyl-d14	80	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants

Date Received: 03/09/00
Extraction Method: 3510C
Matrix: Liquid
Units: ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-004											
Client Sample I.D.:	19409-007 EQB-3-00 Filtered											
Date Sampled:	03/07/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	58	24-93										
Nitrobenzene-d5	47	18-118										
2-Fluorobiphenyl	67	27-113										
Terphenyl-d14	85	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Liquid
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-004											
Client Sample I.D.:	19409-007 EQB-3-00											
	Unfiltered											
Date Sampled:	03/07/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	41	24- 93										
Nitrobenzene-d5	39	18-118										
2-Fluorobiphenyl	52	27-113										
Terphenyl-d14	81	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: _____ Date: 03/14/00

Compton Persaud
Department Supervisor

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Liquid
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-005											
Client Sample I.D.:	19409-009 SRB-32											
	Filtered											
Date Sampled:	03/07/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	44	24- 93										
Nitrobenzene-d5	45	18-118										
2-Fluorobiphenyl	55	27-113										
Terphenyl-d14	73	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Co-Persaud

Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3510C**
Matrix:	**Liquid**
Units:	**ug/L**

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-005											
Client Sample I.D.:	19409-009 SRB-32											
	Unfiltered											
Date Sampled:	03/07/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	63	24- 93										
Nitrobenzene-d5	54	18-118										
2-Fluorobiphenyl	71	27-113										
Terphenyl-d14	75	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories

1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3510C**
Matrix:	**Liquid**
Units:	**ug/L**

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-006											
Client Sample I.D.:	19409-011 SRB-35											
	Filtered											
Date Sampled:	03/07/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	44	24-93										
Nitrobenzene-d5	44	18-118										
2-Fluorobiphenyl	55	27-113										
Terphenyl-d14	70	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3510C**
Matrix:	**Liquid**
Units:	**ug/L**

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-006											
Client Sample I.D.:	19409-011 SRB-35											
	Unfiltered											
Date Sampled:	03/07/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	33	24-93										
Nitrobenzene-d5	55	18-118										
2-Fluorobiphenyl	45	27-113										
Terphenyl-d14	58	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: _____ Date: 03/14/00

Compton Persaud
Department Supervisor

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Liquid
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-007											
Client Sample I.D.:	19409-013 SRB-34 Filtered											
Date Sampled:	03/07/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/13/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	40	24- 93										
Nitrobenzene-d5	51	18-118										
2-Fluorobiphenyl	49	27-113										
Terphenyl-d14	61	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Liquid
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	42396-007											
Client Sample I.D.:	19409-013 SRB-34											
	Unfiltered											
Date Sampled:	03/07/00											
QC Batch #:	S008270W078											
Date Extracted:	03/11/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND										
Acenaphthylene	0.2	0.2	ND										
Acenaphthene	0.2	0.2	ND										
Fluorene	0.2	0.2	ND										
Phenanthrene	0.2	0.2	ND										
Anthracene	0.2	0.2	ND										
Fluoranthene	0.2	0.2	ND										
Pyrene	0.2	0.2	ND										
Benzo(a)anthracene	0.2	0.2	ND										
Chrysene	0.2	0.2	ND										
Benzo(b)fluoranthene	0.2	0.2	ND										
Benzo(k)fluoranthene	0.2	0.2	ND										
Benzo(a)pyrene	0.2	0.2	ND										
Indeno(1,2,3-cd)pyrene	0.2	0.2	ND										
Dibenzo(a,h)anthracene	0.2	0.2	ND										
Benzo(ghi)perylene	0.2	0.2	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	39	24-93										
Nitrobenzene-d5	44	18-118										
2-Fluorobiphenyl	47	27-113										
Terphenyl-d14	53	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3510C
Matrix:	Liquid
Units:	ug/L

EPA Method 8270 SIM (PAH's only)

Lab No.:	LCS										
Client Sample I.D.:	---										
Date Sampled:	---										
QC Batch #:	S008270W078										
Date Extracted:	03/11/00										
Date Analyzed:	03/13/00										
Analyst Initials:	SC										
Dilution Factor:	1										

ANALYTE	MDL	%Rec	Limits	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	81	9-147										
Acenaphthylene	0.2	85	9-147										
Acenaphthene	0.2	80	9-147										
Fluorene	0.2	89	9-147										
Phenanthrene	0.2	85	9-147										
Anthracene	0.2	85	9-147										
Fluoranthene	0.2	88	9-147										
Pyrene	0.2	86	9-147										
Benzo(a)anthracene	0.2	89	9-147										
Chrysene	0.2	90	9-147										
Benzo(b)fluoranthene	0.2	87	9-147										
Benzo(k)fluoranthene	0.2	96	9-147										
Benzo(a)pyrene	0.2	87	9-147										
Indeno(1,2,3-cd)pyrene	0.2	65	9-147										
Dibenzo(a,h)anthracene	0.2	66	9-147										
Benzo(ghi)perylene	0.2	68	9-147										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	50	24- 93										
Nitrobenzene-d5	57	18-118										
2-Fluorobiphenyl	61	27-113										
Terphenyl-d14	80	19-115										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Co-Persaud
Compton Persaud
Department Supervisor

Date: 03/14/00

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - WATER(ug/L)

Method : D:\HPCHEM\1\METHODS\SSIM0308.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Thu Mar 09 15:28:32 2000
Response via : Initial Calibration

Non-Spiked Sample: S0313003.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0313005.D	S0313037.D
Sample :	M-BLANK,S008270W078,MS	M-BLANK,S008270W078,MSD
Acq Time:	13 Mar 2000 3:01 pm	14 Mar 2000 10:10 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	392	396	77	78	1	17	46- 94
Pyrene	0.0	500	449	441	88	87	2	16	36-114

QCBATCH# S008270W078

Reviewed/Approved by: C. Persaud Date: 03/14/00
Compton Persaud
Department Supervisor

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds
Laboratory Control Sample

QC Batch #: WMS000311
Matrix: Liquid
Units: µg/L

Date analyzed: 03/11/00
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
1,1- Dichloroethene	8240/8260	40	ND	39.0	**98**	38.6	**97**	1.0	25	50-150
Methyl-tert-butyl ether	8240/8260	40	ND	47.1	**118**	38.9	**97**	19.1	25	50-150
Benzene	8240/8260	40	ND	44.3	**111**	44.6	**112**	0.7	25	50-150
Trichloroethene	8240/8260	40	ND	38.8	**97**	40.5	**101**	4.3	25	50-150
Toluene	8240/8260	40	ND	40.3	**101**	43.7	**109**	8.1	25	50-150
Chlorobenzene	8240/8260	40	ND	41.1	**103**	43.5	**109**	5.7	25	50-150
Surrogates										
Dibromofluoromethane	8240/8260		104%	114%		98%				65-135
MTBE-d3	8240/8260		101%	115%		90%				65-135
Toluene -d8	8240/8260		102%	96%		96%				65-135
4-Bromofluorobenzene	8240/8260		94%	106%		104%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Compounds
Laboratory Control Sample

QC Batch #: WMS000315
Matrix: Liquid
Units: µg/L

Date analyzed: 03/15/00
Spiked Sample: Blank Spike

PARAMETER	Method #	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
1,1- Dichloroethene	8240/8260	40	ND	38.3	**96**	38.9	**97**	1.6	25	50-150
Methyl-tert-butyl ether	8240/8260	40	ND	39.8	**100**	38.6	**97**	3.1	25	50-150
Benzene	8240/8260	40	ND	40.9	**102**	41.1	**103**	0.5	25	50-150
Trichloroethene	8240/8260	40	ND	37.1	**93**	39.5	**99**	6.3	25	50-150
Toluene	8240/8260	40	ND	39.0	**98**	42.5	**106**	8.6	25	50-150
Chlorobenzene	8240/8260	40	ND	40.5	**101**	41.0	**103**	1.2	25	50-150
Surrogates										
Dibromofluoromethane	8240/8260		96%	104%		95%				65-135
MTBE-d3	8240/8260		94%	93%		90%				65-135
Toluene -d8	8240/8260		99%	92%		99%				65-135
4-Bromofluorobenzene	8240/8260		97%	106%		99%				65-135

Definition of Terms:

na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Spikes

QC Batch #: DW000309SiO2(Column)
Matrix: Liquid
Units: µg/L

Date analyzed: 03/11/00
Date extracted: 03/10/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP %R	SPD µg/L	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<50.0	1000	ND	833	83	894	89	7.0	25	58-121
Hexocosane(S.S.)				100%	99%		94%				53-119

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

Chain-of-Custody Record

003756

Date: 3/6/00 | Page 1 of 2

Project No.: 2770.005

Samplers (Signature): Todd Loan

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 *	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only) ①	Method 8015M (Gasoline)	Method 8015M (Diesel) ①	Method 8015M (Motor Oil) ①	Silica Gel Cleanup	191409	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/6/00	1450	SRB-38				X							-001	W	N	Y	Y	3
3/6/00	1520	SRB-38						X					-002 mb 002	W	N	N	Y	4
3/6/00	1520	SRB-38								X	X	X	-003	W	N	N	Y	4
3/6/00	1700	SRB-36				X							-004	W	N	Y	Y	3
3/6/00	1725	SRB-36						X					-005 mb 004	W	N	N	Y	4
3/6/00	1725	SRB-36								X	X	X	-006	W	N	N	Y	4
3/6/00	1800	SRB-46				X							-005	W	N	Y	Y	3
3/6/00	1840	SRB-46						X					-006	W	N	N	Y	4
3/6/00	1840	SRB-46								X	X	X	-006	W	N	N	Y	4
3/7/00	0900	EQB-3-00				X							-008 007	W	N	Y	Y	3
3/7/00	0900	EQB-3-00						X					-008 007	W	N	N	Y	4
3/7/00	0900	EQB-3-00								X	X	X	-006 -007	W	N	N	Y	4
3/7/00	1030	SRB-32				X							-008	W	N	Y	Y	3
3/7/00	1050	SRB-32						X					-009	W	N	N	Y	4
3/7/00	1050	SRB-32								X	X	X	-009	W	N	N	Y	4

Laboratory: Entech

Turnaround Time: 5 day - Firm

Results to: Penny Tse

Total No. of Containers: 55

ANALYSES

REMARKS

Additional Comments

- Please bill Union Pacific direct. Contact: John Moe
- Contract No.: 707311
- 5 day Turnaround - Firm
- May request additional Analysis

* include MTBE and Fuel Oxygenates for EPA 8260

① Please use a 0.7 micron glass filter on 2 of each 4 samples taken for PNAs (8270 SIM) and for TPHd/TPHmo (8015M)

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time
Todd Loan	3/7/00	1905	Frank Sunseri	3-7-00	1645
Printed Name: Todd Loan			Printed Name: Frank Sunseri		
Company: Geomatrix			Company: World Courier		
Received by: Frank Sunseri	3/7/00	1907	Received by: Mara Grislis	3/7/00	1645
Printed Name: Frank Sunseri			Printed Name: Mara Grislis		
Company: World Courier			Company: Entech		
Relinquished by (Signature):	Date:	Time:	Received by:	Date:	Time:
Printed Name:			Printed Name:		
Company:			Company:		

Method of Shipment: Lab Pick-up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Chain-of-Custody Record

003757

Date: 3/7/00 | Page 2 of 2

Project No.: 2770.005

Samplers (Signature:): Todd Lown

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 *	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHs only) ①	Method 8015M (Gasoline)	Method 8015M (Diesel) ①	Method 8015M (Motor Oil) ①	Silica Gel Cleanup	19409	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/7/00	1120	SRB-35				X							-010	W	N	Y	Y	3
3/7/00	1140	SRB-35						X					-011	W	N	N	Y	4
3/7/00	1140	SRB-35								X	X	X	-011	W	N	N	Y	4
3/7/00	1320	SRB-34				X							-012	W	N	Y	Y	3
3/7/00	1340	SRB-34						X					-013	W	N	N	Y	3
3/7/00	1340	SRB-34								X	X	X	-013	W	N	N	Y	3
3/6/00		Trip Blank				X							-014					9

MG 3/8 AA per

ANALYSES

REMARKS

Additional Comments:

- Please Bill Union Pacific direct, Contact: John Moe; Contract No.: 707311
- 5 day turnaround - firm
May request additional analysis

* include MTBE and fuel oxygenates for EPA 8260

① Please use a 0.7 micron glass filter on 2 of each 4 samples taken for PNAs (8270 SIM) and for TPHd/TPHmo (8015M)

Laboratory: Entech

Turnaround Time: 5 day - firm

Results to: Penny Tse

Total No. of Containers: 20

Relinquished by (Signature):	Date:	Time:	Relinquished by (Signature):	Date:	Time:	Relinquished by (Signature):	Date:	Time:	Method of Shipment:
Todd Lown	3/7/00	1405	Frank Sunseri	3-7-00	1645				Lab pick-up
Printed Name: Todd Lown			Printed Name: Frank Sunseri			Printed Name:			Laboratory Comments and Log No.:
Company: Geomatrix			Company: World Courier			Company:			
Received by: Frank Sunseri	Date: 3/7/00		Received by: Mara Grislis	Date: 3/7/00		Received by:	Date:		
Printed Name: Frank Sunseri	Time:	1408	Printed Name: Mara Grislis	Time:	1645	Printed Name:	Time:		
Company: World Courier			Company: World Courier			Company:			

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Chain-of-Custody Record

003756

Date: 3/6/00 | Page 1 of 2

Project No.: 2770.005

Samplers (Signature:) Todd Loan

9409

	Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	* EPA Method 8260	EPA Method 8270 (Full Scan)	① EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	② Method 8015M (Diesel)	① Method 8015M (Motor Oil)	Silica Gel Cleanup	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
-001	3/6/00	1450	SRB-3B				X							W	N	Y	Y	3
-002	3/6/00	1520	SRB-3E						X					W	N	N	Y	4
-002	3/6/00	1520	SRB-3E								X	X	X	W	N	N	Y	4
-003	3/6/00	1700	SRB-3G				X							W	N	Y	Y	3
-004	3/6/00	1725	SRB-3G						X					W	N	N	Y	4
-004	3/6/00	1725	SRB-3G								X	X	X	W	N	N	Y	4
-005	3/6/00	1800	SRB-4G				X							W	N	Y	Y	3
-006	3/6/00	1840	SRB-4G						X					W	N	N	Y	4
-006	3/6/00	1840	SRB-4G								X	X	X	W	N	N	Y	4
-007	3/7/00	0900	EQB-3-00				X							W	N	Y	Y	3
-007	3/7/00	0900	EQB-3-00						X					W	N	N	Y	4
-008	3/7/00	0900	EQB-3-00								X	X	X	W	N	N	Y	4
-009	3/7/00	1030	SRB-3Z				X							W	N	Y	Y	3
-009	3/7/00	1050	SRB-3Z						X					W	N	N	Y	4
-010	3/7/00	1050	SRB-3Z								X	X	X	W	N	N	Y	4

REMARKS

Additional Comments

Please bill Union Pacific direct. Contact: John Moe
Contract No.: 707311
5 day Turnaround - Firm
May request additional Analysis

* Include MTBE and Fuel Oxygenates for EPA 8260

① Please use a 0.7 micron glass filter on 2 of each 4 samples taken for PNAs (8270 SIM) ~~and for TPHd/TPHmo (8015M)~~

Clarification: Perform filtered + unfiltered analysis for TPH + PNAs

Laboratory: Entech

Turnaround Time: 5 day - firm

Results to: Penny Tse

Total No. of Containers: 55

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment:
Todd Loan	3/7/00					Lab Pick-up
Printed Name: Todd Loan	Time:	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix	1405	Company:		Company:		
Received by:	Date:	Received by:	Date:	Received by:	Date:	
Printed Name:	Time:	Printed Name:	Time:	Printed Name:	Time:	
Company:		Company:		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

03/08/00 WED 15:49 FAX 510 663 4141 GEOMATRIX OAKLAND 003

Chain-of-Custody Record

003757

Project No.: 2770.005

Samplers (Signature:) Todd Loan

Date: 3/7/00 | Page 2 of 2

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260 *	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only) ①	Method 8015M (Gasoline)	Method 8015M (Diesel) ①	Method 8015M (Motor Oil) ①	Silica Gel Cleanup	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
3/7/00	1120	SRB-35				X							W	N	Y	Y	3	- Please Bill Union Pacific direct. Contact: John Moe; Contract #: 707311 - 5 day turnaround - firm May request additional analysis
3/7/00	1140	SRB-35						X					W	N	N	Y	4	
3/7/00	1140	SRB-35								X	X	X	W	N	N	Y	4	* Include MTBE and fuel oxygenates for EPA 8260
3/7/00	1320	SRB-34				X							W	N	Y	Y	3	
3/7/00	1340	SRB-34						X					W	N	N	Y	3	
3/7/00	1340	SRB-34								X	X	X	W	N	N	Y	3	① Please use a 0.7 micron glass filter on 2 of each 4 samples taken for PNAs (8270 SIM) and for TPHd/TPHmo (8015M)
																		* Clarification: perform filtered + unfiltered analysis for TPH + PNAs

Laboratory: Entech

Turnaround Time: 5 day - firm

Results to: Penny Tse

Total No. of Containers: 20

Method of Shipment: Lab pick-up

Laboratory Comments and Log No.:

Relinquished by (Signature):	Date:	Time:	Received by:	Date:	Time:
Todd Loan	3/7/00	1405	[illegible]	3/8/00	1050
Printed Name: Todd Loan			Printed Name: [illegible]		
Company: Geomatrix			Company: [illegible]		

Relinquished by (Signature): Date: Time:
Printed Name:
Company:

Received by: Date: Time:
Printed Name:
Company:

Relinquished by (Signature): Date: Time:
Printed Name:
Company:

Received by: Date: Time:
Printed Name:
Company:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

19409
-011
-012
-012
-013
-014
-014

03/08/00 WED 15:51 FAX 510 663 4141 GEOMATRIX OAKLAND 004

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/8/00	3/14/00-FIRM!!!!	19409

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19409-002	SRB-38	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/6/00	3:20 PM	Amber Jar (4)	4 C
19409-004	SRB-36	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/6/00	5:25 PM	Amber Jar	4 C
19409-006	SRB-46	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/6/00	6:40 PM	Amber Jar	4 C
19409-007	EQB-3-00	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	9:00 AM	Amber/~~Voa~~	4 C/ HCL
19409-009	SRB-32	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	10:50 AM	Amber Jar	4 C
19409-011	SRB-35	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	11:40 AM	Amber Jar	4 C
19409-013	SRB-34	Liquid	EPA 8270 PAH SIMS-ATL	EPA 8270	3/7/00	1:40 PM	Amber Jar	4 C

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/8/00	1800
Relinquished By:	Received By:	Date:	Time:
	Diane Galvan	3-9-00	0900
Relinquished By:	Received By:	Date:	Time:

Notes: Filter Blank on hold, if hits please run.
2 sets of ambers per sample. 1 set is filtered, the other set is not.
Run both sets!

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 28, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19411	**Date Collected:**	3/6/00
Project Name:	Santa Rosa	**Date Received:**	3/7/00
Project Number:	2770.005	**P.O. Number:**	Invoice Union Pacific
Project Notes:			

On March 07, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Chromium	EPA 6010B
	Nickel	EPA 6010B
	TPH as Diesel, STLC Rainwater	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil, STLC Rainwater	EPA 8015 MOD. (Extractable)

Case Narrative: Due to the limitation of LIMS software, the Hexacosane surrogate recovery limits reported reflect normal TPH-extractrables surrogate limits rather than silica gel cleanup limits. The correct surrogate control limits for silica gel cleanup are 53-119 rather than 65-135

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/28/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-002 **Client Sample ID:** SRB-36-1.0

Sample Time: 3:13 PM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	50	50	ug/L	3/27/00	3/28/00	DW000318COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	85	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Comment: Sample extracted with STLC Rainwater

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	250	250	µg/L	3/27/00	3/28/00	DW000318COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	85	75 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Comment: Sample extracted with STLC Rainwater

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/28/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-011 **Client Sample ID:** SRB-36-7.5
Sample Time: 3:27 PM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Nickel	140	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B

Order ID: 19411 **Lab Sample ID:** 19411-017 **Client Sample ID:** SRB-35-7.0
Sample Time: 10:02 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Nickel	110	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B

Order ID: 19411 **Lab Sample ID:** 19411-018 **Client Sample ID:** SRB-34-7.5
Sample Time: 11:24 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	68	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B
Nickel	130	5	1	5	mg/Kg	3/20/00	3/21/00	SM000313	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 16, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order: 19411
Project Name: Santa Rosa
Project Number: 2770.005
Project Notes:

Date Collected: 3/6/00
Date Received: 3/7/00
P.O. Number: Invoice Union Pacific

On March 07, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	CAM 17 TTLC	EPA 6010B
		EPA 7471
	EPA 8270 SIM-ATL	EPA 8270
	TPH as Diesel w/ Si-Gel C/U (Column)	EPA 8015 MOD. (Extractable)
	TPH as Gasoline	EPA 8015 MOD. (Purgeable)
	TPH as Motor Oil w/ Si-Gel Column	EPA 8015 MOD. (Extractable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-001 **Client Sample ID:** SRB-32-1.0

Sample Time: 2:45 PM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Arsenic	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Barium	110	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Beryllium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cadmium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Chromium	170	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cobalt	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Copper	21	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Lead	57	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Mercury	0.5900	10	0.05	0.5	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Nickel	80	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Selenium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Silver	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Thallium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Vanadium	47	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Zinc	83	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-002 **Client Sample ID:** SRB-36-1.0

Sample Time: 3:13 PM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Arsenic	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Barium	95	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Beryllium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cadmium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Chromium	43	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cobalt	15	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Copper	20	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Lead	48	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Mercury	0.0590	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Nickel	97	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Selenium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Silver	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Thallium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Vanadium	57	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Zinc	61	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-003 **Client Sample ID:** SRB-36-4.5

Sample Time: 3:20 PM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Arsenic	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Barium	200	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Beryllium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cadmium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Chromium	85	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cobalt	30	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Copper	22	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Lead	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Mercury	ND	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Nickel	160	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Selenium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Silver	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Thallium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Vanadium	66	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Zinc	67	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-004 **Client Sample ID:** SRB-32-4.5

Sample Time: 8:40 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Arsenic	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Barium	150	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Beryllium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cadmium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Chromium	53	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cobalt	17	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Copper	17	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Lead	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Mercury	ND	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Nickel	96	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Selenium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Silver	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Thallium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Vanadium	45	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Zinc	55	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-005 **Client Sample ID:** SRB-35-1.0

Sample Time: 9:35 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Arsenic	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Barium	190	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Beryllium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cadmium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Chromium	61	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cobalt	21	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Copper	22	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Lead	15	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Mercury	ND	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Nickel	97	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Selenium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Silver	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Thallium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Vanadium	68	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Zinc	68	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-006 **Client Sample ID:** SRB-35-4.5

Sample Time: 9:50 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Arsenic	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Barium	170	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Beryllium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cadmium	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Chromium	93	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Cobalt	21	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Copper	20	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Lead	8.7	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Mercury	0.0560	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Nickel	150	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Selenium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Silver	ND	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Thallium	ND	20	1.25	25	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Vanadium	68	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B
Zinc	71	20	.25	5	mg/Kg	3/9/00	3/13/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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Geomatrix Consultants
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Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-007 **Client Sample ID:** SRB-34-1.0

Sample Time: 11:03 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Arsenic	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Barium	150	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Beryllium	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Cadmium	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Chromium	320	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Cobalt	16	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Copper	18	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Lead	23	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Mercury	ND	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Nickel	92	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Selenium	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Silver	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Thallium	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Vanadium	46	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Zinc	53	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

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Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-008 **Client Sample ID:** SRB-34-4.5

Sample Time: 11:12 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Arsenic	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Barium	160	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Beryllium	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Cadmium	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Chromium	440	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Cobalt	20	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Copper	19	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Lead	10	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Mercury	ND	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Nickel	140	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Selenium	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Silver	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Thallium	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Vanadium	61	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Zinc	55	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

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Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-009 **Client Sample ID:** SRB-33-1.0

Sample Time: 12:37 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Arsenic	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Barium	160	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Beryllium	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Cadmium	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Chromium	470	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Cobalt	29	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Copper	20	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Lead	13	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Mercury	0.0830	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Nickel	190	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Selenium	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Silver	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Thallium	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Vanadium	56	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Zinc	54	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/15/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-010 **Client Sample ID:** SRB-33-4.5

Sample Time: 12:45 PM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Arsenic	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Barium	140	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Beryllium	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Cadmium	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Chromium	630	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Cobalt	21	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Copper	17	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Lead	13	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Mercury	ND	1	0.05	0.05	mg/Kg	3/14/00	3/14/00	SHG000305	EPA 7471
Molybdenum	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Nickel	160	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Selenium	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Silver	ND	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Thallium	ND	5	5	25	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Vanadium	62	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B
Zinc	55	5	1	5	mg/Kg	3/9/00	3/14/00	SM000305	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-001 **Client Sample ID:** SRB-32-1.0

Sample Time: 2:45 PM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	160		5	1	5	mg/Kg	3/10/00	3/14/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	104	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		5	13	65	mg/Kg	3/10/00	3/14/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	104	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19411 **Lab Sample ID:** 19411-002 **Client Sample ID:** SRB-36-1.0

Sample Time: 3:13 PM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	430	x	20	1	20	mg/Kg	3/10/00	3/13/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	75	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	780		20	13	260	mg/Kg	3/10/00	3/13/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	75	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-003 **Client Sample ID:** SRB-36-4.5

Sample Time: 3:20 PM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/10/00	3/11/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	93	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/10/00	3/11/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	93	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19411 **Lab Sample ID:** 19411-004 **Client Sample ID:** SRB-32-4.5

Sample Time: 8:40 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	2.8	x	1	1	1	mg/Kg	3/10/00	3/11/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	88	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/10/00	3/11/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	88	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/7/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19411 **Lab Sample ID:** 19411-005 **Client Sample ID:** SRB-35-1.0

Sample Time: 9:35 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/10/00	3/14/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	111	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/10/00	3/14/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	111	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19411 **Lab Sample ID:** 19411-006 **Client Sample ID:** SRB-35-4.5

Sample Time: 9:50 AM **Sample Date:** 3/7/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/10/00	3/11/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	84	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	ND		1	13	13	mg/Kg	3/10/00	3/11/00	DS000306COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	84	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

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STANDARD LAB QUALIFIERS (FLAGS)

All Entech lab reports now reference standard lab qualifiers. These qualifiers are noted in the adjacent column to the analytical result and are adapted from the U.S. EPA CLP program. The current qualifier list is as follows:

Qualifier (Flag)	Description
U	Compound was analyzed for but not detected
J	Estimated value for tentatively identified compounds or if result is below PQL but above MDL
N	Presumptive evidence of a compound (for Tentatively Identified Compounds)
B	Analyte is found in the associated Method Blank
E	Compounds whose concentrations exceed the upper level of the calibration range
D	Multiple dilutions reported for analysis; discrepancies between analytes may be due to dilution
X	Results within quantitation range; chromatographic pattern not typical of fuel

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Matrix Spike and Matrix Spike Duplicate
METHOD: EPA 6010

QC Batch #: SM000313
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/17/00
Date Digested: 03/16/00
Digestion Method: EPA 3050
Spiked Sample: 19536-001

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	11.	**22**	23.	**45**	68.0	25.0	64-102
Arsenic	6010	<1.0	50.	8.4	41.	**66**	26.	**36**	43.7	25.0	64-115
Barium	6010	<1.0	50.	637.0	nc	**nc**	nc	**nc**	nc	25.0	75-113
Beryllium	6010	<1.0	50.	0.0	48.	**95**	46.	**92**	3.1	25.0	71-110
Cadmium	6010	<1.0	50.	0.0	46.	**91**	44.	**89**	2.9	25.0	70-100
Chromium	6010	<1.0	50.	350.2	nc	**nc**	nc	**nc**	nc	25.0	68-112
Cobalt	6010	<1.0	50.	6.4	54.	**96**	53.	**93**	2.2	25.0	59-114
Copper	6010	<1.0	50.	33.5	78.	**89**	76.	**85**	2.5	25.0	75-109
Lead	6010	<1.0	50.	64.9	80.	**30**	89.	**48**	10.5	25.0	64-115
Molybdenum	6010	<1.0	50.	0.0	46.	**92**	47.	**94**	2.5	25.0	69-113
Nickel	6010	<1.0	50.	18.9	68.	**98**	70.	**101**	2.3	25.0	60-112
Selenium	6010	<1.0	50.	0.0	41.	**83**	41.	**82**	0.1	25.0	67-103
Silver	6010	<1.0	25.	0.0	44.	**177**	45.	**181**	2.5	25.0	65-111
Thallium	6010	<1.0	50.	0.0	59.	**118**	59.	**118**	0.2	25.0	70-109
Vanadium	6010	<1.0	50.	43.6	94.	**101**	92.	**96**	2.6	25.0	69-114
Zinc	6010	<1.0	50.	98.3	153.	**110**	149.	**101**	2.9	25.0	69-119

Calculated Recoveries Outside of Control Limits:
Antimony
Arsenic
Barium
Chromium
Lead
Silver

Definition of Terms:

- na: Not Analyzed in QC batch
- nc: Not Calculated
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY
MATRIX SPIKE
METHOD: EPA 7471

QC Batch #: SHG000305
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/14/00
Quality Control Sample: 19411-001

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	**SP %R**	SPD mg/kg	**SPD %R**	RPD	QC LIMITS %R
Mercury	7471	<0.10	0.20	0.59	0.77	**90**	0.72	**66**	31.5	65-135

Calculated Recoveries Outside of Control Limits:
RPD for Mercury

Definition of Terms:
MB: Method Blank
SA: Spike Added
SR: Sample Result
SP: Spike Result
SP (%R) Spike % Recovery
SPD Spike Duplicate Result
SPD (%R) Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Matrix Spike/Matrix Spike Duplicate

QC Batch #: DS000306(column)
Matrix: Solid
Units: mg/Kg

Date analyzed: 03/11/00
Date extracted: 03/10/00
Quality Control Sample: 19411-010

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	SP %R	SPD mg/Kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	17	69	19	76	8.9	30	50-150
Hexocosane				95%	91%		92%				53-119

Calculated Recovery Outside of Control Limits:

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

Entech Analytical Labs, Inc.

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Spikes

QC Batch #: DW000318SiO2(Column)
Matrix: Liquid
Units: µg/L

03/28/00
03/27/00
Blank Spike

PARAMETER	Method #	MB µg/L	SA µg/L	SR µg/L	SP µg/L	SP %R	RPD	QC LIMITS %R
Diesel	8015M	<50.0	1000	ND	867	87	25	59-121
Hexocosane(S.S.)				111%	91%			53-119

Method Blank and LCS Filtered through 0.70 micron filter prior to extraction and analysis.

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R) Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R) Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

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Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes
METHOD: EPA 6010

QC Batch #: SM000305
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/09/00
Date Digested: 03/08/00
Digestion Method: EPA 3050
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	43.	87	45.	89	2.7	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	39.	78	37.	74	4.5	25.0	75-125
Barium	6010	<1.0	50.	0.0	49.	99	51.	103	4.0	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	43.	86	45.	89	4.4	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	44.	88	45.	90	1.7	25.0	75-125
Chromium	6010	<1.0	50.	0.0	52.	104	56.	111	6.5	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	48.	96	49.	97	2.0	25.0	75-125
Copper	6010	<1.0	50.	0.0	47.	94	49.	98	4.8	25.0	75-125
Lead	6010	<1.0	50.	0.0	44.	88	46.	92	4.0	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	51.	103	53.	105	2.6	25.0	75-125
Nickel	6010	<1.0	50.	0.0	46.	92	48.	96	4.0	25.0	75-125
Selenium	6010	<1.0	50.	0.0	45.	91	44.	87	3.6	25.0	75-125
Silver	6010	<1.0	50.	0.0	46.	92	47.	94	2.1	25.0	75-125
Thallium	6010	<1.0	50.	0.0	39.	77	38.	76	2.1	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	51.	103	55.	109	6.2	25.0	75-125
Zinc	6010	<1.0	50.	0.0	45.	89	46.	93	4.1	25.0	75-125

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

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Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY
Laboratory Control Spikes

QC Batch #: DS000306(column)
Matrix: Solid
Units: mg/Kg

Date analyzed: 03/11/00
Date extracted: 03/10/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	SP %R	SPD mg/Kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	19	74	17	70	6.7	30	50-150
Hexocosane				107%	108%		96%				53-119

Calculated Recovery Outside of Control Limits:

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

April 03, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order: 19411
Project Name: Santa Rosa
Project Number: 2770.005
Project Notes:

Date Collected: 3/6/00
Date Received: 3/7/00
P.O. Number: Invoice Union Pacific

On March 07, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	EPA 8270 PAH SIMS-ATL	EPA 8270

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

March 15, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: Geomatrix Consultants
Lab No.: 42398-001/019

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3550B**
Matrix:	**Solid**
Units:	**ug/kg**

EPA Method 8270C SIM (PAH's only)

Lab No.:		Method Blank		42398-001									
Client Sample I.D.:		--		19411-001 SRB-32-1.0									
Date Sampled:		--		03/06/00									
QC Batch #:		S008270S076		S008270S076									
Date Extracted:		03/10/00		03/10/00									
Date Analyzed:		03/14/00		03/14/00									
Analyst Initials:		SC		SC									
Dilution Factor:		1		2 *									
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND	300	609**								
Acenaphthylene	10	10	ND	300	ND**								
Acenaphthene	10	10	ND	300	ND**								
Fluorene	10	10	ND	300	739**								
Phenanthrene	10	10	ND	300	1980**								
Anthracene	10	10	ND	20	106								
Fluoranthene	10	10	ND	300	739**								
Pyrene	10	10	ND	300	797**								
Benzo(a)anthracene	10	10	ND	300	329**								
Chrysene	10	10	ND	300	424**								
Benzo(b)fluoranthene	10	10	ND	300	582**								
Benzo(k)fluoranthene	10	10	ND	20	158								
Benzo(a)pyrene	10	10	ND	300	526**								
Indeno(1,2,3-cd)pyrene	10	10	ND	300	455**								
Dibenzo(a,h)anthracene	10	10	ND	20	73								
Benzo(ghi)perylene	10	10	ND	300	706**								

Surrogate Recovery	%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4	59	17-97	82	17-97								
Nitrobenzene-d5	60	20-100	143***	20-100								
2-Fluorobiphenyl	63	21-114	37	21-114								
Terphenyl-d14	80	17-130	98	17-130								

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

* = Dilution due to sample matrix
** = Dilution factor of 30
*** = Matrix interference

Approved/Reviewed By: C Persaud

Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3550B**
Matrix:	**Solid**
Units:	**ug/kg**

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-002											
Client Sample I.D.:	19411-002 SRB-36-1.0											
Date Sampled:	03/06/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	200 *											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	2000	ND										
Acenaphthylene	10	2000	ND										
Acenaphthene	10	2000	ND										
Fluorene	10	2000	ND										
Phenanthrene	10	2000	ND										
Anthracene	10	2000	ND										
Fluoranthene	10	2000	ND										
Pyrene	10	2000	ND										
Benzo(a)anthracene	10	2000	ND										
Chrysene	10	2000	ND										
Benzo(b)fluoranthene	10	2000	ND										
Benzo(k)fluoranthene	10	2000	ND										
Benzo(a)pyrene	10	2000	ND										
Indeno(1,2,3-cd)pyrene	10	2000	ND										
Dibenzo(a,h)anthracene	10	2000	ND										
Benzo(ghi)perylene	10	2000	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	DO	17-97										
Nitrobenzene-d5	DO	20-100										
2-Fluorobiphenyl	DO	21-114										
Terphenyl-d14	DO	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
DO = Diluted Out

ND = Not Detected (Below DLR). * = Dilution due to sample matrix
NA = Not Analyzed

Approved/Reviewed By: C. Persaud **Date:** 03/15/00

Compton Persaud
Department Supervisor

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants

Date Received: 03/09/00
Extraction Method: 3550B
Matrix: Solid
Units: ug/kg

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-003											
Client Sample I.D.:	19411-003 SRB-36-4.5											
Date Sampled:	03/06/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	2 *											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	20	ND										
Acenaphthylene	10	20	ND										
Acenaphthene	10	20	ND										
Fluorene	10	20	ND										
Phenanthrene	10	20	ND										
Anthracene	10	20	ND										
Fluoranthene	10	20	ND										
Pyrene	10	20	ND										
Benzo(a)anthracene	10	20	ND										
Chrysene	10	20	ND										
Benzo(b)fluoranthene	10	20	ND										
Benzo(k)fluoranthene	10	20	ND										
Benzo(a)pyrene	10	20	ND										
Indeno(1,2,3-cd)pyrene	10	20	ND										
Dibenzo(a,h)anthracene	10	20	ND										
Benzo(ghi)perylene	10	20	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	56	17-97										
Nitrobenzene-d5	41	20-100										
2-Fluorobiphenyl	60	21-114										
Terphenyl-d14	102	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed
* = Dilution due to sample matrix

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3550B
Matrix:	Solid
Units:	ug/kg

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-004											
Client Sample I.D.:	19411-004 SRB-32-4.5											
Date Sampled:	03/07/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	ND										
Anthracene	10	10	ND										
Fluoranthene	10	10	ND										
Pyrene	10	10	ND										
Benzo(a)anthracene	10	10	ND										
Chrysene	10	10	ND										
Benzo(b)fluoranthene	10	10	ND										
Benzo(k)fluoranthene	10	10	ND										
Benzo(a)pyrene	10	10	ND										
Indeno(1,2,3-cd)pyrene	10	10	ND										
Dibenzo(a,h)anthracene	10	10	ND										
Benzo(ghi)perylene	10	10	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	55	17-97										
Nitrobenzene-d5	56	20-100										
2-Fluorobiphenyl	61	21-114										
Terphenyl-d14	79	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3550B
Matrix:	Solid
Units:	ug/kg

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-005											
Client Sample I.D.:	19411-005 SRB-35-1.0											
Date Sampled:	03/07/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	ND										
Anthracene	10	10	ND										
Fluoranthene	10	10	ND										
Pyrene	10	10	ND										
Benzo(a)anthracene	10	10	ND										
Chrysene	10	10	ND										
Benzo(b)fluoranthene	10	10	ND										
Benzo(k)fluoranthene	10	10	ND										
Benzo(a)pyrene	10	10	ND										
Indeno(1,2,3-cd)pyrene	10	10	ND										
Dibenzo(a,h)anthracene	10	10	ND										
Benzo(ghi)perylene	10	10	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	46	17-97										
Nitrobenzene-d5	47	20-100										
2-Fluorobiphenyl	52	21-114										
Terphenyl-d14	77	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Co-Persaud

Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3550B**
Matrix:	**Solid**
Units:	**ug/kg**

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-007											
Client Sample I.D.:	19411-007 SRB-34-1.0											
Date Sampled:	03/07/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	ND										
Anthracene	10	10	ND										
Fluoranthene	10	10	ND										
Pyrene	10	10	ND										
Benzo(a)anthracene	10	10	ND										
Chrysene	10	10	ND										
Benzo(b)fluoranthene	10	10	ND										
Benzo(k)fluoranthene	10	10	ND										
Benzo(a)pyrene	10	10	ND										
Indeno(1,2,3-cd)pyrene	10	10	ND										
Dibenzo(a,h)anthracene	10	10	ND										
Benzo(ghi)perylene	10	10	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	54	17-97										
Nitrobenzene-d5	49	20-100										
2-Fluorobiphenyl	50	21-114										
Terphenyl-d14	90	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3550B
Matrix:	Solid
Units:	ug/kg

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-009											
Client Sample I.D.:	19411-009 SRB-33-1.0											
Date Sampled:	03/07/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	11										
Anthracene	10	10	ND										
Fluoranthene	10	10	27										
Pyrene	10	10	28										
Benzo(a)anthracene	10	10	19										
Chrysene	10	10	19										
Benzo(b)fluoranthene	10	10	24										
Benzo(k)fluoranthene	10	10	ND										
Benzo(a)pyrene	10	10	18										
Indeno(1,2,3-cd)pyrene	10	10	ND										
Dibenzo(a,h)anthracene	10	10	ND										
Benzo(ghi)perylene	10	10	10										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	47	17-97										
Nitrobenzene-d5	46	20-100										
2-Fluorobiphenyl	50	21-114										
Terphenyl-d14	80	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor
ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Client:	Entech Analytical Labs, Inc.
Attn:	Michelle Anderson
Client's Project:	Geomatrix Consultants
Date Received:	03/09/00
Extraction Method:	3550B
Matrix:	Solid
Units:	ug/kg

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-010											
Client Sample I.D.:	19411-010 SRB-33-4.5											
Date Sampled:	03/07/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	ND										
Anthracene	10	10	ND										
Fluoranthene	10	10	ND										
Pyrene	10	10	ND										
Benzo(a)anthracene	10	10	ND										
Chrysene	10	10	ND										
Benzo(b)fluoranthene	10	10	ND										
Benzo(k)fluoranthene	10	10	ND										
Benzo(a)pyrene	10	10	ND										
Indeno(1,2,3-cd)pyrene	10	10	ND										
Dibenzo(a,h)anthracene	10	10	ND										
Benzo(ghi)perylene	10	10	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	51	17-97										
Nitrobenzene-d5	56	20-100										
2-Fluorobiphenyl	58	21-114										
Terphenyl-d14	78	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/10/00

The cover letter is an integral part of this analytical report.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3550B**
Matrix:	**Soil**
Units:	**ug/kg**

EPA Method 8270C SIM (PAH's only)

Lab No.:		LCS											
Client Sample I.D.:		--											
Date Sampled:		--											
QC Batch #:		S008270S076											
Date Extracted:		03/10/00											
Date Analyzed:		03/14/00											
Analyst Initials:		SC											
Dilution Factor:		1											
ANALYTE	MDL	%Rec	Limits	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	70	11-182										
Acenaphthylene	10	71	11-182										
Acenaphthene	10	71	11-182										
Fluorene	10	75	11-182										
Phenanthrene	10	87	11-182										
Anthracene	10	73	11-182										
Fluoranthene	10	81	11-182										
Pyrene	10	81	11-182										
Benzo(a)anthracene	10	74	11-182										
Chrysene	10	86	11-182										
Benzo(b)fluoranthene	10	85	11-182										
Benzo(k)fluoranthene	10	93	11-182										
Benzo(a)pyrene	10	73	11-182										
Indeno(1,2,3-cd)pyrene	10	55	11-182										
Dibenzo(a,h)anthracene	10	55	11-182										
Benzo(ghi)perylene	10	56	11-182										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	57	17-97										
Nitrobenzene-d5	58	20-100										
2-Fluorobiphenyl	62	21-114										
Terphenyl-d14	79	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: Co. Persaud

Compton Persaud
Department Supervisor

Date: 03/15/00

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - Soil (ug/Kg)

Method : D:\HPCHEM\1\METHODS\SSIM0308.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Thu Mar 09 15:28:32 2000
Response via : Initial Calibration

Non-Spiked Sample: S0313040.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0313035.D	S0313036.D
Sample :	42398-004,S008270S076,MS	42398-004,S008270S076,MSD
Acq Time:	14 Mar 2000 8:54 am	14 Mar 2000 9:32 am

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	317	308	63	62	2	19	39-103
Pyrene	0.0	500	437	430	87	86	1	17	24-124

QCBATCH# S008270S076

Reviewed/Approved by: C. Persaud Date: 03/10/00
Compton Persaud
Department Supervisor

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/7/00	3/14/00	19411

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19411-001	SRB-32-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/6/00	2:45 PM	4OZ JAR	
19411-002	SRB-36-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/6/00	3:13 PM	4OZ JAR	
19411-003	SRB-36-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/6/00	3:20 PM	4OZ JAR	
19411-004	SRB-32-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	8:40 AM	4OZ JAR	
19411-005	SRB-35-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	9:35 AM	4OZ JAR	
19411-006	SRB-35-4.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	9:50 AM	4OZ JAR	
19411-007	SRB-34-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	11:03 AM	4OZ JAR	
19411-008	SRB-34-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	11:12 AM	4OZ JAR	
19411-009	SRB-33-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	12:37 PM	4OZ JAR	
19411-010	SRB-33-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	12:45 PM	4OZ JAR	

19411-11
19411-12
19411-13
-14
-15
-16
-17
-18
-19

Hold

4oz Jar

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/8/00	1800
Relinquished By:	Received By: Diane Galvan	Date: 3-9-00	Time: 0900
Relinquished By:	Received By:	Date:	Time:

Notes:

March 21, 2000

ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

ATTN: Michelle Anderson
SUBJECT: **AMENDED REPORT**

Client's Project: Geomatrix Consultants
Lab No.: 42398-001/019

The report was amended for the following:

Sample I.D. for 42398-006 and 42398-008, were corrected.

Please disregard all previous documentation that corresponds to the pages(s) enclosed.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3550B**
Matrix:	**Solid**
Units:	**ug/kg**

Date Amended: 03/21/00

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-006											
Client Sample I.D.:	19411-006 SRB-35-4.5											
Date Sampled:	03/07/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	ND										
Anthracene	10	10	ND										
Fluoranthene	10	10	ND										
Pyrene	10	10	ND										
Benzo(a)anthracene	10	10	ND										
Chrysene	10	10	ND										
Benzo(b)fluoranthene	10	10	ND										
Benzo(k)fluoranthene	10	10	ND										
Benzo(a)pyrene	10	10	ND										
Indeno(1,2,3-cd)pyrene	10	10	ND										
Dibenzo(a,h)anthracene	10	10	ND										
Benzo(ghi)perylene	10	10	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	52	17-97										
Nitrobenzene-d5	55	20-100										
2-Fluorobiphenyl	60	21-114										
Terphenyl-d14	78	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/21/00

The cover letter is an integral part of this analytical report.

Client:	**Entech Analytical Labs, Inc.**
Attn:	**Michelle Anderson**
Client's Project:	**Geomatrix Consultants**
Date Received:	**03/09/00**
Extraction Method:	**3550B**
Matrix:	**Solid**
Units:	**ug/kg**

Date Amended: 03/21/00

EPA Method 8270C SIM (PAH's only)

Lab No.:	42398-008											
Client Sample I.D.:	19411-008 SRB-34-4.5											
Date Sampled:	03/07/00											
QC Batch #:	S008270S076											
Date Extracted:	03/10/00											
Date Analyzed:	03/14/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	ND										
Anthracene	10	10	ND										
Fluoranthene	10	10	ND										
Pyrene	10	10	ND										
Benzo(a)anthracene	10	10	ND										
Chrysene	10	10	ND										
Benzo(b)fluoranthene	10	10	ND										
Benzo(k)fluoranthene	10	10	ND										
Benzo(a)pyrene	10	10	ND										
Indeno(1,2,3-cd)pyrene	10	10	ND										
Dibenzo(a,h)anthracene	10	10	ND										
Benzo(ghi)perylene	10	10	ND										

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	46	17-97										
Nitrobenzene-d5	46	20-100										
2-Fluorobiphenyl	47	21-114										
Terphenyl-d14	81	17-130										

MDL = Method Detection Limit
DLR = MDL X Dilution Factor

ND = Not Detected (Below DLR).
NA = Not Analyzed

Approved/Reviewed By: C. Persaud

Compton Persaud
Department Supervisor

Date: 03/21/00

The cover letter is an integral part of this analytical report.

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Numbe::
ATL	Geomatrix Consultants	3/7/00	3/14/00	19411

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19411-001	SRB-32-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/6/00	2:45 PM	4OZ JAR	
19411-002	SRB-36-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/6/00	3:13 PM	4OZ JAR	
19411-003	SRB-36-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/6/00	3:20 PM	4OZ JAR	
19411-004	SRB-32-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	8:40 AM	4OZ JAR	
19411-005	SRB-35-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	9:35 AM	4OZ JAR	
19411-006	SRB-35-~~4.0~~ 4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	9:50 AM	4OZ JAR	
19411-007	SRB-34-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	11:03 AM	4OZ JAR	
19411-008	SRB-34-~~4.0~~ 4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	11:12 AM	4OZ JAR	
19411-009	SRB-33-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	12:37 PM	4OZ JAR	
19411-010	SRB-33-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/7/00	12:45 PM	4OZ JAR	

19411-11
19411-12
19411-13
-14
-15
-16
-17
-18
-19

Hold

4OZ JAR

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/8/00	1800
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Notes:

March 31, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: Geomatrix Consultants
Lab No.: 42787-001

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants
Date Received: 03/25/00
Matrix: Liquid
Units: µg/l
Extraction Method: 3510

EPA Method 8270 (SIMS) PNA Only

Lab No.:		Method Blank		42787-001								
Client Sample I.D.:		--		19411-001 SRB-32-1.0								
Date Sampled:		--		03/06/00								
QC Batch #:		S008270W095		S008270W095								
Date Extracted:		03/28/00		03/28/00								
Date Analyzed:		03/29/00		03/29/00								
Analyst Initials:		MH		MH								
Dilution Factor:		1		1								
ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	0.2	0.2	ND	0.2	ND								
Acenaphthylene	0.2	0.2	ND	0.2	ND								
Acenaphthene	0.2	0.2	ND	0.2	ND								
Fluorene	0.2	0.2	ND	0.2	ND								
Phenanthrene	0.2	0.2	ND	0.2	ND								
Anthracene	0.2	0.2	ND	0.2	ND								
Fluoranthene	0.2	0.2	ND	0.2	ND								
Pyrene	0.2	0.2	ND	0.2	ND								
Benzo[a]anthracene	0.2	0.2	ND	0.2	ND								
Chrysene	0.2	0.2	ND	0.2	ND								
Benzo[b]fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo[k]fluoranthene	0.2	0.2	ND	0.2	ND								
Benzo[a]pyrene	0.2	0.2	ND	0.2	ND								
Indeno[1,2,3-cd]pyrene	0.2	0.2	ND	0.2	ND								
Dibenz[a,h,]anthracene	0.2	0.2	ND	0.2	ND								
Benzo[g,h,i]perylene	0.2	0.2	ND	0.2	ND								

Surrogate Recovery

Surrogate Recovery		%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4		43	17-97	48	17-97								
Nitrobenzene-d5		53	20-100	34	20-100								
2-Fluorobiphenyl		49	21-114	54	21-114								
Terphenyl-d14		68	17-130	74	17-130								

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/31/00

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants
Date Received: 03/25/00
Matrix: Water
Units: µg/l
Extraction Method: 3510

EPA Method 8270 (SIMS) PNA Only

Lab No.:		LCS												
Client Sample I.D.:		--												
Date Sampled:		--												
QC Batch #:		S008270W095												
Date Extracted:		03/28/00												
Date Analyzed:		03/29/00												
Analyst Initials:		MH												
Dilution Factor:		1												
ANALYTE	MDL	Limits	%Rec	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	
Naphthalene	0.2	9-147	60											
Acenaphthylene	0.2	9-147	72											
Acenaphthene	0.2	9-147	60											
Fluorene	0.2	9-147	58											
Phenanthrene	0.2	9-147	63											
Anthracene	0.2	9-147	65											
Fluoranthene	0.2	9-147	71											
Pyrene	0.2	9-147	66											
Benzo[a]anthracene	0.2	9-147	71											
Chrysene	0.2	9-147	68											
Benzo[b]fluoranthene	0.2	9-147	67											
Benzo[k]fluoranthene	0.2	9-147	65											
Benzo[a]pyrene	0.2	9-147	68											
Indeno[1,2,3-cd]pyrene	0.2	9-147	63											
Dibenz[a,h,]anthracene	0.2	9-147	67											
Benzo[g,h,i]perylene	0.2	9-147	60											

Surrogate Recovery

Surrogate Recovery	%Rec.	Limits									
1,2-Dichlorobenzene-d4	49	17-97									
Nitrobenzene-d5	59	20-100									
2-Fluorobiphenyl	54	21-114									
Terphenyl-d14	69	17-130									

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/31/00

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - WATER (ng/L)

Method : D:\HPCHEM\1\METHODS\SSIM0323.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Fri Mar 24 10:26:31 2000
Response via : Initial Calibration

Non-Spiked Sample: S0329023.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0329025.D	S0329026.D
Sample :	MS BLANK, S008270W095, MS	MSD BLANK, S008270W095, MSD
Acq Time:	29 Mar 2000 10:07 pm	29 Mar 2000 10:45 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	316	293	63	58	8	17	46- 94
Pyrene	0.0	500	348	336	69	67	4	16	36-114

QCBATCH#008270W-095

Reviewed / Approved by: C. Persaud Date: 03/31/00
Compton Persaud
Department Supervisor

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/24/00	3/31/00	19411

Sample Number:	Customer Sample Number:	Matrix: ~~Solid~~ Liquid	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19411-001	SRB-32-1.0		EPA 8270 PAH SIMS-ATL	EPA 8270	3/6/00	2:45 PM	SS tube	

Relinquished By:	Received By:	Date:	Time:
Leo Radmajan	Golden State	3/24/00	1800
Relinquished By:	Received By:	Date:	Time:
		3/25/00	9:45
Relinquished By:	Received By:	Date:	Time:

Notes: This is STLC rainwater extract
If any hits, please run filter blank, call for work order #

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/24/00	3/31/00	19411

Sample Number:	Customer Sample Number:	Matrix: Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19411-001	SRB-32-1.0	~~Solid~~ Liquid EPA 8270 PAH SIMS-ATL	EPA 8270	3/6/00	2:45 PM	SS tube	

Relinquished By:	Received By:	Date:	Time:
Leo Rodriguez	Golden State	3/24/00	1800
Relinquished By:	Received By:	Date:	Time:
Relinquished By:	Received By:	Date:	Time:

Notes: This is STLC rainwater extract
If any hits, please run filter blank, call for work order #

Chain-of-Custody Record

003764

Project No.: 2770.005

Samplers (Signature): [signature] 9411

Date: 3/7/2000 Page 1 of

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270SIM (Full Scan)	EPA Method 8270 SIM (PAHs only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM17 Metals	Hold	Reinstate for PAHs only	Reinstate for TPHM	Ni Cd	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/6/2000	1445	SRB-32-1.0					X			X	X	X	X		X		007	S	-	-	Y	1
	1513	SRB-36-1.0					X			X	X	X	X		X	X	001	S	-	-	Y	1
	1520	SRB-36-4.5					X			X	X	X	X				003	S	-	-	Y	1
	1527	SRB-36-7.5											X				011	S	-	-	Y	1
	1533	SRB-36-10.5											X				012	S	-	-	Y	1
	1542	SRB-36-13.5											X				013	S	-	-	Y	1
	1625	SRB-36-19.5											X				014	S	-	-	Y	1
3/7/2000	0840	SRB-32-4.5					X			X	X	X	X				004	S	-	-	Y	1
	0853	SRB-32-7.5											X				015	S	-	-	Y	1
	0910	SRB-32-10.5											X				016	S	-	-	Y	1
	0935	SRB-35-1.0					X		X	X	X	X	X				005	S	-	-	Y	1
	0950	SRB-35-4.5					X		X	X	X	X	X				006	S	-	-	Y	1
	1002	SRB-35-7.0											X				017	S	-	-	Y	1
	1103	SRB-34-1.0					X		X	X	X	X	X				009	S	-	-	Y	1
	1112	SRB-34-4.5					X		X	X	X	X	X				008	S	-	-	Y	1

REMARKS

Additional Comments

Bill UP directly: Contact: John Hoc
Contract # 707311
- 5 Day turn firm, may request additional analyses
~~- 8260 including MTBE~~
~~- Fuel oxygenates only (5 compounds)~~
- Silica Gel clean up on samples for diesel + motor oil

Total No. of Containers: 15

Laboratory: Entech

Turnaround Time: 5-Day Firm

Results to: Penny Tse

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment: Lab Pick up
Printed Name: Charles Rome	3/7/00 Time:	Printed Name: Frank Swsari	3-7-00 Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix	1350	Company: World Courier	1645	Company:		
Received by: Frank Swsari	Date: 3/7/00	Received by: Maria Grisis	Date: 3/7/00	Received by:	Date:	
Printed Name: Frank Swsari	Time: 1400	Printed Name: Maria Grisis	Time: 1645	Printed Name:	Time:	
Company: World Courier		Company: Entech		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

03/16/00 THU 17:04 FAX 510 663 4141 GEOMATRIX OAKLAND 002

Chain-of-Custody Record

003756

Date: 3/7/2000 Page 2 of

Project No.: 2770.005

Samplers (Signature.)

1941

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan) SIM	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	Hold	Cr, Cd, Pb, Ni, Zn, Cu, Mo, Co, Chromium + Vanadium		Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
3/7/00	1124	SRB-34-7.5										X	X	X	018	S	—	—	Y	1	Bill to Direct by - Contact John M. Contract # 707311 - 5 DAY TURN FIRM, may request additional analyses
	1135	SRB-34-10.5										X	X	X	019	S	—	—	Y	1	~~5260 including MTBE~~
	1237	SRB-33-1.0					X			X	X	X		X	009	S	—	—	Y	1	~~fuel oxygenates on 3/7/00~~
	1245	SRB-33-4.5					X			X	X	X		X	010	S	—	—	Y	1	- silica gel cleanup on samples for diesel + motor oil

CR 3/7/00

Laboratory: Entech

Turnaround Time: 5-Day Firm

Results to: Penny Tse

Total No. of Containers: 4

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment:
Printed Name: Charles Reme	3/7/00 Time:	Printed Name: Frank Sunseri	3-7-00 Time:	Printed Name:	Time:	Lab Pick up
Company: Geomatrix	1350	Company: World Courier	1645	Company:		Laboratory Comments and Log No.:
Received by: Frank Sunseri	Date: 3/7/00	Received by: Mara Gruds	Date: 3/7/00	Received by:	Date:	
Printed Name: Frank Sunseri	Time: 1400	Printed Name: Mara Grisli5	Time: 1649	Printed Name:	Time:	
Company: World Courier		Company: Entech		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

03/16/00 THU 17:05 FAX 510 663 4141 GEOMATRIX OAKLAND 003

Chain-of-Custody Record

003764

Date: 3/7/2000 | Page 1 of

Project No.: 2770.005

Samplers (Signature): Chuck Romo

19411

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM17 Metals	HOLD					Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/6/2000	1445	SRB-32-1.0					X			X	X	X	X					001	S	-	-	Y	1
	1513	SRB-36-1.0					X			X	X	X	X					002	S	-	-	Y	1
	1526	SRB-36-4.5					X			X	X	X	X					003	S	-	-	Y	1
	1527	SRB-36-7.5												X				011	S	-	-	Y	1
	1533	SRB-36-10.5												X				012	S	-	-	Y	1
	1542	SRB-36-13.5												X				013	S	-	-	Y	1
	1625	SRB-36-19.5												X				014	S	-	-	Y	1
3/7/2000	0840	SRB-32-4.5					X			X	X	X	X					004	S	-	-	Y	1
	0853	SRB-32-7.5												X				015	S	-	-	Y	1
	0910	SRB-32-10.5												X				016	S	-	-	Y	1
	0935	SRB-35-1.0					X		X	X	X	X	X					005	S	-	-	Y	1
	0950	SRB-35-4.5					X		X	X	X	X	X					006	S	-	-	Y	1
	1002	SRB-35-7.0												X				017	S	-	-	Y	1
	1103	SRB-34-1.0					X		X	X	X	X	X					007	S	-	-	Y	1
	1112	SRB-34-4.5					X		X	X	X	X	X					008	S	-	-	Y	1

REMARKS

Additional Comments

Bill UP directly: contact: John Moe
Contract # 707311
- 5 Day turn firm, may request additional analyses
- ~~8260 including MTBE~~ Fuel oxygenates ~~on all samples~~ CP 3/7/0
- Silica Gel clean up on samples for diesel + motor oil

Laboratory: Entech

Turnaround Time: 5-Day Firm

Results to: Penny Tse

Total No. of Containers: 15

Relinquished by (Signature)	Date	Relinquished by (Signature)	Date	Relinquished by (Signature)	Date
Printed Name: Charles Romo	3/7/00 Time:	Printed Name: Frank Sunseri	3-7-00 Time:	Printed Name:	Time:
Company: Geomatrix	1350	Company: World Courier	1645	Company:	
Received by: Frank Sunseri	Date: 3/7/00	Received by: Maura Grisis	Date: 3/7/00	Received by:	Date:
Printed Name: Frank Sunseri	Time: 1400	Printed Name: Maura Grisis	Time: 1645	Printed Name:	Time:
Company: World Courier		Company: Entech		Company:	

Method of Shipment: Lab Pick UP

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Chain-of-Custody Record

003758

Date: 3/7/2000 | Page 2 of

Project No.: 2770.005

Samplers (Signature): 1941

ANALYSES

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan) SIM	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	Hexane	Carrier Methylene Chloride					Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/7/00	1124	SRB-34-7.5											X					018	S	–	–	Y	1
	1135	SRB-34-10.5											X					019	S	–	–	Y	1
	1237	SRB-33-1.0					X			X	X	X		X				009	S	–	–	Y	1
	1245	SRB-33-4.5					X			X	X	X		X				010	S	–	–	Y	1

Laboratory: Entech

Turnaround Time: 5-Day Firm

Results to: Penny Tse

Total No. of Containers: 4

REMARKS

Additional Comments

Bill of Directly-Contact John Mc
Contract # 707311
- 5 DAY TURN FIRM,
may request additional analyses

~~8260 including MTBE +~~
~~fuel oxygenates~~ OK 3/7/00

- Silica gel cleanup on samples for diesel + motor oil

CFR 3/7/00

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Printed Name: Charles Reese	Time:	Printed Name: Frank Sunseri	Time:	Printed Name:	Time:
Company: Geomatrix	1350	Company: World Courier	1645	Company:	
Received by: Frank Sunseri	Date: 3/7/00	Received by: Mara Grisli	Date: 3/7/00	Received by:	Date:
Printed Name: Frank Sunseri	Time: 1400	Printed Name: Mara Grislis	Time: 1649	Printed Name:	Time:
Company: World Courier		Company: Entech		Company:	

Method of Shipment: Lab pick up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 21, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19382	**Date Collected:**	3/6/00
Project Name:	Santa Rosa	**Date Received:**	3/6/00
Project Number:	2770.005	**P.O. Number:**	Invoice UP directly
Project Notes:			

On March 06, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	TPH as Motor Oil w/ Si-Gel Std	EPA 8015 MOD. (Extractable)

Case Narrative: Due to the limitation of LIMS software, the Hexacosane surrogate recovery limits reported reflect normal TPH-extractrables surrogate limits rather than silica gel cleanup limits. The correct surrogate control limits for silica gel column cleanup are 53-119 rather than 65-135

Report was amended on 3/14/00 to correct PQL and DLR for CAM 17 results.

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/21/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19382 **Lab Sample ID:** 19382-003 **Client Sample ID:** SRB-39-7.5

Sample Time: 11:47 AM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Barium	140	5	1	5	mg/Kg	3/17/00	3/20/00	SM000313	EPA 6010B
Chromium	76	5	1	5	mg/Kg	3/17/00	3/20/00	SM000313	EPA 6010B
Nickel	100	5	1	5	mg/Kg	3/17/00	3/20/00	SM000313	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/21/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19382 **Lab Sample ID:** 19382-003 **Client Sample ID:** SRB-39-7.5

Sample Time: 11:47 AM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	49		1	13	13	mg/Kg	3/15/00	3/17/00	DS000307COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	95	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor · ND = Not Detected · DLR = Detection Limit Reported · PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

March 14, 2000

Penny Tse
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	19382	**Date Collected:**	3/6/00
Project Name:	Santa Rosa	**Date Received:**	3/6/00
Project Number:	2770.005	**P.O. Number:**	Invoice UP directly
Project Notes:			

On March 06, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	CAM 17 TTLC	EPA 6010B
		EPA 7471
	EPA 8270 SIM-ATL	EPA 8270
	TPH as Diesel w/ Si-Gel C/U (Column)	EPA 8015 MOD. (Extractable)
	TPH as Motor Oil w/ Si-Gel Column	EPA 8015 MOD. (Extractable)

Case Narrative: Due to the limitation of LIMS software, the Hexacosane surrogate recovery limits reported reflect normal TPH-extractrables surrogate limits rather than silica gel cleanup limits. The correct surrogate control limits for silica gel column cleanup are 53-119 rather than 65-135

Report was amended on 3/14/00 to correct PQL and DLR for CAM 17 results.

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19382 **Lab Sample ID:** 19382-001 **Client Sample ID:** SRB-39-1.0

Sample Time: 11:32 AM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	20	1.25	25	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Arsenic	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Barium	57	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Beryllium	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Cadmium	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Chromium	31	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Cobalt	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Copper	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Lead	77	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Mercury	0.1700	1.11	0.05	0.0555	mg/Kg	3/8/00	3/8/00	SHG000303	EPA 7471
Molybdenum	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Nickel	43	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Selenium	ND	20	1.25	25	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Silver	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Thallium	ND	20	1.25	25	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Vanadium	33	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Zinc	55	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19382 **Lab Sample ID:** 19382-002 **Client Sample ID:** SRB-39-4.5

Sample Time: 11:42 AM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Antimony	ND	20	1.25	25	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Arsenic	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Barium	150	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Beryllium	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Cadmium	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Chromium	58	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Cobalt	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Copper	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Lead	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Mercury	0.1000	1.11	0.05	0.0555	mg/Kg	3/8/00	3/8/00	SHG000303	EPA 7471
Molybdenum	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Nickel	78	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Selenium	ND	20	1.25	25	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Silver	ND	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Thallium	ND	20	1.25	25	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Vanadium	39	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B
Zinc	48	20	0.25	5	mg/Kg	3/7/00	3/8/00	SM000303	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Penny Tse

Date: 3/14/00
Date Received: 3/6/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice UP directly
Sampled By: Charles Rome

Certified Analytical Report

Order ID: 19382 **Lab Sample ID:** 19382-001 **Client Sample ID:** SRB-39-1.0

Sample Time: 11:32 AM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		20	1	20	mg/Kg	3/7/00	3/13/00	DS000303COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	48	65 - 135

Comment: Surrogate recovery out of control limits due to sample dilution
Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	720		20	13	260	mg/Kg	3/7/00	3/13/00	DS000303COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	48	65 - 135

Comment: Surrogate recovery out of control limits due to sample dilution
Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Order ID: 19382 **Lab Sample ID:** 19382-002 **Client Sample ID:** SRB-39-4.5

Sample Time: 11:42 AM **Sample Date:** 3/6/00 **Matrix:** Solid

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Diesel	ND		1	1	1	mg/Kg	3/7/00	3/13/00	DS000303COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	99	65 - 135

Comment: TPH-Diesel extraction performed with silica gel column cleanup (EPA 3630B-Mod)

Parameter	Result	Flag	DF	PQL	DLR	Units	Extraction Date	Analysis Date	QC Batch ID	Method
TPH as Motor Oil	51		1	13	13	mg/Kg	3/7/00	3/13/00	DS000303COL	EPA 8015 MOD. (Extractable)

Surrogate	Surrogate Recovery	Control Limits (%)
Hexacosane	99	65 - 135

Comment: TPH-Motor Oil extraction performed with silica gel column cleanup (EPA 3630B-Mod)

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Environmental Analysis Since 1983

March 13, 2000 ELAP No.: 1838

Entech Analytical Labs, Inc.
525 Del Rey Avenue, Suite E,
Sunnyvale, CA 94086

ATTN: Michelle Anderson

Client's Project: Geomatrix Consultants
Lab No.: 42290-001/005

Enclosed are the results for sample(s) received by Advanced Technology Laboratories and tested for the parameters indicated in the enclosed chain of custody.

Thank you for the opportunity to service the needs of your company. Please feel free to call me at (562) 989 - 4045 if I can be of further assistance to your company.

Sincerely,

Cheryl De Los Reyes
Technical Operations Manager
CDR/jh

Enclosures

This cover letter is an integral part of this analytical report.

This report pertains only to the samples investigated and does not necessarily apply to other apparently identical or similar materials. This report is submitted for the exclusive use of the client to whom it is addressed. Any reproduction of this report or use of this Laboratory's name for advertising or publicity purpose without authorization is prohibited.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants
Date Received: 03/07/00
Matrix: Solid
Units: µg/kg
Extraction Method: 3550

EPA Method 8270C SIM (PNA's only)

Lab No.:	Method Blank	42290-001
Client Sample I.D.:	–	19382-001 SRB-39-1.0
Date Sampled:	–	03/06/00
QC Batch #:	S008270S069	S008270S069
Date Extracted:	03/08/00	03/08/00
Date Analyzed:	03/09/00	03/09/00
Analyst Initials:	SC	SC
Dilution Factor:	1	250*

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND	2,500	ND								
Acenaphthylene	10	10	ND	2,500	ND								
Acenaphthene	10	10	ND	2,500	ND								
Fluorene	10	10	ND	2,500	ND								
Phenanthrene	10	10	ND	2,500	ND								
Anthracene	10	10	ND	2,500	ND								
Fluoranthene	10	10	ND	2,500	ND								
Pyrene	10	10	ND	2,500	ND								
Benzo[a]anthracene	10	10	ND	2,500	ND								
Chrysene	10	10	ND	2,500	ND								
Benzo[b]fluoranthene	10	10	ND	2,500	ND								
Benzo[k]fluoranthene	10	10	ND	2,500	ND								
Benzo[a]pyrene	10	10	ND	2,500	ND								
Indeno[1,2,3-cd]pyrene	10	10	ND	2,500	ND								
Dibenz[a,h,]anthracene	10	10	ND	2,500	ND								
Benzo[g,h,i]perylene	10	10	ND	2,500	ND								

Surrogate Recovery

Surrogate Recovery	%Rec.	Limits	%Rec.	Limits								
1,2-Dichlorobenzene-d4	53	17- 97	**	17- 97								
Nitrobenzene-d5	52	20-100	**	20-100								
2-Fluorobiphenyl	57	21-114	**	21-114								
Terphenyl-d14	76	17-130	**	17-130								

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DLR = MDL x Dilution Factor
NA = Not Analyzed

* = Dilution due to difficult matrix
** = Diluted out

Approved/Reviewed By: Compton Persaud
Department Supervisor

Date: 03/13/00

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants
Date Received: 03/07/00
Matrix: Solid
Units: µg/kg
Extraction Method: 3550

EPA Method 8270C SIM (PNA's only)

Lab No.:	42290-002											
Client Sample I.D.:	19382-002 SRB-39-4.5											
Date Sampled:	03/06/00											
QC Batch #:	S008270S069											
Date Extracted:	03/08/00											
Date Analyzed:	03/09/00											
Analyst Initials:	SC											
Dilution Factor:	1											

ANALYTE	MDL	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	10	ND										
Acenaphthylene	10	10	ND										
Acenaphthene	10	10	ND										
Fluorene	10	10	ND										
Phenanthrene	10	10	ND										
Anthracene	10	10	ND										
Fluoranthene	10	10	ND										
Pyrene	10	10	ND										
Benzo[a]anthracene	10	10	ND										
Chrysene	10	10	ND										
Benzo[b]fluoranthene	10	10	ND										
Benzo[k]fluoranthene	10	10	ND										
Benzo[a]pyrene	10	10	ND										
Indeno[1,2,3-cd]pyrene	10	10	ND										
Dibenz[a,h,]anthracene	10	10	ND										
Benzo[g,h,i]perylene	10	10	ND										

Surrogate Recovery

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	47	17- 97										
Nitrobenzene-d5	46	20-100										
2-Fluorobiphenyl	57	21-114										
Terphenyl-d14	80	17-130										

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: C. Persaud
Compton Persaud
Department Supervisor

Date: 03/13/00

The cover letter is an integral part of this analytical report.

Client: Entech Analytical Labs, Inc.
Attn: Michelle Anderson

Client's Project: Geomatrix Consultants
Date Received: 03/07/00
Matrix: Soil
Units: µg/kg
Extraction Method: 3550

EPA Method 8270C SIM (PNA's only)

Lab No.:	LCS												
Client Sample I.D.:	---												
Date Sampled:	---												
QC Batch #:	S008270S069												
Date Extracted:	03/08/00												
Date Analyzed:	03/09/00												
Analyst Initials:	SC												
Dilution Factor:	1												

ANALYTE	MDL	%Rec.	Limits	DLR	Results	DLR	Results	DLR	Results	DLR	Results	DLR	Results
Naphthalene	10	80	11-182										
Acenaphthylene	10	84	11-182										
Acenaphthene	10	82	11-182										
Fluorene	10	89	11-182										
Phenanthrene	10	130	11-182										
Anthracene	10	90	11-182										
Fluoranthene	10	109	11-182										
Pyrene	10	101	11-182										
Benzo[a]anthracene	10	96	11-182										
Chrysene	10	95	11-182										
Benzo[b]fluoranthene	10	104	11-182										
Benzo[k]fluoranthene	10	101	11-182										
Benzo[a]pyrene	10	92	11-182										
Indeno[1,2,3-cd]pyrene	10	94	11-182										
Dibenz[a,h,]anthracene	10	96	11-182										
Benzo[g,h,i]perylene	10	95	11-182										

Surrogate Recovery

Surrogate Recovery	%Rec.	Limits										
1,2-Dichlorobenzene-d4	51	17- 97										
Nitrobenzene-d5	46	20-100										
2-Fluorobiphenyl	54	21-114										
Terphenyl-d14	81	17-130										

MDL = Method Detection Limit
ND = Not Detected (Below DLR)
DLR = MDL x Dilution Factor
NA = Not Analyzed

Approved/Reviewed By: Co. Persaud
Compton Persaud
Department Supervisor

Date: 03/13/00

The cover letter is an integral part of this analytical report.

Spike Recovery and RPD Summary Report - SOIL(ug/Kg)

Method : D:\HPCHEM\1\METHODS\SSIM0308.M (RTE Integrator)
Title : EPA 8270C Advanced Technology Laboratory
Last Update : Thu Mar 09 15:28:32 2000
Response via : Initial Calibration

Non-Spiked Sample: S0309003.D

	Spike Sample	Spike Duplicate Sample
File ID :	S0309005.D	S0309006.D
Sample :	M-BLANK,S008270S069,MS	M-BLANK,S008270S069,MSD
Acq Time:	9 Mar 2000 5:30 pm	9 Mar 2000 6:08 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Acenaphthene	0.0	500	310	355	62	71	14	19	39-103
Pyrene	0.0	500	473	464	95	93	2	17	24-124

QCBATCH# S008270S069

Reviewed/Approved by: C. Persaud Date: 03/13/00
Compton Persaud
Department Supervisor

Advanced Technology Laboratories
1510 E. 33rd Street Signal Hill, CA 90807 Tel: 562 989-4045 Fax: 562 989-4040

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes
METHOD: EPA 6010

QC Batch #: SM000313
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/20/00
Date Digested: 03/17/00
Digestion Method: EPA 3050
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	49.	**98**	47.	**93**	4.3	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	44.	**87**	45.	**91**	4.3	25.0	75-125
Barium	6010	<1.0	50.	0.0	50.	**100**	50.	**99**	1.2	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	51.	**102**	47.	**93**	8.7	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	49.	**97**	47.	**94**	3.8	25.0	75-125
Chromium	6010	<1.0	50.	0.0	51.	**101**	46.	**93**	9.0	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	52.	**105**	51.	**103**	2.3	25.0	75-125
Copper	6010	<1.0	50.	0.0	46.	**92**	49.	**99**	7.5	25.0	75-125
Lead	6010	<1.0	50.	0.0	49.	**98**	48.	**96**	1.7	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	51.	**103**	51.	**103**	0.1	25.0	75-125
Nickel	6010	<1.0	50.	0.0	51.	**103**	47.	**93**	10.0	25.0	75-125
Selenium	6010	<1.0	50.	0.0	47.	**95**	43.	**86**	9.4	25.0	75-125
Silver	6010	<1.0	50.	0.0	44.	**88**	45.	**90**	2.9	25.0	75-125
Thallium	6010	<1.0	50.	0.0	47.	**94**	47.	**93**	0.6	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	50.	**101**	51.	**103**	1.9	25.0	75-125
Zinc	6010	<1.0	50.	0.0	49.	97	48.	**95**	1.8	25.0	75-125

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Entech Analytical Labs, Inc.

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Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY
Laboratory Control Spikes

QC Batch #: DS000307(column)
Matrix: Solid
Units: mg/Kg

Date analyzed: 03/11/00
Date extracted: 03/10/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	SP %R	SPD mg/Kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	17	68	16	63	7.9	30	50-150
Hexocosane				82%	81%		82%				65-135

Calculated Recovery Outside of Control Limits:

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

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Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY
Matrix Spike/Matrix Spike Duplicate

QC Batch #: DS000307(column)
Matrix: Solid
Units: mg/Kg

Date analyzed: 03/13/00
Date extracted: 03/10/00
Quality Control Sample: 19426-001

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	SP %R	SPD mg/Kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	nc	nc	nc	nc	nc	nc	30	50-150
Hexocosane				61%	69%		67%				53-119

Calculated Recovery Outside of Control Limits:

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

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QUALITY CONTROL RESULTS SUMMARY
Laboratory Control Spikes

QC Batch #: DS000303SiO2(Column)
Matrix: Solid
Units: mg/Kg

Date analyzed: 03/06/00
Date extracted: 03/06/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/Kg	SA mg/Kg	SR mg/Kg	SP mg/Kg	SP %R	SPD mg/Kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Diesel	8015M	<1.0	25	ND	17	68	20	81	17.5	30	50-150
Hexocosane				85%	90%		96%				65-135

Calculated Recovery Outside of Control Limits:

Definition of Terms:

MB: Method Blank
na: Not Analyzed in QC batch
SA: Spike Added
SR: Sample Result
RPD(%): Duplicate Analysis - Relative Percent Difference
SP: Spike Result
SP (%R): Spike % Recovery
SPD: Spike Duplicate Result
SPD (%R): Spike Duplicate % Recovery
NC: Not Calculated

Entech Analytical Labs, Inc.

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QUALITY CONTROL RESULTS SUMMARY
MATRIX SPIKE
METHOD: EPA 7471

QC Batch #: SHG000303
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/08/00
Quality Control Sample: 19382-001

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	**SP %R**	SPD mg/kg	**SPD %R**	RPD	QC LIMITS %R
Mercury	7471	<0.10	0.20	0.17	0.36	**95**	0.36	**95**	0.0	65-135

Calculated Recoveries Outside of Control Limits:

Definition of Terms:

MB: Method Blank
SA: Spike Added
SR: Sample Result
SP: Spike Result
SP (%R) Spike % Recovery
SPD Spike Duplicate Result
SPD (%R) Spike Duplicate % Recovery

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QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spike
METHOD: EPA 7471

QC Batch #: SHG000303
Matrix: Solid
Units: mg/kg

Date Analyzed: 03/08/00
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	**SP %R**	SPD mg/kg	**SPD %R**	RPD	QC LIMITS %R
Mercury	7471	<0.10	0.20	0.00	0.18	**89**	0.19	**96**	7.6	65-135

Definition of Terms:

MB: Method Blank
SA: Spike Added
SR: Sample Result
SP: Spike Result
SP (%R) Spike % Recovery
SPD Spike Duplicate Result
SPD (%R) Spike Duplicate % Recovery

19382

Chain-of-Custody Record

004469

Date: 3/6/2000 Page 1 of 1

Project No.: 2770.005

Samplers (Signature): Charles Reme

9382

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM 17 Metals Ba, Cr, Ni by 6010	Hold	19382	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/6/2000	1132	SRB-39-1.0					X			X	X	X	X		001	S	-	-	Y	1
	1142	SRB-39-4.5					X			X	X	X	X		002	S	-	-	Y	1
(3)	1147	SRB-39-7.5							3/10	X	X		X	X	003	S	-	-	Y	1
	1153	SRB-39-10.5											X		004	S	-	-	Y	1
	1203	SRB-39-13.5											X		005	S	-	-	Y	1

CWR 3/16/00

3/14/00

Laboratory: Entech

Turnaround Time: 5-Day Firm

Results to: Penny Tse

Total No. of Containers: 5

REMARKS

Additional Comments

Bill UP Directly: contact John Moe Contract # 7c7311,
- 5 Day turn firm, may request additional analyses
- 8260 including MtBE + fuel oxygenates
- Silica Gel Clean up diesel + motor oil

Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Method of Shipment
Charles Reme	3/6/00	1315	Oscar #375	3/6	1500				Lab Pick up
Printed Name: Charles Reme			Printed Name: Oscar #375			Printed Name:			Laboratory Comments and Log No.:
Company: Geomatrix			Company: World			Company:			
Received by: Oscar #375	Date: 3/6		Received by:	Date:		Received by:	Date:		
Printed Name: Oscar Orozco	Time: 1315		Printed Name: Eugene Tsoracio	Time:		Printed Name:	Time:		
Company: World			Company: Entech			Company:			

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663 4141

03/14/00 TUE 12:13 FAX 510 663 4141 GEOMATRIX OAKLAND 002

Chain-of-Custody Record

004469

Date: 3/6/2000 | Page 1 of 1

Project No.: 2770.005

Samplers (Signature): Charles Rome 9382

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM 17 Metals	Hold	9382	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
3/6/2000	1132	SRB-39-1.0					X			X	X	X	X		001	S	-	-	Y	1
	1142	SRB-39-4.5					X			X	X	X	X		002	S	-	-	Y	1
	1147	SRB-39-7.5												X	003	S	-	-	Y	1
	1153	SRB-39-10.5												X	004	S	-	-	Y	1
	1203	SRB-39-13.5												X	005	S	-	-	Y	1

CFR 3/16/00

Laboratory: Entech

Turnaround Time: 5-Day Firm

Results to: Penny Tse

Total No. of Containers: 5

REMARKS

Additional Comments

Bill up Directly: contact John Moe Contract # 707311,
- 5 Day turn firm, may request additional analyses
- 8260 including MtBE + fuel oxygenates
- Silica Gel Clean up
diesel + motor oil

Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time	Relinquished by (Signature)	Date	Time
Printed Name: Charles Rome	3/6/00	1315	Printed Name: Cesar #375	3/6	1500	Printed Name:		
Company: Geomatrix			Company: World			Company:		
Received by: Cesar #375	Date: 3/6		Received by:	Date:		Received by:	Date:	
Printed Name: Cesar Lopez	Time:	1315	Printed Name: Eugene M Garcia	Time:		Printed Name:	Time:	
Company: Mobile			Company: Entech			Company:		

Method of Shipment: Lab Pick up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Entech Analytical Labs, Inc.

CA ELAP # I-2346

525 Del Rey Avenue, Suite E, Sunnyvale, CA 94086 (408) 735-1550 FAX (408) 735-1554

Subcontract Chain of Custody

Subcontract Lab:	Project Name:	Date Sent:	Due Date:	PO Number:
ATL	Geomatrix Consultants	3/6/00	3/13/00	19382

Sample Number:	Customer Sample Number:	Matrix:	Test:	Method:	Collect Date:	Collect Time:	Bottle Type:	Preservative:
19382-001	SRB-39-1.0	Solid	EPA 8270 SIM-ATL	EPA 8270	3/6/00	11:32 AM	4 oz jar	
19382-002	SRB-39-4.5	Solid	EPA 8270 SIM-ATL	EPA 8270	3/6/00	11:42 AM	4 oz jar	

003-005 on hold

Relinquished By:	Received By:	Date:	Time:
Mara Gruis	Golden State	3/06/00	1800
Relinquished By:	Received By:	Date:	Time:
	Dyan Dalman	3-7-00	0900
Relinquished By:	Received By:	Date:	Time:

Notes:

Chain-of-Custody Record

004469

Date: 3/6/2000 | Page 1 of 1

Project No.: 2770.005

Samplers (Signature:) Charles Reme

9382

Date	Time	Sample Number
3/6/2000	1132	SAB-39-1.0
	1142	SRB-39-4.5
	1147	SRB-39-7.5
	1153	SRB-39-10.5
	1203	SRB-39-13.5

ANALYSES

EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 SIM (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	CAM 17 Metals	Hold - Eliminated per CRWQCB for TPHd	9382	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers
				X			X	X	X	X	X	001	S	–	–	Y	1
				X			X	X	X	X	X	002	S	–	–	Y	1
										X		003	S	–	–	Y	1
										X		004	S	–	–	Y	1
										X		005	S	–	–	Y	1

CVR 3/6/00

REMARKS

Additional Comments

Bill up Directly: contact John Moe
Contract # 707311,
- 5 Day turn firm, may request additional analyses
- 8260 including MtBE + fuel oxygenates
- Silica Gel Clean up
diesel + motor oil

Laboratory: Entech

Turnaround Time: 5-Day Firm

Results to: Penny Tse

Total No. of Containers: 5

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment:
Printed Name: Charles Reme	Time:	Printed Name: Oscar #375	Time:	Printed Name:	Time:	Lab Pick up
Company: Geomatrix	1315	Company: World	1500	Company:		Laboratory Comments and Log,No.:
Received by: Oscar #375	Date: 3/6	Received by:	Date:	Received by:	Date:	
Printed Name: Oscar Oregon	Time:	Printed Name: Eugene Figueroa	Time:	Printed Name:	Time:	
Company: World	1500	Company: Entech		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

No.0046 P. 13/13
Mar.14. 2000 11:44AM

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

May 17, 2000

Susan Gallardo
Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612

Order:	20424	**Date Collected:**	5/9/00
Project Name:	Santa Rosa	**Date Received:**	5/10/00
Project Number:	2770.005	**P.O. Number:**	Invoice Union Pacific
Project Notes:			

On May 10, 2000, samples were received under documentented chain of custody. Results for the following analyses are attached:

Matrix	Test	Method
Solid	Chromium	EPA 6010B
	Chromium (VI)	EPA 7196A

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,

Michelle L. Anderson
Lab Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Susan Gallardo

Date: 5/17/00
Date Received: 5/10/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 20424 **Lab Sample ID:** 20424-001 **Client Sample ID:** SRB33-A-1.0
Sample Time: 9:25 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	87	5	1	5	mg/Kg	5/15/00	5/17/00	SM000513	EPA 6010B

Order ID: 20424 **Lab Sample ID:** 20424-002 **Client Sample ID:** SRB33-A-4.5
Sample Time: 9:58 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	80	5	1	5	mg/Kg	5/15/00	5/17/00	SM000513	EPA 6010B

Order ID: 20424 **Lab Sample ID:** 20424-003 **Client Sample ID:** SRB33-B-1.0
Sample Time: 10:30 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	85	5	1	5	mg/Kg	5/15/00	5/17/00	SM000513	EPA 6010B

Order ID: 20424 **Lab Sample ID:** 20424-004 **Client Sample ID:** SRB33-B-4.5
Sample Time: 11:05 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	140	5	1	5	mg/Kg	5/15/00	5/17/00	SM000513	EPA 6010B

Order ID: 20424 **Lab Sample ID:** 20424-005 **Client Sample ID:** SRB34-A-1.0
Sample Time: 11:55 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	43	5	1	5	mg/Kg	5/15/00	5/17/00	SM000513	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Susan Gallardo

Date: 5/17/00
Date Received: 5/10/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 20424 **Lab Sample ID:** 20424-006 **Client Sample ID:** SRB34-A-4.5
Sample Time: 1:00 PM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	80	5	1	5	mg/Kg	5/15/00	5/17/00	SM000513	EPA 6010B

Order ID: 20424 **Lab Sample ID:** 20424-007 **Client Sample ID:** SRB34-B-1.0
Sample Time: 1:50 PM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	35	5	1	5	mg/Kg	5/15/00	5/17/00	SM000513	EPA 6010B

Order ID: 20424 **Lab Sample ID:** 20424-008 **Client Sample ID:** SRB34-B-4.5
Sample Time: 2:25 PM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	PrepDate	Analysis Date	QC Batch ID	Method
Chromium	75	5	1	5	mg/Kg	5/15/00	5/17/00	SM000513	EPA 6010B

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Susan Gallardo

Date: 5/17/00
Date Received: 5/10/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 20424 **Lab Sample ID:** 20424-001 **Client Sample ID:** SRB33-A-1.0
Sample Time: 9:25 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Chromium (VI)	ND	1	0.1	0.1	mg/Kg	5/16/00	SCR6000516	EPA 7196A

Order ID: 20424 **Lab Sample ID:** 20424-002 **Client Sample ID:** SRB33-A-4.5
Sample Time: 9:58 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Chromium (VI)	ND	1	0.1	0.1	mg/Kg	5/16/00	SCR6000516	EPA 7196A

Order ID: 20424 **Lab Sample ID:** 20424-003 **Client Sample ID:** SRB33-B-1.0
Sample Time: 10:30 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Chromium (VI)	ND	1	0.1	0.1	mg/Kg	5/16/00	SCR6000516	EPA 7196A

Order ID: 20424 **Lab Sample ID:** 20424-004 **Client Sample ID:** SRB33-B-4.5
Sample Time: 11:05 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Chromium (VI)	ND	1	0.1	0.1	mg/Kg	5/16/00	SCR6000516	EPA 7196A

Order ID: 20424 **Lab Sample ID:** 20424-005 **Client Sample ID:** SRB34-A-1.0
Sample Time: 11:55 AM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Chromium (VI)	ND	1	0.1	0.1	mg/Kg	5/16/00	SCR6000516	EPA 7196A

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

CA ELAP# 2346

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Geomatrix Consultants
2101 Webster Street, 12th Floor
Oakland, CA 94612
Attn: Susan Gallardo

Date: 5/17/00
Date Received: 5/10/00
Project Name: Santa Rosa
Project Number: 2770.005
P.O. Number: Invoice Union Pacific
Sampled By: Todd Loar

Certified Analytical Report

Order ID: 20424 **Lab Sample ID:** 20424-006 **Client Sample ID:** SRB34-A-4.5
Sample Time: 1:00 PM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Chromium (VI)	ND	1	0.1	0.1	mg/Kg	5/16/00	SCR6000516	EPA 7196A

Order ID: 20424 **Lab Sample ID:** 20424-007 **Client Sample ID:** SRB34-B-1.0
Sample Time: 1:50 PM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Chromium (VI)	ND	1	0.1	0.1	mg/Kg	5/16/00	SCR6000516	EPA 7196A

Order ID: 20424 **Lab Sample ID:** 20424-008 **Client Sample ID:** SRB34-B-4.5
Sample Time: 2:25 PM **Sample Date:** 5/9/00 **Matrix:** Solid

Parameter	Result	DF	PQL	DLR	Units	Analysis Date	QC Batch ID	Method
Chromium (VI)	ND	1	0.1	0.1	mg/Kg	5/16/00	SCR6000516	EPA 7196A

DF = Dilution Factor ND = Not Detected DLR = Detection Limit Reported PQL = Practical Quantitation Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #2346)

Michelle L. Anderson, Laboratory Director

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

Laboratory Control Spikes
METHOD: EPA 6010

QC Batch #: SM000513
Matrix: Solid
Units: mg/kg

Date Analyzed: 05/17/00
Date Digested: 05/15/00
Digestion Method: EPA 3050
Spiked Sample: Blank Spike

PARAMETER	Method #	MB mg/kg	SA mg/kg	SR mg/kg	SP mg/kg	SP %R	SPD mg/kg	SPD %R	RPD	QC LIMITS RPD	QC LIMITS %R
Antimony	6010	<1.0	50.	0.0	45.	**90**	45.	**90**	0.5	25.0	75-125
Arsenic	6010	<1.0	50.	0.0	42.	**85**	43.	**85**	0.1	25.0	75-125
Barium	6010	<1.0	50.	0.0	47.	**95**	48.	**96**	1.1	25.0	75-125
Beryllium	6010	<1.0	50.	0.0	46.	**92**	47.	**93**	1.1	25.0	75-125
Cadmium	6010	<1.0	50.	0.0	43.	**86**	44.	**88**	1.6	25.0	75-125
Chromium	6010	<1.0	50.	0.0	46.	**93**	47.	**94**	1.1	25.0	75-125
Cobalt	6010	<1.0	50.	0.0	46.	**93**	47.	**93**	1.0	25.0	75-125
Copper	6010	<1.0	50.	0.0	46.	**91**	46.	**92**	1.1	25.0	75-125
Lead	6010	<1.0	50.	0.0	46.	**93**	47.	**93**	1.0	25.0	75-125
Molybdenum	6010	<1.0	50.	0.0	47.	**95**	48.	**95**	0.7	25.0	75-125
Nickel	6010	<1.0	50.	0.0	46.	**92**	46.	**93**	0.6	25.0	75-125
Selenium	6010	<1.0	50.	0.0	44.	**87**	44.	**88**	1.0	25.0	75-125
Silver	6010	<1.0	50.	0.0	45.	**91**	46.	**91**	1.0	25.0	75-125
Thallium	6010	<1.0	50.	0.0	47.	**93**	45.	**91**	2.9	25.0	75-125
Vanadium	6010	<1.0	50.	0.0	46.	**93**	47.	**93**	1.0	25.0	75-125
Zinc	6010	<1.0	50.	0.0	44.	**87**	44.	**88**	1.1	25.0	75-125

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery

Chain-of-Custody Record

003611

Date: 5/9/00

Project No.: 2770.005

Samplers (Signature:) Todd N. Loan

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	Total Chromium	Hexavalent Chromium		H2O2	20424	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
5/4/00	0920	SRB33-A-0.5														X	-009	S	No	No	Yes	1	4 oz. glass Jar
	0925	SRB33 A-1.0											X	X			-001	S				1	
	0930	SRB33A-1.5														X	-010	S				1	
	0935	SRB33A-2.0														X	-011	S				1	
	0940	SRB33 A-2.5														X	-012	S				1	
	0945	SRB33 A-3.0														X	-013	S				1	
	0950	SRB33-A-3.5														X	-014	S				1	
	0955	SRB33 A-4.0														X	-015	S				1	
	0958	SRB33 A-4.5											X	X			-002	S				1	
	1000	SRB33A-5.0														X	-016	S				1	
	1025	SRB33 B 0.5														X	-017	S				1	
	1030	SRB33-B 1.0											X	X			-003	S				1	
	1035	SRB33 B 1.5														X	-018	S				1	
	1040	SRB33-B 2.0														X	-019	S				1	
	1045	SRB33-B 2.5														X	-020	S				1	

Laboratory: Entech

Turnaround Time: Standard

Results to: Susan Gallardo

Total No. of Containers: 15

Additional Comments: NOTE: Please Bill Union Pacific directly. Contact John Moe, Contract No. 707311

Relinquished by (Signature): Todd Loan	Date: 5/4/00	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Printed Name: Todd Loan	Time: 1800	Printed Name:	Time:	Printed Name:	Time:
Company: Geomatrix		Company:		Company:	
Received by:	Date: 5/10/00	Received by:	Date:	Received by:	Date:
Printed Name: E. Gustavson	Time: 1154	Printed Name:	Time:	Printed Name:	Time:
Company: Entech		Company:		Company:	

Method of Shipment: Lab Pick-up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Chain-of-Custody Record

003612

Date: 5/9/00 | Page 2 of 3

Project No.: 2770.005

Samplers (Signature:): Todd N. Loan

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	Total Chromium	Hexavalent Chromium		HOLD	20424	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
5/9/00	1050	SRB33 B-3.0														X	-021	S	No	No	Yes	1	NOTE: Please bill Union Pacific directly - Contact John Moe; Contract No: 707311
	1055	SRB33-B 3.5														X	-022	S				1	4 oz. glass Jar
	1100	SRB33-B 4.0														X	-023	S				1	
	1105	SRB33-B 4.5											X	X			-024	S				1	
	1110	SRB33-B 5.0														X	-024	S				1	
	1150	SRB34-A-0.5														X	-025	S				1	
	1155	SRB34-A-1.0											X	X			-026	S				1	
	1205	SRB34-A-1.5														X	-026	S				1	
89:11 01 AUG 00	1210	SRB34-A 2.0														X	-027	S				1	
	1215	SRB34-A-2.5														X	-028	S				1	
	1245	SRB34-A-3.0														X	-029	S				1	
	1250	SRB34-A-3.5														X	-030	S				1	
	1255	SRB34-A-4.0														X	-031	S				1	
	1300	SRB34-A-4.5											X	X			-006	S				1	
	1305	SRB34-A-5.0														X	-032	S				1	

Laboratory: Entech

Turnaround Time: Standard

Results to: Susan Gallardo

Total No. of Containers: 15

Relinquished by (Signature): Todd Loan	Date: 5/9/00	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:
Printed Name: Todd Loan	Time: 1800	Printed Name:	Time:	Printed Name:	Time:
Company: Geomatrix		Company:		Company:	
Received by:	Date: 5/10/00	Received by:	Date:	Received by:	Date:
Printed Name:	Time: 1157	Printed Name:	Time:	Printed Name:	Time:
Company:		Company:		Company:	

Method of Shipment: Lab Pick-up

Laboratory Comments and Log No.:

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Chain-of-Custody Record

003610

Date: 5/9/00

Page 3 of 3

Project No.: 2770 005

Samplers (Signature:) Todd N. Loar

ANALYSES

REMARKS

Date	Time	Sample Number	EPA Method 8021 (Full Scan)	EPA Method 8021 (Hal. VOCs only)	EPA Method 8021 (BETX only)	EPA Method 8260	EPA Method 8270 (Full Scan)	EPA Method 8270 SIM (PAHS only)	Method 8015M (Gasoline)	Method 8015M (Diesel)	Method 8015M (Motor Oil)	Silica Gel Cleanup	Total Chromium	Hexavalent Chromium		HOLD	20429	Soil (S), Water (W) Vapor (V), or Other (O)	Filtered	Preserved	Cooled	No. of Containers	Additional Comments
																							NOTE: Please bill Union Pacific directly. Contact: John Moe. Contract No. 707311
5/9/00	1345	SRB34-B 0.5														X	-033	S	No	No	Yes	1	4 oz. glass Jar
	1350	SRB34-B 1.0											X	X			-007	S				1	
	1355	SRB34-B 1.5														X	-034	S				1	
	1400	SRB34-B 2.0														X	-035	S				1	
	1405	SRB34-B 2.5														X	-036	S				1	
	1410	SRB34-B 3.0														X	-037	S				1	
	1415	SRB34-B 3.5														X	-038	S				1	
	1420	SRB34-B 4.0														X	-039	S				1	
	1425	SRB34-B 4.5											X	X			-008	S				1	
↓	1430	SRB34-B 5.0														X	-040	S	↓	↓	↓	1	↓
8S:TT 8T AUN 00																							
														JL									

Laboratory:

Turnaround Time:

Results to:

Total No. of Containers: 10

Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Relinquished by (Signature):	Date:	Method of Shipment:
Todd Loar	5/9/00					
Printed Name: Todd Loar	Time:	Printed Name:	Time:	Printed Name:	Time:	Laboratory Comments and Log No.:
Company: Geomatrix	1800	Company:		Company:		
Received by:	Date: 5/10/00	Received by:	Date:	Received by:	Date:	
Printed Name:	Time: 1155	Printed Name:	Time:	Printed Name:	Time:	
Company:		Company:		Company:		

Geomatrix Consultants
2101 Webster Street, 12th Floor • Oakland, CA 94612
Phone: 510-663-4100 • Fax: 510-663-4141

Well Abandonment Report

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street
Santa Rosa, California

North Coast Regional Water Quality Control Board
Case No. 1TSR196

Antea Group Project No. UPR8248
March 26, 2015

Prepared for:
Janice Goebel
California Water Quality Control Board North Coast Region
5550 Skyline Boulevard, Suite A
Santa Rosa, California 95403

Prepared by:
Antea®Group
1155 North First Street, Suite 201
San Jose, CA 95112 USA
+1 800 477 7411

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Appendix B Well Abandonment Permit

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Well Abandonment Report

Union Pacific Railroad
2 Fourth Street and 34 Sixth Street, Santa Rosa, California
North Coast Regional Water Quality Control Board
Case No. 1TSR196

1.0 INTRODUCTION

Antea®Group (Antea Group) has prepared this Well Abandonment Report to document the abandonment of 4 (four) wells associated with the subject site. These wells were abandoned as requested in correspondence from the North Coast Regional Water Quality Control Board (NCRWQCB). A Site Location Map and Site Plan are provided as **Figure 1** and **Figure 2,** respectively. Agency correspondence granting closure concurrence and the directive to destroy site monitoring wells is provided as **Appendix A**. As case obligations are now complete, following agency review of this document, Antea Group requests to receive correspondence documenting final case closure.

2.0 WELL ABANDONMENT ACTIVITIES

All wells were destroyed by Gregg Drilling and Testing, Inc. (Gregg), C-57 License #485165, under the supervision of Antea Group. Antea Group obtained well abandonment permits from the Sonoma County Department of Environmental Health (**Appendix B**).

2.1 Well Abandonments

On February 10 and 11, 2015, Antea Group oversaw the proper abandonment of all 4 site-associated wells. Each well was drilled out to total depth and subsequently backfilled with neat cement grout until the level of grout within the well stabilized (until the grout level did not decrease). The well boxes were removed from all locations and the surface was finished to match the surrounding areas. Following well abandonment, Antea Group and Gregg completed Well Completion Report (WCR) forms for the Department of Water Resources (DWR). Copies of these forms have been sent Sonoma County Department of Environmental Health; the original WCR forms have been submitted to the DWR.

3.0 WASTE DISPOSAL

Soil cuttings and construction debris (concrete and well casing material) generated during well abandonment activities were placed in Department of Transportation (DOT) approved 55-gallon drums, sealed and labeled in accordance with the corresponding DOT protocols for non-hazardous waste and temporarily stored on site pending waste characterization. Soil drums and construction debris were subsequently removed from the site on March 19, 2015 and transported to an approved disposal facility. Copies of the non-hazardous waste manifests are provided as **Appendix C**

4.0 REMARKS

The recommendations contained in this document represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This document is based upon a specific scope of work requested by the client. For any reports cited that were not generated by Delta or Antea Group, the data from those reports is used "as is" and is assumed to be accurate. Antea Group does not guarantee the accuracy of this data for the referenced work performed nor the inferences or conclusions stated in these reports. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this document were performed. This document is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this document. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this document.

on behalf of

Kira Thornley
Staff Professional
Antea Group

Information, conclusions, and recommendations provided by Antea Group in this document regarding the site have been prepared under the supervision of and reviewed by the licensed professional whose signature appears below.

Licensed Approver:

PROFESSIONAL GEOLOGIST
LIA HOLDEN
No. 8584
Exp. 4/17
STATE OF CALIFORNIA

Lia N. Holden, P.G.
Senior Project Manager
California Registered Professional Geologist No. 8584
Antea Group

Figures

Figure 1 Site Location Map
Figure 2 Site Plan





North

0 1000 2000 FT

SCALE

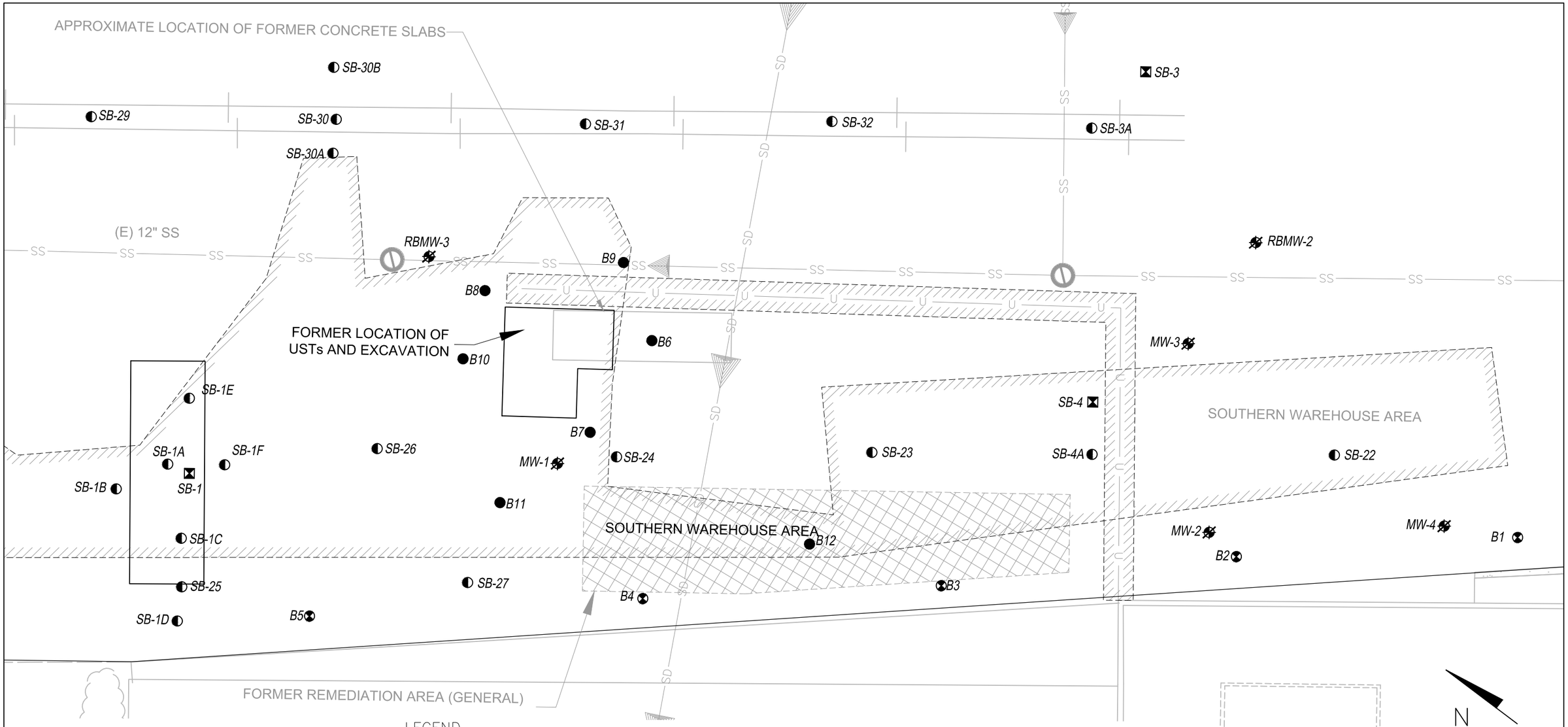
SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, SANTA ROSA QUADRANGLE (1973)

FIGURE 1
SITE LOCATION MAP

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	SM	JH
DATE	REVIEWED BY	FILE NAME
11/22/11	LH	UPR8248-TOPO

anteagroup



ADAPTED FROM A SOIL LOCATION MAP BY EBA (2008)

LEGEND

2012 INVESTIGATION (ANTEA GROUP)

- EXTENT OF SOIL EXCAVATION
- SOIL BORINGS (B1 THROUGH B5)
- QUALITATIVE SOIL BORINGS (B6 THROUGH B12)
- DESTROYED MONITORING WELL

1996 INVESTIGATION (GEOMATRIX)

- SOIL BORING

2008 INVESTIGATION (EBA)

- SHALLOW GROUNDWATER CHARACTERIZATION (~15' BGS)
- DEEP GROUNDWATER CHARACTERIZATION (~25' BGS)
- SOIL SAMPLE
- SOIL BORINGS SB-12 THROUGH SB-14 (SOIL AND/OR GROUNDWATER CHARACTERIZATION FOR SANITARY SEWER AND STORM DRAINS)
- SOIL BORINGS SB-18 THROUGH SB-61 (SHALLOW SOIL CHARACTERIZATION FOR RAILROAD SPUR AND OTHER MISCELLANEOUS LOCATIONS)

UTILITIES

- SS — SANITARY SEWER
- SD — STORM DRAIN
- W — WATER
- U — PIPE OF UNKNOWN USE
- FENCE
- RAIL ROAD TRACKS
- TELEPHONE POLE
- (E) EXISTING
- BGS BELOW GROUND SURFACE
- CMP CORRUGATED METAL PIPE

FIGURE 2
SITE PLAN

UNION PACIFIC RAILROAD
2 FOURTH STREET AND 34 SIXTH STREET
SANTA ROSA, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
UPR8248	LH	JH
DATE	REVIEWED BY	FILE NAME
3/25/15	LH	UPR8248-Site

anteagroup

Appendix A

Agency Correspondence

CALIFORNIA Water Boards

EDMUND G. BROWN JR. GOVERNOR

MATTHEW RODRIQUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

North Coast Regional Water Quality Control Board

January 9, 2015

Ms. Lauren A. Mancuso
Manager of Environmental Site Remediation
Union Pacific Railroad Company
9451 Atkinson Street, Suite 100
Roseville, CA 95747
lamancus@up.com

Dear Ms. Mancuso:

Subject: Concurrence with "Well Abandonment Work Plan"

Site: Southern Pacific Transportation Company, 20 West Third Street, Santa Rosa
Case No. 1TSR196 and 1NSR196

On December 16, 2014, the "Well Abandonment Work Plan" was received for the former Southern Pacific Transportation Company's rail yard located off West Third Street in Santa Rosa. We concur with the well abandonment work plan as written.

Please provide documentation on the well destruction and that all wastes have been removed from the site. Once that information is received, you will receive a letter indicating no further action is required.

If you have questions, please contact me at Janice.Goebel@waterboards.ca.gov or (707) 576-2676.

Sincerely,

Janice M. Goebel
Sanitary Engineering Associate

150109_JMG_er_SPWellaban

cc: Ms. Leslye Choate, lchoate@sonoma-county.org
Ms. Marita Petersen, SRFD, mpetersen@srcity.org
Ms. Laura Giraud, SMART, LGiraud@sonomamarintrain.org
Ms. Lia Holden, Anteagroup, lia.holden@anteagroup.com

Appendix B

Well Abandonment Permit

COUNTY OF SONOMA — DEPARTMENT OF HEALTH SERVICES
ENVIRONMENTAL HEALTH & SAFETY
625 5th Street, Santa Rosa, CA 95404
Phone (707) 565-6565 Fax (707) 565-6525 www.sonoma-county.org

DEPT. OF HEALTH SVCS
JAN 20 2015
ENVIRONMENTAL HEALTH DIVISION

APPLICATION FOR DRILLING PERMIT
for Regional Board Lead/Environmental Assessment/LOP Lead

For Office Use Only
Amount Paid 597.00
Receipt Number _____ PE 1348
Payment Date 1-23-15 Rev. Code 1348
Site ID# FA0041705
Permit # SRW12615

Permit Type:

☐ Monitoring Well ☐ Borings ■ Destruct ☐ Environmental Assessment

Well Type: ☐ Remediation Well ☐ Extraction Well ☐ Soil Vapor
■ Other Monitoring

On-Site Well 4 ID # MW-1, MW-2, MW-3, MW-4 # Off-Site Well _____ ID # _____

On-Site Boring _____ ID # _____ # Off-Site Boring _____ ID # _____

Submit legal right-of-entry/off-site well address/encroachment permit

Site Address 34 Sixth Street & 2 Fourth Street AP# 010-166-03 & 010-171-004

Facility Name Union Pacific Railroad

Site Owner Union Pacific Railroad Phone (916) 789-5184

Street 9451 Atkinson Street Suite 100 City Roseville State CA Zip 95747

Responsible Party Union Pacific Railroad Phone (916) 789-5184

Street 9451 Atkinson Street Suite 100 City Roseville State CA Zip 95747

Consultant Antea Group License#/Type _____ Phone 408-606-4909

Street 1155 N First Street Suite 201 City San Jose State CA Zip 95112

License #/Type _____ Email kira.thornley@anteagroup.com

Drilling Contractor Gregg Drilling and Testing Phone 925-313-5800

Street 950 Howe Rd City Martinez State CA Zip 94553

C-57 License 485165

ENTERED EP

Disposal method for soil cuttings 55 Gal Drum

Disposal method for development water NA

Drilling method Hollow Stem Auger

Method of drill equipment rinsate containment and disposal 55 Gal Drum

If destroying a well, abandonment method Overdrill to Full Depth

684624*#
001348D
ENVDRILL 597.00
TTLAMT 597.00
CHECKS 597.00
CHANGE 0.00
414B #2 11:13

Submit plot plan of wells in relation to all sewer or septic lines.

Is well to be constructed within: 100 feet of a septic tank or leach field? ○Yes ◉No

50 feet of any sanitary sewer line? ◉Yes ○No

25 feet of any private sanitary sewer line? ○Yes ◉No

01/23/15

In addition, all monitoring wells must include an ***identification system*** affixed to the interior surface:

1) Well identification 2) Well type 3) Well depth 4) Well casing diameter 5) Perforated intervals

Well identification number and well type shall be ***affixed*** to the ***exterior surface*** security structure.

For Office Use Only

Address 34 6th St ; 2424th St.

Site ID# FA0041705

Permit # SRO12665

I hereby agree to comply with all laws and regulations of the County of Sonoma and State of California pertaining to water well construction. I will telephone (707) 565-6565, 48 hours in advance, to notify the Environmental Health Specialist when completing or destroying a well. I will furnish the Director of Environmental Health and the owner a legible copy of the State Water Well Driller's Report within 15 days; and a copy of the Summary Report, including sample results, should be received by the Department of Health Services, Environmental Health and Safety Section within 90 days in order to obtain final approval on this well permit. I acknowledge that the application will become a permit ***only*** after site approval and payment of fee. I understand that this permit is not transferable and expires one year from date of issuance.

Signature of Well Driller—***no proxies (Wet Signature Required)*** Date 11/5/15

Insurance Carrier AON Risk Insurance Services Expiration Date 8-1-2015

Once all wells/borings are installed, submit a Well Driller's Log and/or Summary Report to complete permit process.

Indicate on attached plot plan the exact location of well(s) with respect to the following items: property lines, water bodies or water courses drainage pattern, roads, existing wells, sewer main and laterals and private sewage disposal systems or other sources of contamination or pollution. INCLUDE DIMENSIONS. The validity of this permit depends upon the accuracy of the information provided by the applicant.

Conditions of permit:

FOR OFFICE USE ONLY – ENVIRONMENTAL HEALTH & SAFETY

ENTERED EHS

Permit approved by Wesley Heath Date 1/30/15

Constr. approved by _____ Observed? ☐Yes ☐No Well # _____ Date ___/___/___

RWQCB/LOP approval _____ Date ___/___/___

Distribution: ☐File ☐Driller ☐Consultant ☐Owner/Resp. Party

Appendix C

Non-Hazardous Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No. 11952450

2. Page 1 of 1

3. Generator's Name and Mailing Address
UNION PACIFIC RAILROAD - UNI768
2401 E. SEPULVEDA BLVD.
LONG BEACH CA 90810
ANNE THERIAULT

4. Generator's Phone (626 890-7073

5. Transporter 1 Company Name
ASBURY ENVIRONMENTAL SERVICES

6. US EPA ID Number
CAD028277036

A. State Transporter's ID

B. Transporter 1 Phone (800)974-4495

7. Transporter 2 Company Name

8. US EPA ID Number

C. State Transporter's ID

D. Transporter 2 Phone

9. Designated Facility Name and Site Address
DEMENNO / KERDOON
2000 N. ALAMEDA STREET
COMPTON CA 90222

10. US EPA ID Number
CAT080013352

E. State Facility's ID

F. Facility's Phone
(310)537-7100

11. WASTE DESCRIPTION	12. Containers No.	12. Containers Type	13. Total Quantity	14. Unit Wt./Vol.
a. NON-HAZARDOUS WASTE, SOLID SOIL	3	DM	1,800	P
b.				
c.				
d.				

G. Additional Descriptions for Materials Listed Above

H. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
EMERGENCY CONTACT : CHEMTREC 1-800-424-9300 * PROFILE # 9B1 : 329740 SOIL * PO# A110204546 * APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT

SITE: 2 4TH ST / 34 6TH ST, , SANTA ROSA, CA 95401

3X55DM 2006

GENERATOR

16. **GENERATOR'S CERTIFICATION:** I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.

Printed/Typed Name: Andrew Hinton
Signature: ON BEHALF OF GENERATOR
Date: Month 03 Day 19 Year 15

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: ANDREW HINTON
Signature:
Date: Month 03 Day 19 Year 15

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name:
Signature:
Date: Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.

Printed/Typed Name:
Signature:
Date: Month Day Year

NON-HAZARDOUS WASTE