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QUARTERLY GROUNDWATER MONITORING REPORT

Third Sampling Event, March 2013

For the Site Located at:

2145 35TH Avenue

Oakland, California 94601

Prepared for:

Salisbury Avenue Associates LLC

2917 MacArthur Boulevard, #A3F

Oakland, CA 94602

Prepared by:

Eagle Environmental Construction (EEC)

1485 Bayshore Boulevard, Suite 374

San Francisco, CA 94124

April 11, 2013

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1.0 Introduction

This quarterly groundwater monitoring report is for the former gasoline service station located at 2145 35th Avenue, Oakland, California (Figure 1). This is the third quarterly sampling event since the four monitoring wells were installed in July 2012. For background information about the subject site and an update of the activities performed through July 2012, review the August 2012 report titled “Phase II Environmental Investigation Report and Supplemental Investigation Workplan.”

What is different in this third quarterly monitoring event from the previous two events is the following:

- Added the analysis of Polycyclic Aromatic Hydrocarbons (PAHs) of the water from monitoring wells MW-2 and MW-3. This is due to the detection of Naphthalene, Stoddard solvent, and motor oil in these two wells and as requested in a letter from Alameda County Environmental Health (ACEH) dated December 18, 2012.
- Reduced the LUFT five metal analysis to only Lead and Nickel in all four wells. This is due to the non-detected levels of Cadmium, Chromium, and Zinc in the past, in all four wells, and as requested in a letter from Alameda County Environmental Health (ACEH) dated December 18, 2012.

2.0 Groundwater Sampling Activities

The wells were purged and sampled on March 21, 2013. EEC Engineer, Sami Malaeb, performed the well purging and sampling. The well sampling logs are presented in Appendix A. The depth to water in the wells was measured and recorded after removing the well caps and letting the wells stabilize for approximately 15 minutes. Subsequently, each well was purged of at least three casing volumes and until conductivity, temperature, and pH stabilized. The well purge water was transferred to 55-gallon, DOT-approved, steel drums. The drums were temporarily stored onsite pending transport and disposal to a licensed facility.

After purging the wells, groundwater samples were collected by using disposable bailers. The water samples were discharged directly into laboratory cleaned 40-milliliter volatile organic analysis (VOA) vials with HCL preservative to prevent loss of any volatile constituents. The vials were filled slowly and in such a manner that the meniscus extended above the top of the VOA vial. After the vials were filled and capped, they were inverted to ensure there is no headspace or entrapped air bubbles. The groundwater VOAs were labeled and placed in a cooler chilled to approximately 4°C. Equipment wash and rinse water were transferred to a 55-gallon storage drum. The drum was sealed with a steel lid and labeled. Other containers, amber jars, one liter

plastic bottles, were obtained from the laboratory and filled with water from the bailer for the analyses of TPH-D, TPH-mo, PAHs, and Metals.

The water samples were placed on ice, in an ice cooler, accompanied by a completed chain of custody. The samples were sent to Curtis & Tompkins Laboratory in Berkeley and analyzed for the following:

- Total Petroleum Hydrocarbons as Gasoline (TPH-G) by EPA Method 8015B;
- Total Petroleum Hydrocarbons as Stoddard Solvent (TPHss) by EPA Method 8015B;
- Total Petroleum Hydrocarbons as Diesel (TPH-D) by EPA Method 8015B;
- Volatile Organics by the GC/MS EPA Method 8260, MTBE, BTEX, and Naphthalene (no other chlorinated organic compounds were considered for analysis because all previous results from sampling the boreholes did not detect chlorinated solvents);
- Total Recoverable Petroleum Hydrocarbons (TRPH) as Motor Oil and Hydraulic Oil , EPA Method 8015;
- Lead and Nickel by EPA Method 6010/7471 (with filtering before analysis). *And*
- *PAHs by EPA Method 8270sim.*

3.0 Groundwater Elevations and Flow Direction

The groundwater flow direction and gradient were calculated based on the depth to groundwater from top of casing in each well and the surveyed top of casing elevations. The well data are presented in the attached Table 1. The calculated groundwater flow direction was to the south at a gradient of 0.89% (Figure 2).

4.0 Groundwater Samples Laboratory Results

The laboratory report is included in Appendix B. Tables 2 through 4 summarize the analytical results. Laboratory analyses of groundwater samples collected from the monitoring wells indicated the following:

- Floating product or sheen was not observed in any of the wells.
- Similar to the first and second sampling events in July and December 2012, none of the analyzed petroleum hydrocarbons was detected in monitoring wells MW-1 and MW-4.
- Consistent with the first and second sampling events, the most petroleum hydrocarbon impact was detected in monitoring well MW-2, and to a lesser extent in monitoring well MW-3, downgradient from the former sources onsite; USTs, piping, and fuel dispenser. Groundwater from monitoring well MW-2 exceeded the ESLs for drinking water scenario for TPH-G; TPH-D; TPHss; BTEX; and Naphthalene. Groundwater from monitoring well

MW-3 exceeded the ESLs for drinking water scenario for TPH-G; TPH-D; and Benzene (Tables 2 and 3).

- Of the PAHs, Naphthalene was detected at a maximum of 27 µg/l in monitoring well MW-2 and Phenanthrene at 0.3 µg/l (at the detection limit) in the same well. All other PAHs were non-detected (Table 3).

5.0 Waste Management

A total of two (2) purge water drums were generated from the purging and sampling activities onsite. These drums are stored onsite pending profiling and disposal.

6.0 Conclusions and Recommendations

Based on the analytical findings EEC presents the following conclusions and recommendations:

Conclusions

- Similar to the first sampling event in July 2012, none of the analyzed petroleum hydrocarbons was detected in monitoring wells MW-1 and MW-4.
- Groundwater in the remaining monitoring wells MW-2 and MW-3 is impacted with petroleum hydrocarbons above the ESLs for the drinking water scenario.

Recommendations

- Continue the quarterly sampling of wells until at least four monitoring events are completed.
- Of the PAHs only Naphthalene was detected above the laboratory reporting limit (Table 3). We recommend discontinuing the analysis for the full suite PAHs by 8270sim and continuing the analysis for Naphthalene by EPA Method 8260B.
- Lead was not detected in any of the wells. Maximum Nickel concentration to date was detected below the drinking water MCL of 100 µg/l. Nickel was detected in the three sampling events at 6.6 µg/l, 9.7 µg/l, and 8.7 µg/l, in Monitoring well MW-4. No other contaminant was detected in monitoring well MW-4. It appears that Nickel at this site is not related to the fuel leak and may be naturally occurring. Therefore, we recommend discontinuing the analysis for metals in the monitoring wells at this site.

Thank you for your cooperation. If you have any questions, please call at (925) 858-9608 or email Sami Malaeb at s.malaeb@comcast.net.

All engineering information, conclusions, and recommendations contained in this report have been prepared by a California Professional Engineer.



Sami Malaeb, P.E., QSP/QSD
Project Manager

I declare under penalty of perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

A handwritten signature in cursive script that reads "Peter Robertson".

Salisbury Avenue Associates LLC
Peter Robertson
Property Owner

TABLES

<i>TABLE 1</i>	WELL DATA AND GROUNDWATER ELEVATIONS
<i>TABLE 2</i>	SUMMARY OF CHEMICAL ANALYSES OF GROUNDWATER SAMPLES COLLECTED FROM THE MONITORING WELLS –PETROLEUM HYDROCARBONS-BTEX AND MTBE
<i>TABLE 3</i>	SUMMARY OF CHEMICAL ANALYSES OF GROUNDWATER SAMPLES COLLECTED FROM THE MONITORING WELLS –POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)
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TABLE 1
WELL DATA AND GROUNDWATER ELEVATIONS
2145 35th Avenue
Oakland, California

DATE	WELL INFORMATION	MW-1	MW-2	MW-3	MW-4
07/18/2012	Casing Diameter (in)	2	4	4	2
	Total Well Depth (ft)	18	16	18	18
	Depth to Water (ft)	10.13	10.92	11.01	10.85
	Top of Casing Elevation	94.21	94.43	94.61	94.91
	Top of Water Elevation	84.08	83.51	83.60	84.06
12/06/2012	Casing Diameter (in)	2	4	4	2
	Total Well Depth (ft)	18	16	18	18
	Depth to Water (ft)	7.98	10.40	10.40	9.25
	Top of Casing Elevation	94.21	94.43	94.61	94.91
	Top of Water Elevation	86.23	84.03	84.21	85.66
03/21/2013	Casing Diameter (in)	2	4	4	2
	Total Well Depth (ft)	18	16	18	18
	Depth to Water (ft)	9.88	10.77	10.83	10.66
	Top of Casing Elevation	94.21	94.43	94.61	94.91
	Top of Water Elevation	84.33	83.66	83.78	84.25

TABLE 2
SUMMARY OF CHEMICAL ANALYSES
GROUNWATER SAMPLES COLLECTED FROM THE MONITORING WELLS
PETROLEUM HYDROCARBONS, BTEX, and MTBE
2145 35th Avenue
Oakland, California

Sample ID	Date Sampled	TPH-G ⁽¹⁾ (µg/l) ⁽²⁾	TPH-ss ⁽³⁾ (µg/l)	TPH-D ⁽⁴⁾ (µg/l)	TPH as Motor Oil (µg/l)	TPH as Hydraulic Oil (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl benzene (µg/l)	Total Xylenes (µg/l)	MTBE ⁽⁵⁾ (µg/l)
MW-1	07/09/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5
MW-2		3,800	3,900 (Y) ⁽⁶⁾	1,200 Y	<300	660Y	82	42	350	189.4	<0.5
MW-3		85Y	86Y	180Y	<300	<300	0.8	<0.5	<0.5	<1.0	<0.5
MW-4		<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5
MW-1	12/06/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5
MW-2		5,000	3,300 (Y)	2,300	<300	1,500Y	92	42	460	179.6	<0.5
MW-3		1,200	800Y	2,000	<300	1,600Y	36	0.8	9.2	1.1	<0.5
MW-4		<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5
MW-1	03/21/2013	<50	<50	<49	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5
MW-2		4,500	3,000	1,800 (Y)	<290	1,000Y	77	31	230	115.4	<1.7
MW-3		130 (Y)	91Y	140 (Y)	<290	<290	1.8	<0.5	<0.5	<1.0	<0.5
MW-4		<50	<50	<49	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5
Groundwater Screening Levels, drinking water resource (Final Groundwater Screening Levels) ⁽⁷⁾		100	100	100	100	100	1.0	40	30	20	5.0
Groundwater Screening Levels, non-drinking water resource (Final Groundwater Screening Levels) ⁽⁸⁾		210	210	210	210	210	46	130	43	100	1,800
Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (Volatile Chemicals Only) ⁽⁹⁾		Use Soil Gas	Use Soil Gas	Use Soil Gas	Use Soil Gas	Use Soil Gas	540	380,000	170,000	160,000	24,000

- TPH-G ⁽¹⁾ = Total petroleum hydrocarbons as gasoline by EPA Method 8015B
($\mu\text{g/l}$) ⁽²⁾ = Microgram per liter
TPH-ss ⁽³⁾ = Total petroleum hydrocarbons as Stoddard solvent by EPA Method 8015B
TPH-D ⁽⁴⁾ = Total petroleum hydrocarbons as diesel by EPA Method 8015B
MTBE ⁽⁵⁾ = Methyl Tertiary Butyl Ether
(Y) ⁽⁶⁾ = Sample exhibits chromatographic pattern which does not resemble standard
⁽⁷⁾ = Tier 1 Environmental Screening Levels (ESLs), Groundwater Screening Levels, Groundwater is Current or Potential Source of Drinking Water (Table F1-a), Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Prepared by: California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, Interim Final - November 2007, (Revised May 2008).
⁽⁸⁾ = Tier 1 Environmental Screening Levels (ESLs), Groundwater Screening Levels, Groundwater is not Current or Potential Source of Drinking Water (Table F-1B), Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Prepared by: California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, Interim Final - November 2007, (Revised May 2008).
⁽⁹⁾ = Tier 1 Environmental Screening Levels (ESLs), Groundwater Screening Levels, Groundwater is not Current or Potential Source of Drinking Water (Table E-1), Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Prepared by: California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, Interim Final - November 2007, (Revised May 2008).
Bold = Concentration presented in bold where such a value is at or exceeds one of the environmental screening levels (ESLs) listed

TABLE 3
SUMMARY OF CHEMICAL ANALYSES
GROUNWATER SAMPLES COLLECTED FROM THE MONITORING WELLS
POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)
2145 35th Avenue
Oakland, California

Sample ID	Date Sampled	Naphtha-lene (µg/l) ⁽¹⁾	Acena-phthylene (µg/l)	Acena-phtene (µg/l)	Fluo-rene (µg/l)	Phenan-threne (µg/l)	Anth-racene (µg/l)	Fluo-ranthene (µg/l)	Pyrene (µg/l)	Benzo (a) Anth-racene (µg/l)	Chry-sene (µg/l)	Benzo (b) Fluo-ranthene (µg/l)	Benzo (k) Fluo-ranthene (µg/l)	Benzo (a) pyrene (µg/l)	Indeno (1,2,3-cd) pyrene (µg/l)	Dibenz (a,h) Anthracene (µg/l)	Benzo (g,h,i) Perylene (µg/l)
MW-1	07/09/2012	<2.0	N/A ⁽²⁾	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-2		44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-3		<2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-4		<2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-1	12/06/2012	<2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-2		62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-3		120	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-4		<2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-1	03/21/2013	<2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-2		27	<0.3	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
MW-3		0.6	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09	<0.09
MW-4		<2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Groundwater Screening Levels, drinking water resource (Final Groundwater Screening Level) ⁽³⁾		17	30	20	3.9	4.6	0.73	8.0	2.0	0.027	0.35	0.029	0.029	0.014	0.048	0.0048	0.10
Groundwater Screening Levels, non-drinking water resource (Final Groundwater Screening Level) ⁽⁴⁾		24	30	23	3.9	4.6	0.73	8.0	2.0	0.027	0.35	0.029	0.029	0.014	0.048	0.25	0.10
Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (Volatile Chemicals Only) ⁽⁵⁾		3,200	Use Soil Gas	4,200	1,900	Use Soil Gas	43	N/A	140	N/A	Use Soil Gas	N/A	N/A	N/A	N/A	N/A	N/A

(µg/l)⁽¹⁾ = Microgram per liter

N/A⁽²⁾ = Not applicable or not analyzed for.

⁽³⁾ = Tier 1 Environmental Screening Levels (ESLs), Groundwater Screening Levels, Groundwater is Current or Potential Source of Drinking Water (Table F-1A), Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Prepared by: California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, Interim Final - November 2007, (Revised May 2008).

⁽⁴⁾ = Tier 1 Environmental Screening Levels (ESLs), Groundwater Screening Levels, Groundwater is not Current or Potential Source of Drinking Water (Table F-1B), Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Prepared by: California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, Interim Final - November 2007, (Revised May 2008).

⁽⁵⁾ = Tier 1 Environmental Screening Levels (ESLs), Groundwater Screening Levels, Groundwater is not Current or Potential Source of Drinking Water (Table E-1), Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Prepared by: California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, Interim Final - November 2007, (Revised May 2008).

Bold = Concentration presented in bold where such a value is at or exceeds one of the environmental screening levels (ESLs) listed

TABLE 4
SUMMARY OF CHEMICAL ANALYSES
GROUNDWATER SAMPLES COLLECTED FROM THE MONITORING WELLS
LUFT FIVE METALS
2145 35th Avenue
Oakland, California

Sample ID	Date Sampled	Cadmium (Cd) (µg/l) ⁽¹⁾	Chromium (Cr) (µg/l)	Lead (Pb) (µg/l)	Nickel (Ni) (µg/l)	Zinc (Zn) (µg/l)
MW-1	07/09/2012	<5.0	<5.0	<5.0	<5.0	<20
MW-2		<5.0	<5.0	<5.0	<5.0	<20
MW-3		<5.0	<5.0	<5.0	<5.0	<20
MW-4		<5.0	<5.0	<5.0	6.6	<20
MW-1	12/06/2012	<5.0	<5.0	<5.0	7.6	<20
MW-2		<5.0	<5.0	<5.0	<5.0	<20
MW-3		<5.0	<5.0	<5.0	6.1	<20
MW-4		<5.0	<5.0	<5.0	9.7	<20
MW-1	03/21/2013	N/A ⁽²⁾	N/A	<5.0	5.5	<20
MW-2		N/A	N/A	<5.0	<5.0	<20
MW-3		N/A	N/A	<5.0	5.1	<20
MW-4		N/A	N/A	<5.0	8.7	<20
Groundwater Screening Levels, drinking water Toxicity ⁽³⁾		5.0	50	15	100	5,000

(µg/l) ⁽¹⁾ =

Microgram per liter

N/A ⁽²⁾ =

Not applicable or not analyzed for the indicated compound

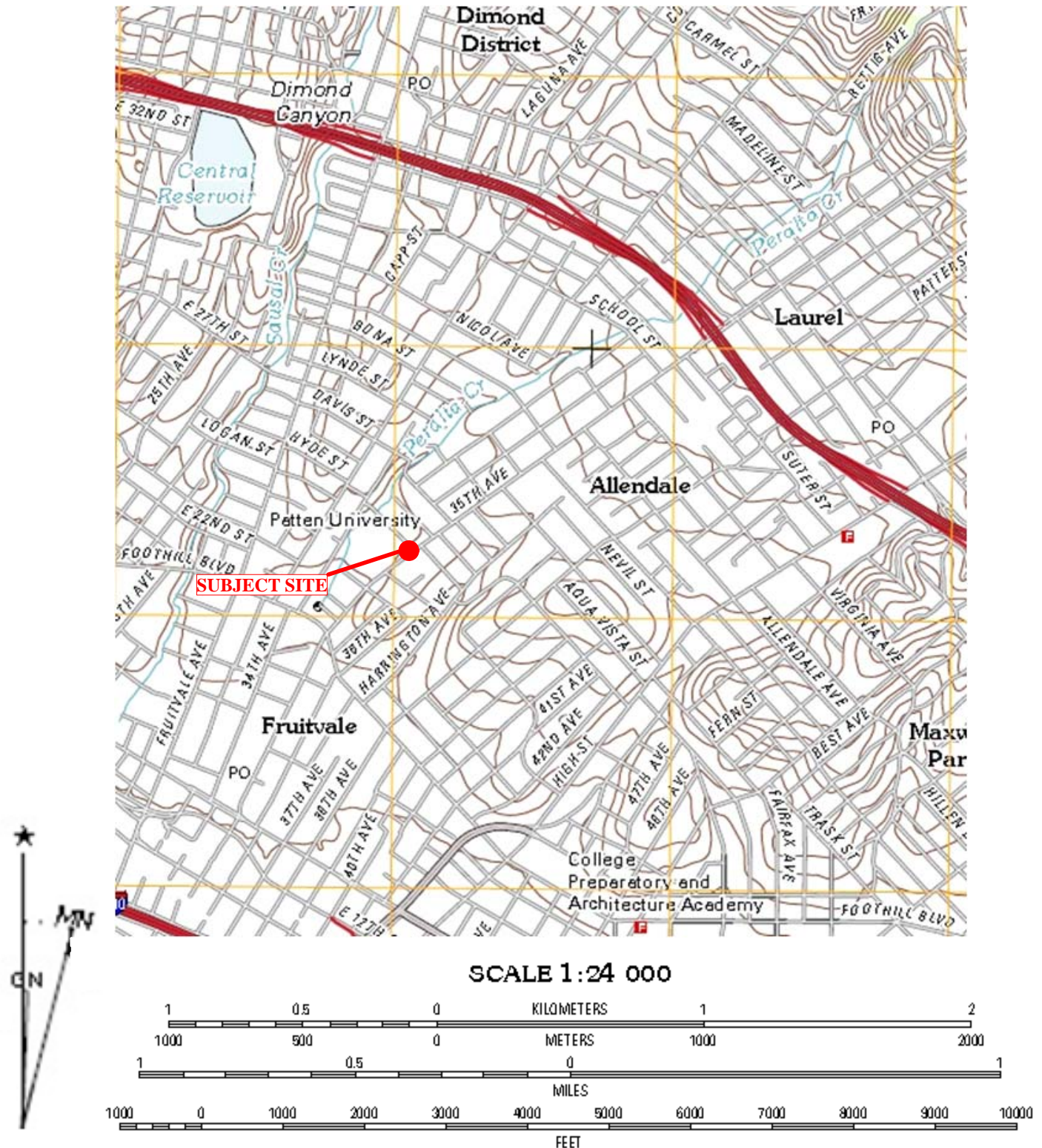
⁽³⁾ =

Tier 1 Environmental Screening Levels (ESLs), Groundwater Screening Levels, Groundwater is Current or Potential Source of Drinking Water (Table F-3), Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Prepared by: California Regional Water Quality Control Board, San Francisco Bay Region, 1515 Clay Street, Suite 1400, Oakland, California 94612, Interim Final - November 2007, (Revised May 2008).

FIGURES

FIGURE 1 SITE LOCATION

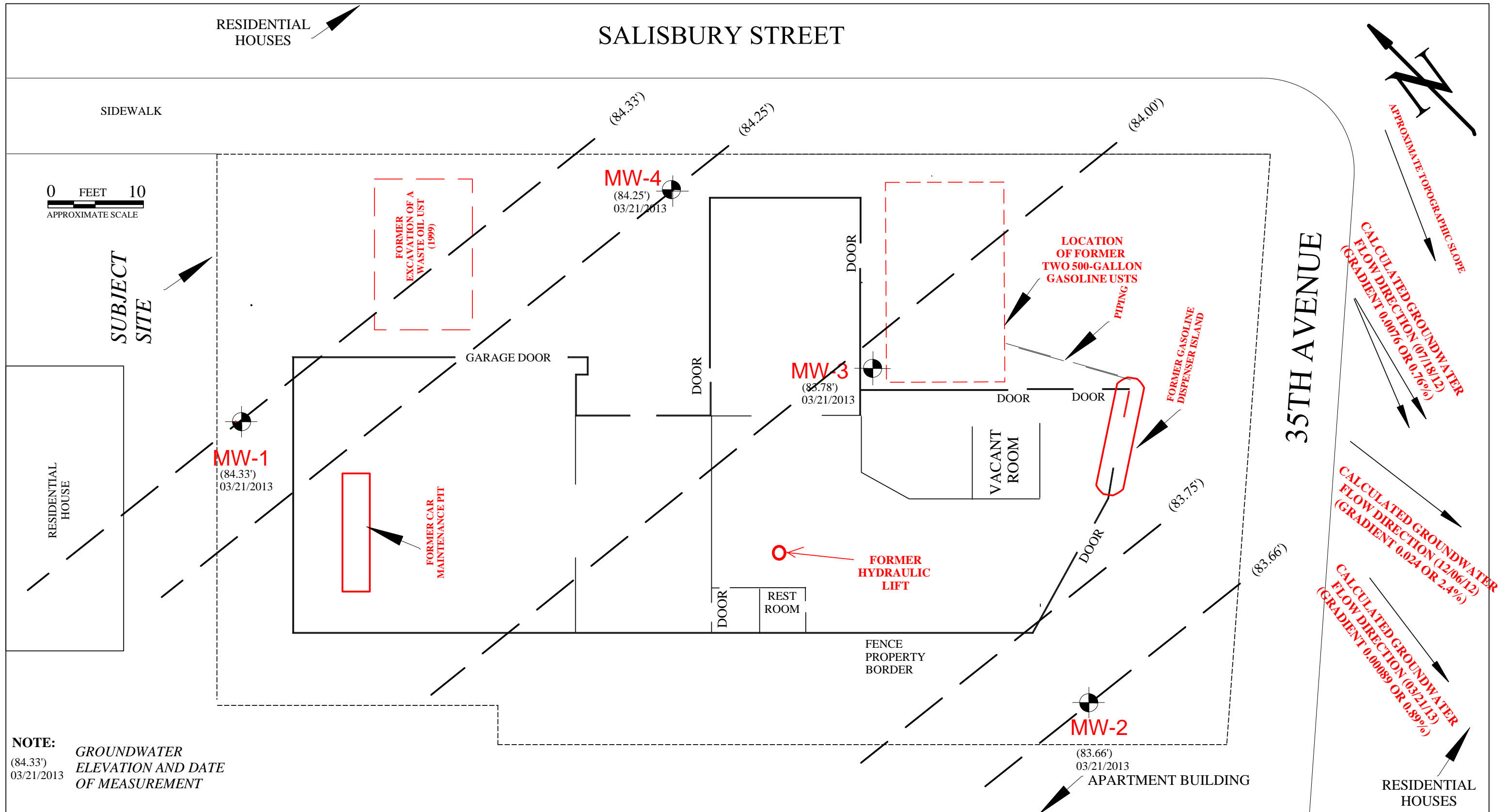
FIGURE 2 WELL LOCATIONS AND GROUNDWATER FLOW DIRECTIONS AND GRADIENT




1485 BAYSHORE BOULEVARD, SUITE 374
SAN FRANCISCO, CA 94124

SITE LOCATION
2145 35TH AVENUE
OAKLAND, CA 94601

FIGURE 1
MARCH
2013



1485 BAYSHORE BOULEVARD, SUITE 374
SAN FRANCISCO, CA 94124

WELL LOCATIONS AND
GROUNDWATER FLOW DIRECTION AND GRADIENT
2145 35TH AVENUE, OAKLAND, CALIFORNIA

FIGURE 2
MARCH 2013

APPENDIX A WELL PURGING AND SAMPLING LOGS

WELL SAMPLING LOG

Project No. : _____
 Project Name: SALISBURY
 Location: 2145 35th Avenue
 Oakland, CA

Well ID: MW-1
 Sampled by: S.M. EEC
 Date: 03/21/2013

Well Diameter:	<u>2"</u>
Total Well Depth:	<u>17.70'</u>
Depth to Water:	<u>9.88'</u>
Water Column:	<u>7.82</u>
Calculated Purge:	<u>3.83 gallons</u>
Actual Purge:	
Free Product:	<u>NO</u>
Product Sheen:	<u>NO</u>

Purge Volume Calculations	
for Three Casing Volume Purge	
Volume Per One Foot of Well:	<u>0.1632 gallons</u>
$\pi r^2 \times 1$	
Volume of One Casing:	<u>1.276</u>
Volume of Three Casings:	<u>3.83 gallons</u>

Purge Method: using disposable boiler
 Did Well go dry? _____

Sampling Method: 3 Volume Purge or Parameton stabilization
 Sample Time: _____

Post Purge Depth to Water (DTW)

Time	DTW
<u>8:28 a.m.</u>	<u>9.88' pre-purge</u>
<u>10:10 a.m.</u>	<u>9.90' after purge</u>

Analyze for:

Time	Conductivity ^{µS}	Temperature ^{°C}	pH	Salinity	Volume Purged
<u>9:45 a.m.</u>	<u>516</u>	<u>17.2</u>	<u>7.19</u>		<u>0.5 gallons</u>
<u>9:49 a.m.</u>	<u>511</u>	<u>16.8</u>	<u>7.17</u>		<u>1.0 "</u>
<u>9:55 a.m.</u>	<u>485</u>	<u>16.6</u>	<u>7.16</u>		<u>2.0 "</u>
<u>10:00 a.m.</u>	<u>485</u>	<u>16.7</u>	<u>7.13</u>		<u>2.5 gallons</u>
<u>10:03 a.m.</u>	<u>478</u>	<u>16.6</u>	<u>7.13</u>		<u>3.0 "</u>
<u>10:05 a.m.</u>	<u>476</u>	<u>16.7</u>	<u>7.12</u>		<u>4.0 "</u>
					<u>sample</u>

Comments: _____

WELL SAMPLING LOG

Project No. : _____
 Project Name: SALISBURY
 Location: 2145 35th Avenue
 Oakland, CA

Well ID: MW-2
 Sampled by: S.U. EE
 Date: 03/21/2013

Well Diameter:	<u>4"</u>
Total Well Depth:	<u>15.40'</u>
Depth to Water:	<u>10.77'</u>
Water Column:	<u>4.63</u>
Calculated Purge:	<u>9.07 gallons</u>
Actual Purge:	
Free Product:	<u>NO</u>
Product Sheen:	<u>NO</u>

Purge Volume Calculations	
for Three Casing Volume Purge	
Volume Per One Foot of Well:	<u>0.653 gallons</u>
$\pi r^2 \times 1$	
Volume of One Casing:	<u>3.02 gallons</u>
Volume of Three Casings:	<u>9.07 gallons</u>

Purge Method: using disposable
boiler
 Did Well go dry? _____

Sampling Method: 3 volume purge or
parameter stabilization
 Sample Time: _____

Post Purge Depth to Water (DTW)

Time	DTW
<u>8:43 a.m.</u>	<u>10.77' pre-purge</u>
<u>2:05 p.m.</u>	<u>11.40' after</u> <u>purge</u>

Analyze for:

Time	Conductivity ^{MS}	Temperature ^{°C}	pH	Salinity	Volume Purged
<u>RAW</u>	<u>517</u>	<u>N/A</u>	<u>7.36</u>		
<u>1:35 p.m.</u>	<u>716</u>	<u>16.9</u>	<u>6.81</u>		<u>1 gallon</u>
<u>1:45 p.m.</u>	<u>727</u>	<u>16.9</u>	<u>6.80</u>		<u>3 gallons</u>
<u>1:50 p.m.</u>	<u>729</u>	<u>16.9</u>	<u>6.80</u>		<u>5 gallons</u>
<u>2:00 p.m.</u>	<u>725</u>	<u>17.0</u>	<u>6.82</u>		<u>8.0 gal</u>
<u>2:02 p.m.</u>	<u>722</u>	<u>16.9</u>	<u>6.84</u>		<u>9.0 gallons</u>
<u>2:05 p.m.</u>	<u>719</u>	<u>17.0</u>	<u>6.84</u>		<u>9.00 gal</u> <u>Stop</u>

Comments: _____

WELL SAMPLING LOG

Project No. : _____
 Project Name: SALISBURY
 Location: 2145 35th Avenue
 Oakland, CA

Well ID: MW-3
 Sampled by: S.M. EEC
 Date: 03/21/2013

Well Diameter:	4"
Total Well Depth:	17.68
Depth to Water:	10.83
Water Column:	6.85
Calculated Purge:	13.42 gallons
Actual Purge:	
Free Product:	No
Product Sheen:	No

Purge Volume Calculations	
for Three Casing Volume Purge	
Volume Per One Foot of Well:	$\pi r^2 \times 1$ = 0.653 gallons
Volume of One Casing:	4.47 gallons
Volume of Three Casings:	13.42 gallons

Purge Method: using disposable boiler
 Did Well go dry? _____

Sampling Method: 3 volume purge
 Sample Time: or parameter stabilization

Post Purge Depth to Water (DTW)

Time	DTW
8:37 am	10.83' pre-purge
12:32 pm	11.42' after purge

Analyze for:

Time	Conductivity ^{µS}	Temperature ^{°C}	pH	Salinity	Volume Purged
11:50 am	641	17.6	6.82		0.5 gallon
12:00 pm	646	17.5	6.83		3.0 gallons
12:04 pm	650	17.7	6.84		5.0 gallons
12:14 pm	644	17.6	6.84		8.0 gallons
12:18 pm	643	17.6	6.86		10.0 gallons
12:25 pm	640	17.6	6.86		12.0 gallons
12:30 pm	636	17.6	6.86		13.0 gallons
12:32 pm	636	17.7	6.87		13.50 gallons
					Sample

Comments: _____

WELL SAMPLING LOG

Project No. : _____
 Project Name: SALISBURY
 Location: 2145 35th Avenue
 Oakland, CA

Well ID: MW-4
 Sampled by: S.M. FEE
 Date: 03/21/2013

Well Diameter:	<u>2"</u>
Total Well Depth:	<u>17.72'</u>
Depth to Water:	<u>10.66'</u>
Water Column:	<u>7.06'</u>
Calculated Purge:	<u>3.45 gallons</u>
Actual Purge:	
Free Product:	<u>NO</u>
Product Sheen:	<u>NO</u>

Purge Volume Calculations	
for Three Casing Volume Purge	
Volume Per One Foot of Well:	<u>0.163</u>
$\pi r^2 \times 1$	
Volume of One Casing:	<u>1.15</u>
Volume of Three Casings:	<u>3.45 gallons</u>

Purge Method: using disposable
 Did Well go dry? Boiler

Sampling Method: 3 volume purge
 Sample Time: or parameter stabilization

Post Purge Depth to Water (DTW)

Time	DTW
<u>8:31 a.m.</u>	<u>10.66' Pre-purge</u>
<u>11:18 a.m.</u>	<u>11.10' After purge</u>

Analyze for:

Time	Conductivity ^{µC}	Temperature ^{°C}	pH	Salinity	Volume Purged
<u>10:42 a.m.</u>	<u>604</u>	<u>17.6</u>	<u>6.89</u>		<u>0.5 gallons</u>
<u>10:55 a.m.</u>	<u>616</u>	<u>17.7</u>	<u>6.95</u>		<u>1.0 gallon</u>
<u>11:00 a.m.</u>	<u>607</u>	<u>17.6</u>	<u>6.96</u>		<u>2.0 gallons</u>
<u>11:04 a.m.</u>	<u>585</u>	<u>17.6</u>	<u>6.96</u>		<u>2.5 gallons</u>
<u>11:10 a.m.</u>	<u>599</u>	<u>17.6</u>	<u>6.96</u>		<u>3.0 gallons</u>
<u>11:15 a.m.</u>	<u>567</u>	<u>17.6</u>	<u>6.97</u>		<u>3.5 gallons</u>
<u>11:18 a.m.</u>	<u>569</u>	<u>17.5</u>	<u>6.95</u>		<u>4.0 " sample"</u>

Comments: _____

APPENDIX B LABORATORY REPORT



Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 243973
ANALYTICAL REPORT

Eagle Env. Construction
3150 Hilltop Road
Richmond, CA 94806

Project : SALISBURY PROJECT
Location : Salisbury Project
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-1	243973-001
MW-2	243973-002
MW-3	243973-003
MW-4	243973-004
TRIP BLANK	243973-005

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: _____

Tracy Babjar
Project Manager
(510) 204-2226

Date: 04/02/2013

NELAP # 01107CA

CASE NARRATIVE

Laboratory number: 243973
Client: Eagle Env. Construction
Project: SALISBURY PROJECT
Location: Salisbury Project
Request Date: 03/21/13
Samples Received: 03/21/13

This data package contains sample and QC results for five water samples, requested for the above referenced project on 03/21/13. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

No analytical problems were encountered.

Semivolatile Organics by GC/MS SIM (EPA 8270C-SIM):

No analytical problems were encountered.

Metals (EPA 6010B):

No analytical problems were encountered.



Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY

In Business Since 1878

CHAIN OF CUSTODY

Geotracker Global ID: 70619778840

Page 1 of 2

Chain of Custody # _____

2323 Fifth Street
Berkeley, CA 94710

Phone (510) 486-0900
Fax (510) 486-0532

C&T LOGIN # 243973

Project No: _____ Sampler: EFC J.M.

Project Name: SALESBURY PROJECT Report To: SAMI MALAEB

Project P. O. No: 2145 35th Ave., Oakland Company: EFC

EDD Format: _____ Report Level II III IV Telephone: (925) 858-9608

Turnaround Time: RUSH Standard Email: S.MALAEB@COMCAST.NET

ANALYTICAL REQUEST																				
Lab No.	Sample ID.	SAMPLING		MATRIX		# of Containers	CHEMICAL PRESERVATIVE													
		Date Collected	Time Collected	Water	Solid		HCl	H2SO4	HNO3	NaOH	None									
	MW-1	03/21/13	10:05	X		3	X													
	MW-1	"	"	X		3	X													
	MW-1	"	"	X		2														
	MW-1	"	"	X		1														
	MW-2	03/21/13	2:05 pm	X		3	X													
	MW-2	"	"	X		3	X													
	MW-2	"	"	X		2														
	MW-2	"	"	X		1														
	MW-2	"	"	X		2														

TPH-G; TPH-SS by 8015B

BTEX; Naphthalene; and MTB by 8260B

TPH-D; TPH-MB; and TPH-Hydraulic Oil by 8015

Lead (Pb) and Nickel (Ni) by 6010B

PAHs by 8270.i.m

Notes:

Please filter plastic bottles same day for the analysis of Ni and Pb.

SAMPLE RECEIPT

- Intact
- Cold
- On Ice
- Ambient

RELINQUISHED BY:

Sam Malae 03/21/13 4:20
 DATE: TIME:
 DATE: TIME:
 DATE: TIME:

RECEIVED BY:

Tina D... 3/21/13 9:30
 DATE: TIME:
 DATE: TIME:
 DATE: TIME:

COOLER RECEIPT CHECKLIST



Login # 243973 Date Received 3/21/13 Number of coolers 2
 Client EFC Project Salisbury Project

Date Opened 3/21/13 By (print) EL (sign) [Signature]
 Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) YES NO
 Shipping info _____

2A. Were custody seals present? YES (circle) on cooler on samples NO
 How many _____ Name _____ Date _____

2B. Were custody seals intact upon arrival? _____ YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe) _____

- Bubble Wrap Foam blocks Bags None
- Cloth material Cardboard Styrofoam Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C
 Type of ice used: Wet Blue/Gel None Temp(°C) 3.2, 5.9

Samples Received on ice & cold without a temperature blank; temp. taken with IR gun

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? _____ YES NO
 If YES, what time were they transferred to freezer? _____

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? _____ YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? _____ YES NO N/A

17. Did you document your preservative check? _____ YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? _____ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? _____ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? _____ YES NO
 If YES, Who was called? _____ By _____ Date: _____

COMMENTS

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC681273	Batch#:	196672
Matrix:	Water	Analyzed:	03/25/13
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,038	104	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	97	76-128

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	196672
MSS Lab ID:	243996-001	Sampled:	03/18/13
Matrix:	Water	Received:	03/22/13
Units:	ug/L	Analyzed:	03/25/13
Diln Fac:	1.000		

Type: MS Lab ID: QC681275

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	14.20	2,000	2,021	100	76-120

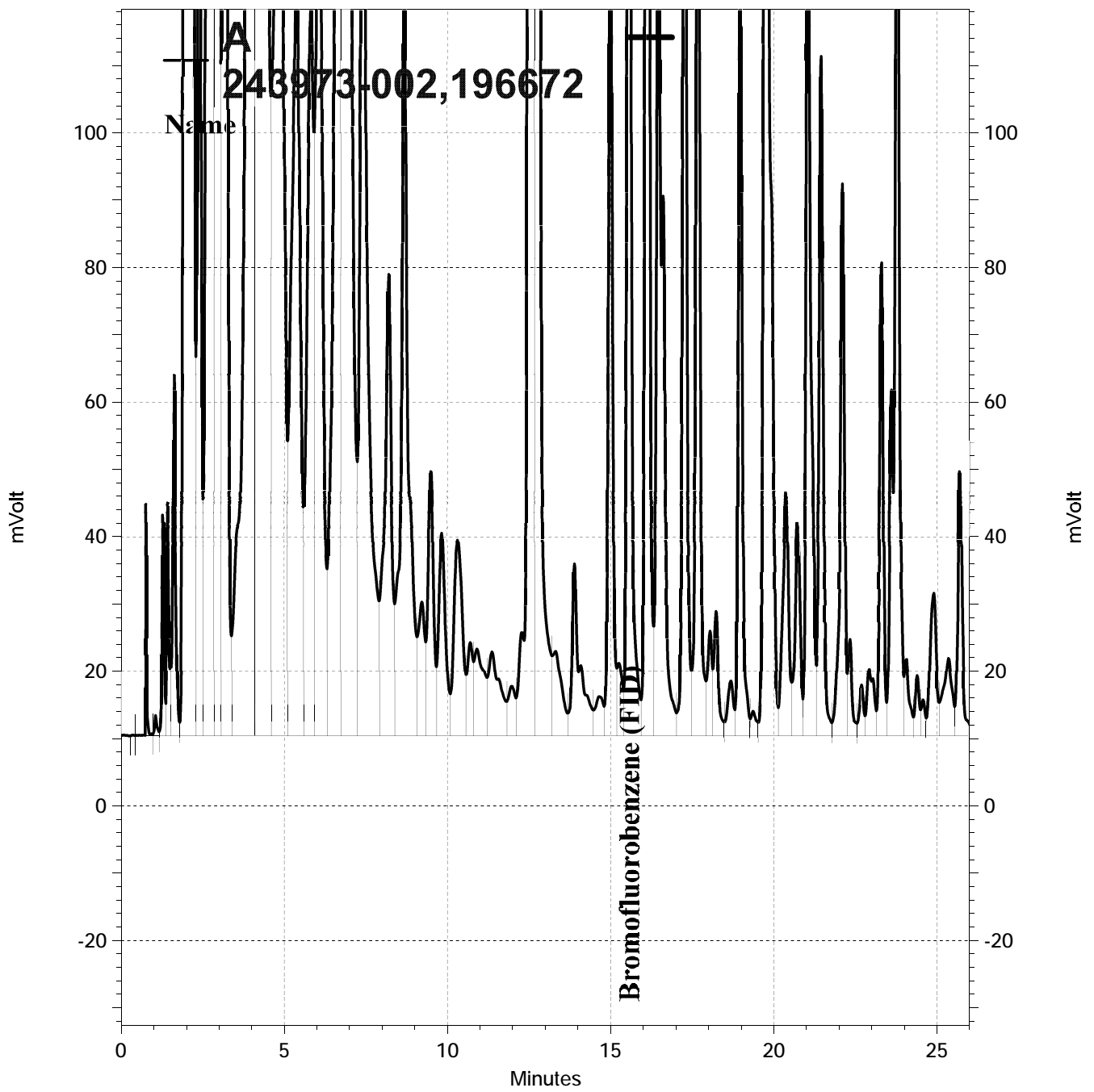
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	76-128

Type: MSD Lab ID: QC681276

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,989	99	76-120	2	20

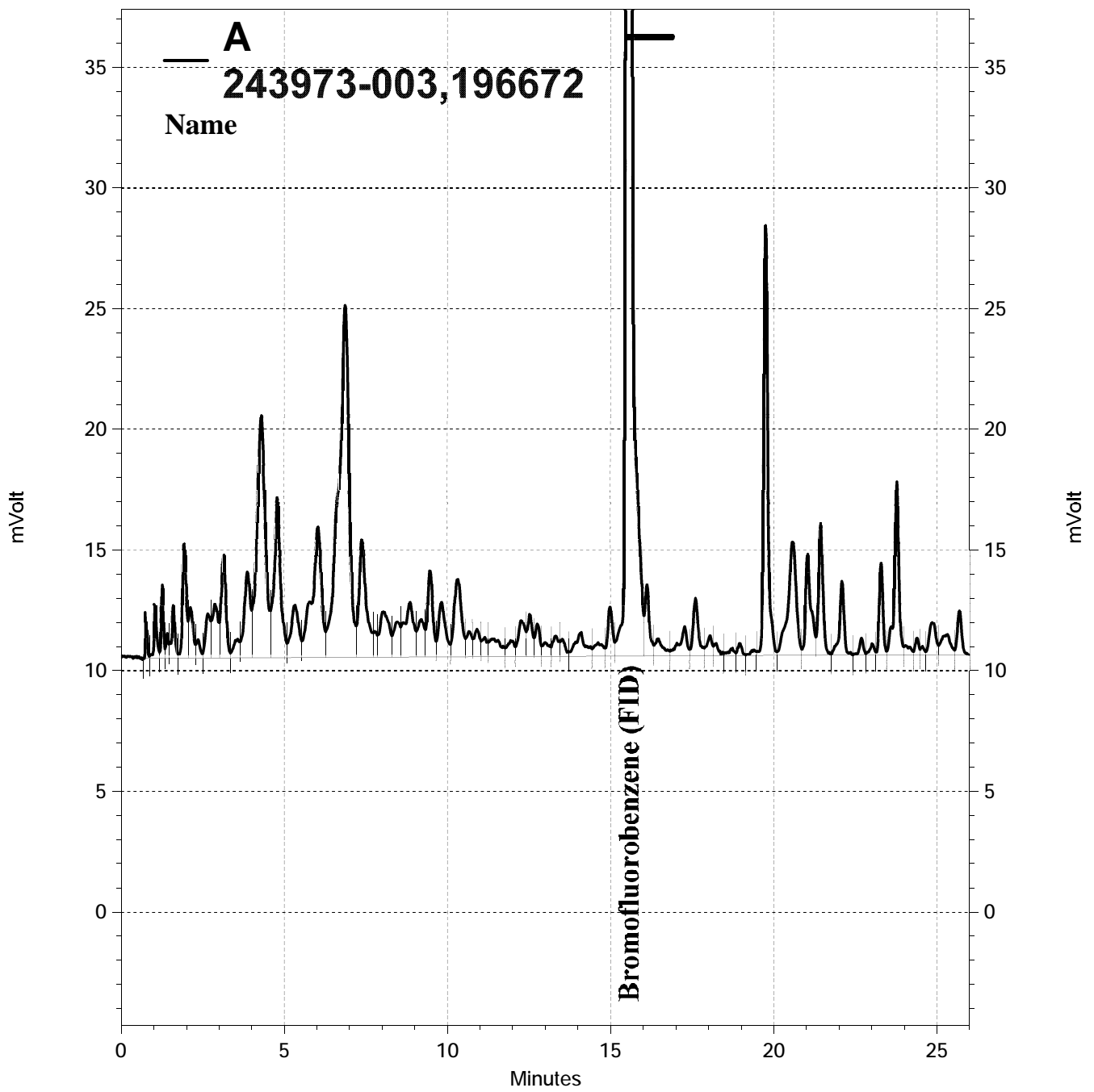
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	101	76-128

RPD= Relative Percent Difference



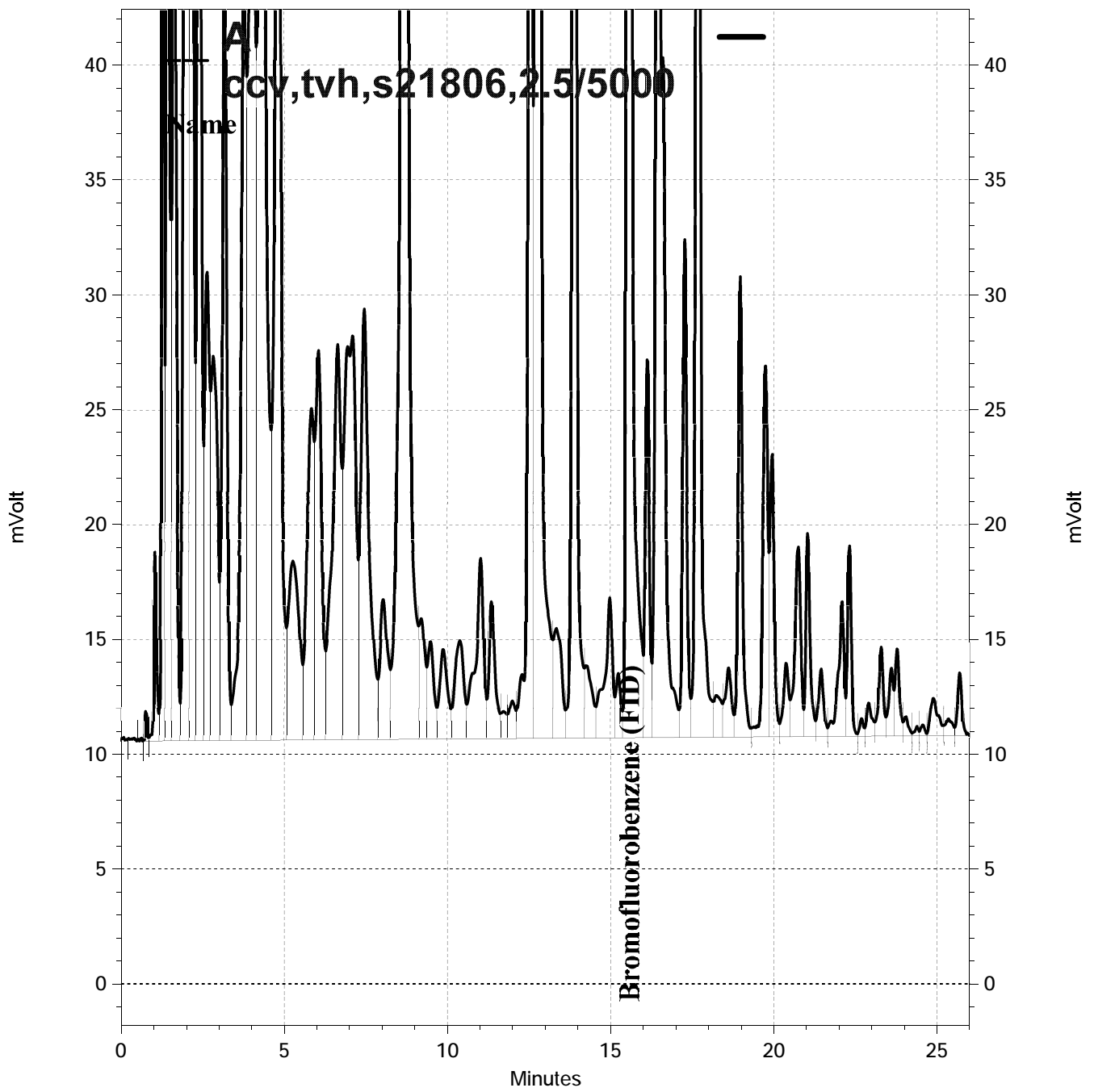
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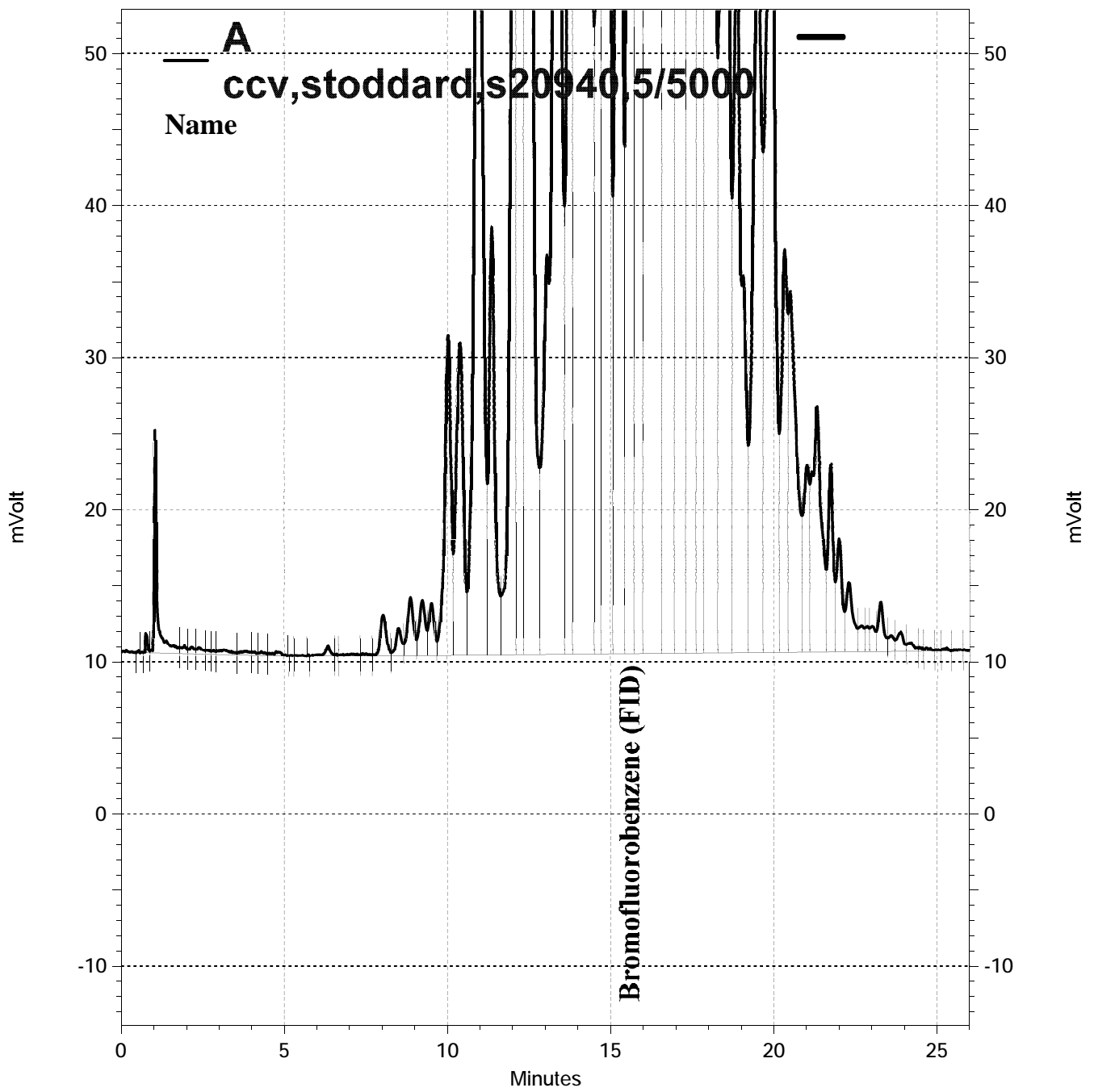
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Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	196689
Units:	ug/L	Prepared:	03/25/13
Diln Fac:	1.000	Analyzed:	03/26/13

Type: BS Cleanup Method: EPA 3630C
 Lab ID: QC681331

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,331	93	59-120

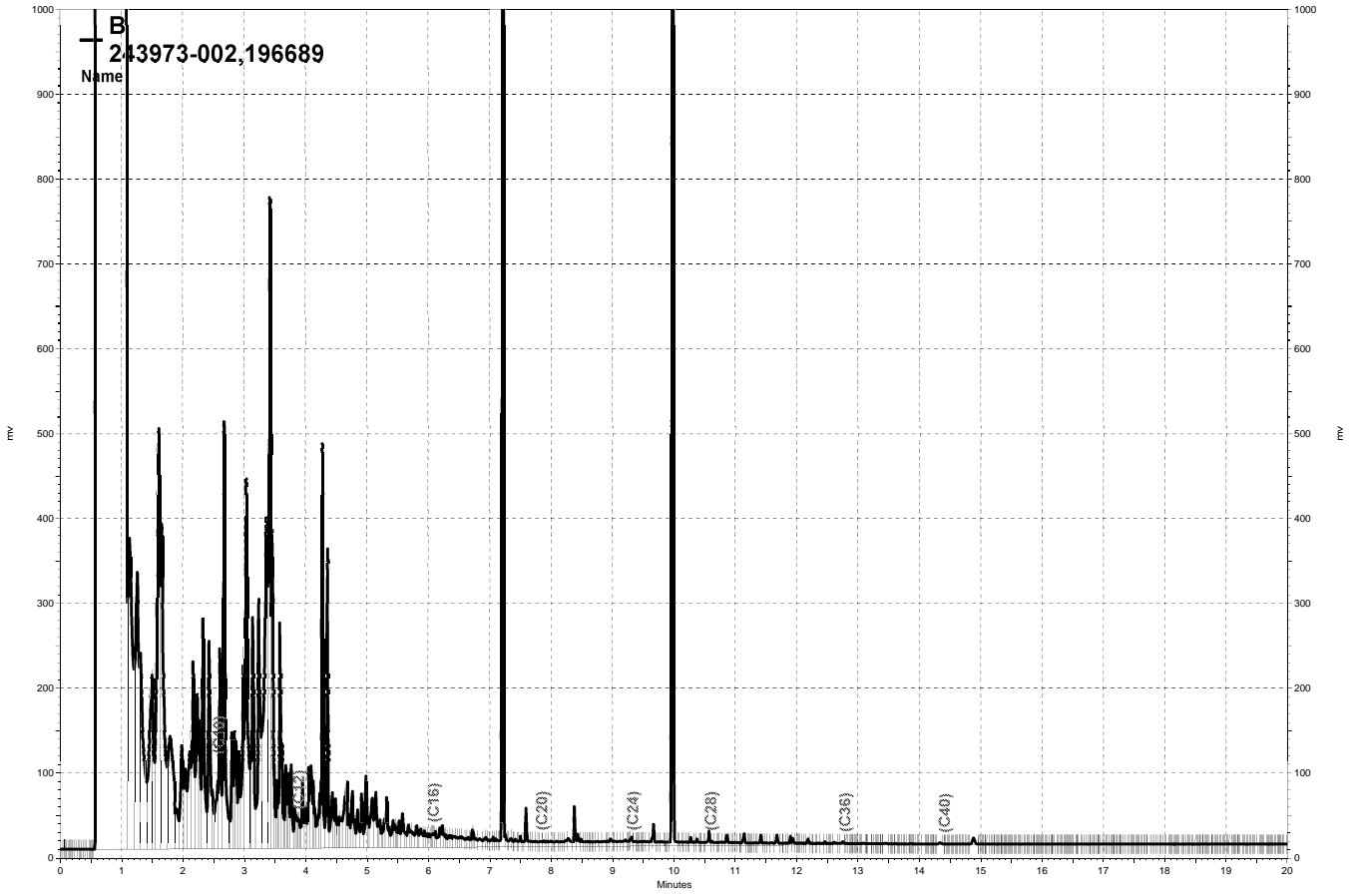
Surrogate	%REC	Limits
o-Terphenyl	104	62-133

Type: BSD Cleanup Method: EPA 3630C
 Lab ID: QC681332

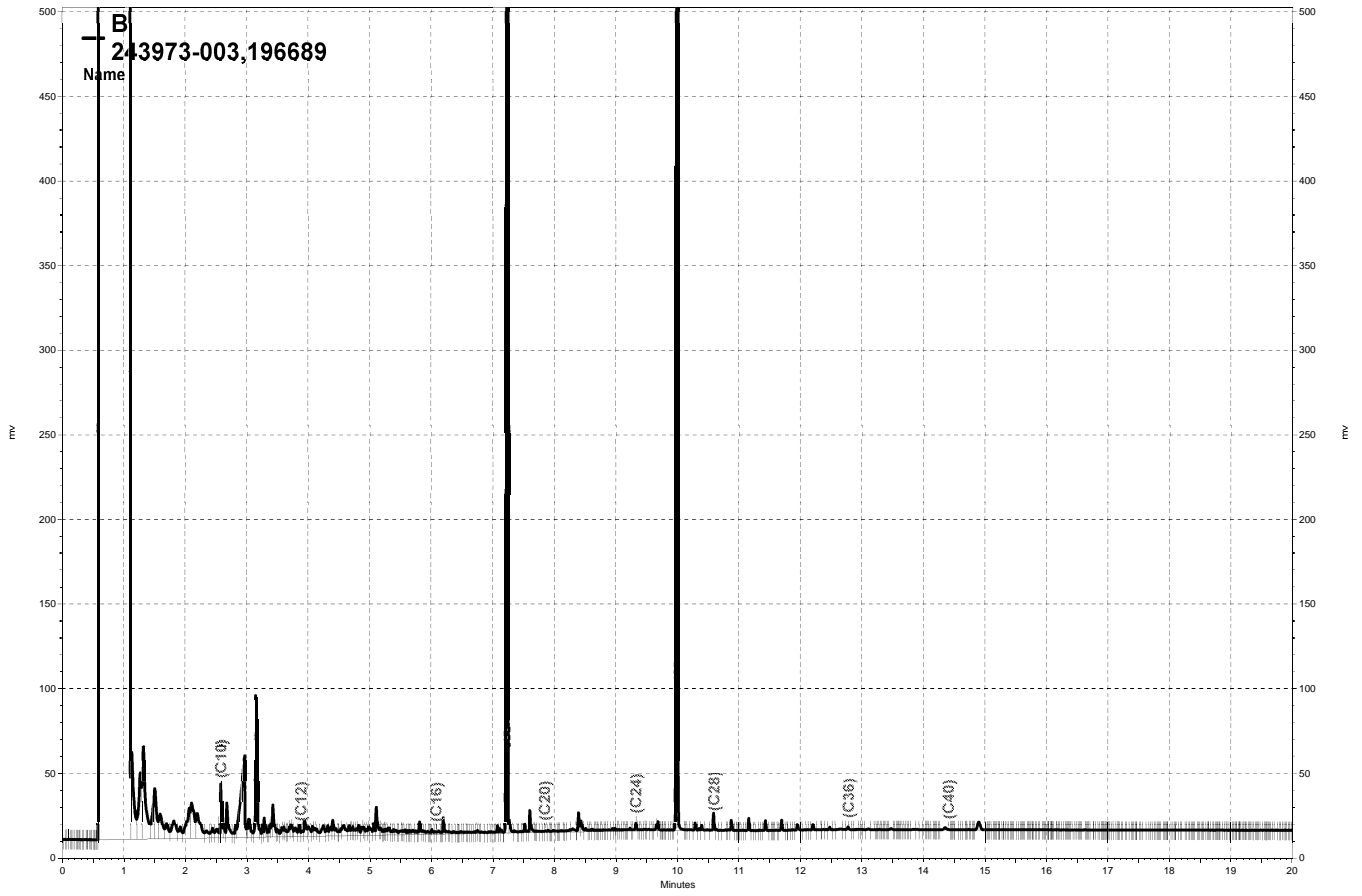
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,023	81	59-120	14	46

Surrogate	%REC	Limits
o-Terphenyl	90	62-133

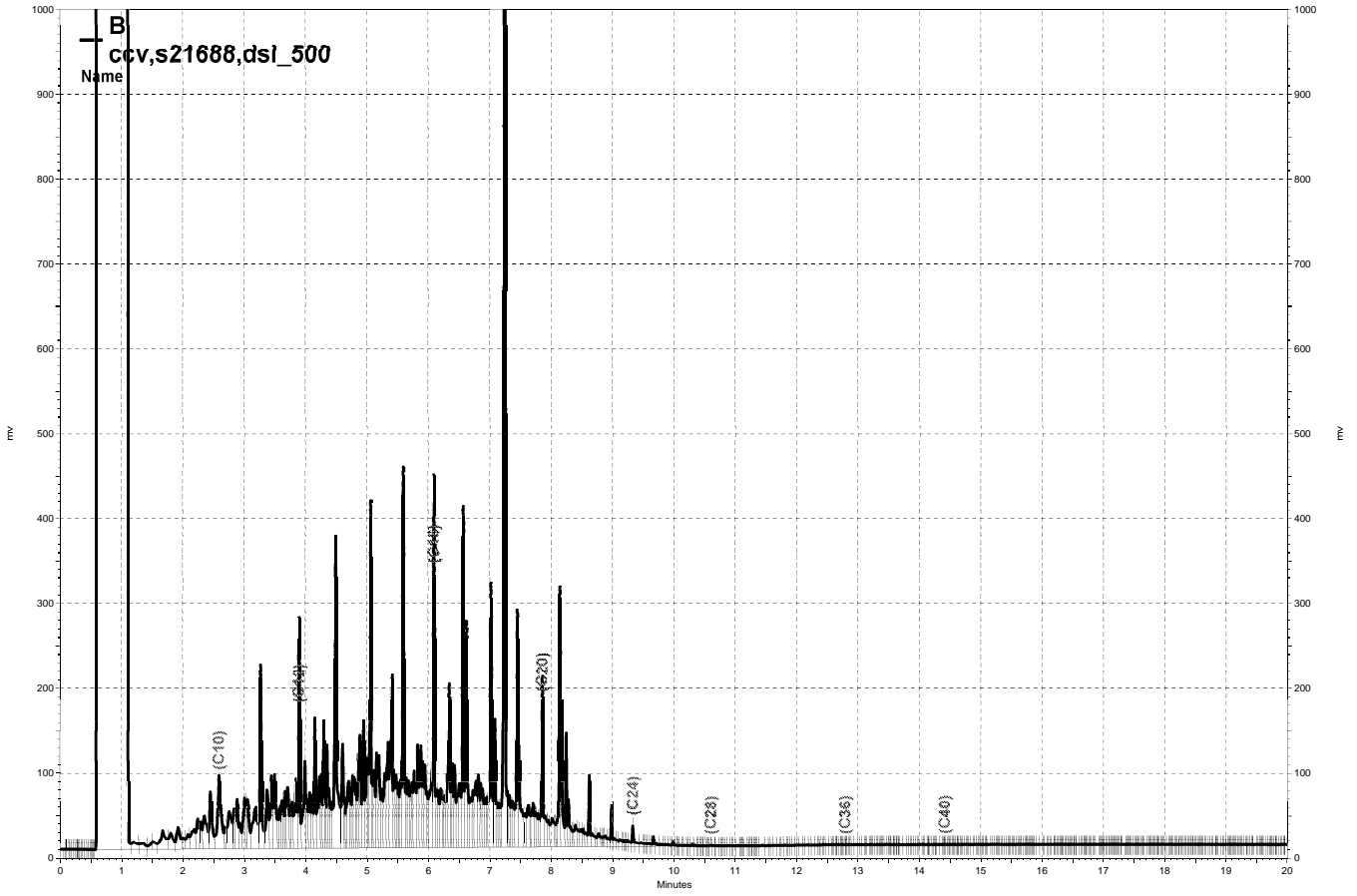
RPD= Relative Percent Difference



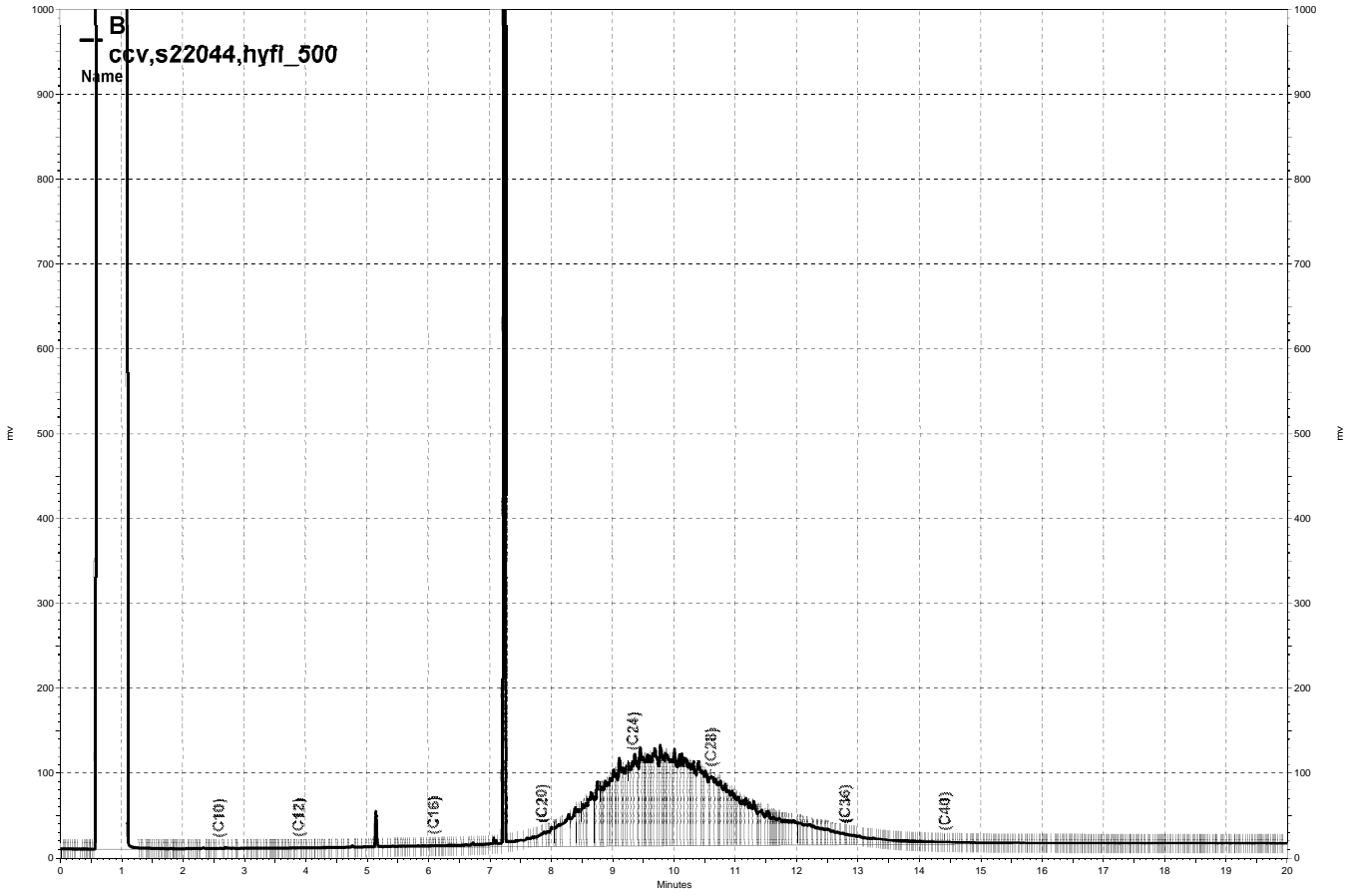
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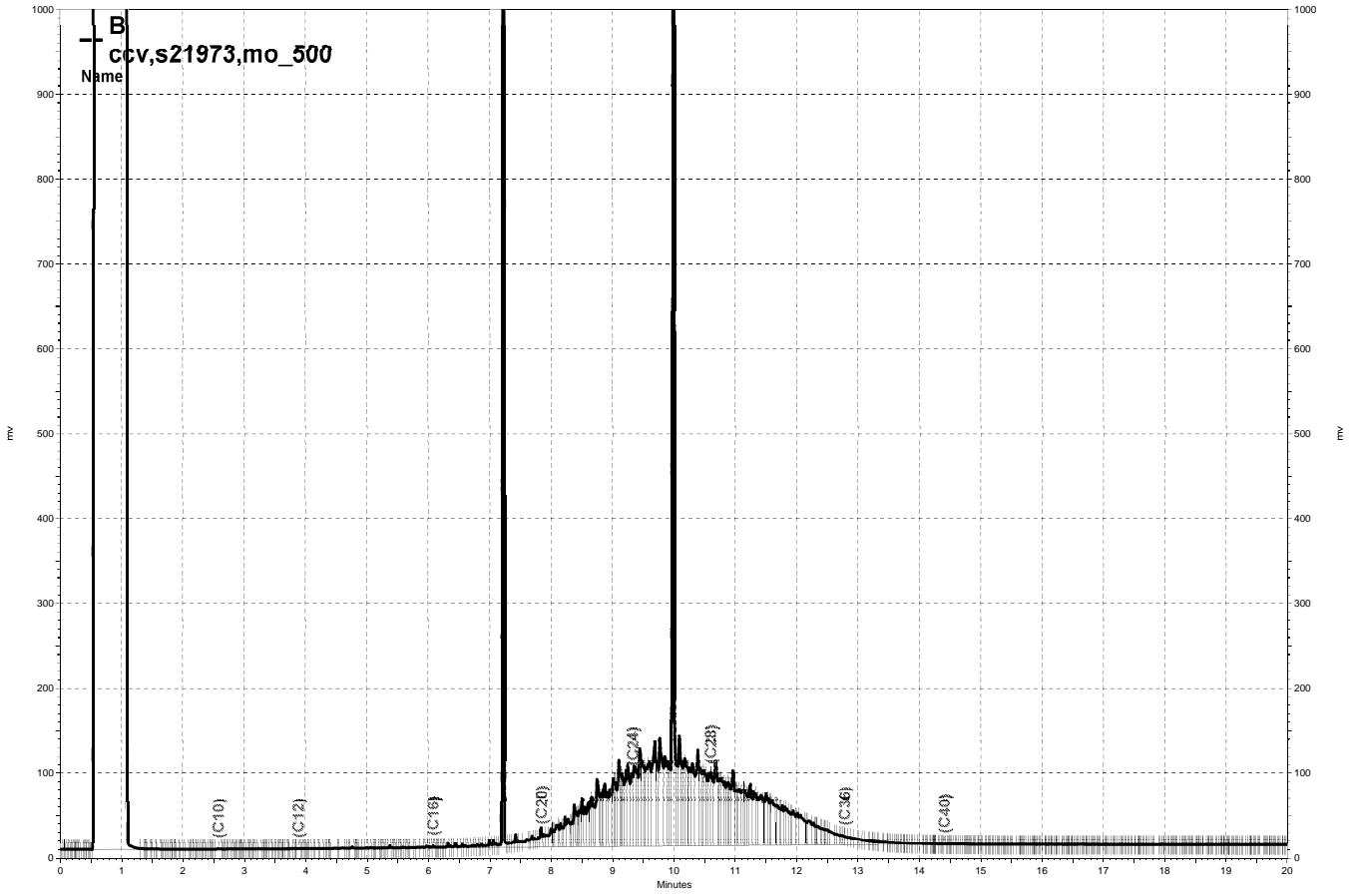
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Purgeable Aromatics by GC/MS

Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	196613
Lab ID:	243973-001	Sampled:	03/21/13
Matrix:	Water	Received:	03/21/13
Units:	ug/L	Analyzed:	03/22/13
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Naphthalene	ND	2.0

Surrogate	%REC	Limits
Dibromofluoromethane	119	77-134
1,2-Dichloroethane-d4	112	72-140
Toluene-d8	100	80-120
Bromofluorobenzene	94	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	196622
Lab ID:	243973-002	Sampled:	03/21/13
Matrix:	Water	Received:	03/21/13
Units:	ug/L	Analyzed:	03/22/13
Diln Fac:	3.333		

Analyte	Result	RL
MTBE	ND	1.7
Benzene	77	1.7
Toluene	31	1.7
Ethylbenzene	230	1.7
m,p-Xylenes	110	1.7
o-Xylene	5.4	1.7
Naphthalene	25	6.7

Surrogate	%REC	Limits
Dibromofluoromethane	93	77-134
1,2-Dichloroethane-d4	120	72-140
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	196622
Lab ID:	243973-003	Sampled:	03/21/13
Matrix:	Water	Received:	03/21/13
Units:	ug/L	Analyzed:	03/22/13
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	1.8	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Naphthalene	ND	2.0

Surrogate	%REC	Limits
Dibromofluoromethane	105	77-134
1,2-Dichloroethane-d4	121	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	196613
Lab ID:	243973-004	Sampled:	03/21/13
Matrix:	Water	Received:	03/21/13
Units:	ug/L	Analyzed:	03/22/13
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Naphthalene	ND	2.0

Surrogate	%REC	Limits
Dibromofluoromethane	122	77-134
1,2-Dichloroethane-d4	111	72-140
Toluene-d8	100	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	TRIP BLANK	Batch#:	196613
Lab ID:	243973-005	Sampled:	03/21/13
Matrix:	Water	Received:	03/21/13
Units:	ug/L	Analyzed:	03/22/13
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Naphthalene	ND	2.0

Surrogate	%REC	Limits
Dibromofluoromethane	117	77-134
1,2-Dichloroethane-d4	109	72-140
Toluene-d8	100	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC681059	Batch#:	196613
Matrix:	Water	Analyzed:	03/22/13
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Naphthalene	ND	2.0

Surrogate	%REC	Limits
Dibromofluoromethane	121	77-134
1,2-Dichloroethane-d4	110	72-140
Toluene-d8	101	80-120
Bromofluorobenzene	94	80-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	196622
Units:	ug/L	Analyzed:	03/22/13
Diln Fac:	1.000		

Type: BS Lab ID: QC681084

Analyte	Spiked	Result	%REC	Limits
MTBE	12.50	12.44	100	58-120
Benzene	12.50	13.44	107	78-125
Toluene	12.50	13.35	107	79-123
Ethylbenzene	12.50	13.38	107	80-126
m,p-Xylenes	25.00	26.82	107	80-123
o-Xylene	12.50	12.43	99	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	77-134
1,2-Dichloroethane-d4	120	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-120

Type: BSD Lab ID: QC681085

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	12.50	12.87	103	58-120	3	23
Benzene	12.50	14.11	113	78-125	5	20
Toluene	12.50	14.04	112	79-123	5	20
Ethylbenzene	12.50	14.16	113	80-126	6	20
m,p-Xylenes	25.00	28.40	114	80-123	6	20
o-Xylene	12.50	13.20	106	75-120	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	77-134
1,2-Dichloroethane-d4	121	72-140
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC681086	Batch#:	196622
Matrix:	Water	Analyzed:	03/22/13
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Naphthalene	ND	2.0

Surrogate	%REC	Limits
Dibromofluoromethane	109	77-134
1,2-Dichloroethane-d4	121	72-140
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS SIM

Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8270C-SIM
Field ID:	MW-2	Batch#:	196634
Lab ID:	243973-002	Sampled:	03/21/13
Matrix:	Water	Received:	03/21/13
Units:	ug/L	Prepared:	03/22/13
Diln Fac:	3.000	Analyzed:	03/25/13

Analyte	Result	RL
Naphthalene	27	0.3
Acenaphthylene	ND	0.3
Acenaphthene	ND	0.3
Fluorene	ND	0.3
Phenanthrene	0.3	0.3
Anthracene	ND	0.3
Fluoranthene	ND	0.3
Pyrene	ND	0.3
Benzo(a)anthracene	ND	0.3
Chrysene	ND	0.3
Benzo(b)fluoranthene	ND	0.3
Benzo(k)fluoranthene	ND	0.3
Benzo(a)pyrene	ND	0.3
Indeno(1,2,3-cd)pyrene	ND	0.3
Dibenz(a,h)anthracene	ND	0.3
Benzo(g,h,i)perylene	ND	0.3

Surrogate	%REC	Limits
Nitrobenzene-d5	74	48-130
2-Fluorobiphenyl	79	47-120
Terphenyl-d14	84	33-120

ND= Not Detected
 RL= Reporting Limit

Semivolatile Organics by GC/MS SIM

Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8270C-SIM
Field ID:	MW-3	Batch#:	196634
Lab ID:	243973-003	Sampled:	03/21/13
Matrix:	Water	Received:	03/21/13
Units:	ug/L	Prepared:	03/22/13
Diln Fac:	1.000	Analyzed:	03/25/13

Analyte	Result	RL
Naphthalene	0.6	0.09
Acenaphthylene	ND	0.09
Acenaphthene	ND	0.09
Fluorene	ND	0.09
Phenanthrene	ND	0.09
Anthracene	ND	0.09
Fluoranthene	ND	0.09
Pyrene	ND	0.09
Benzo(a)anthracene	ND	0.09
Chrysene	ND	0.09
Benzo(b)fluoranthene	ND	0.09
Benzo(k)fluoranthene	ND	0.09
Benzo(a)pyrene	ND	0.09
Indeno(1,2,3-cd)pyrene	ND	0.09
Dibenz(a,h)anthracene	ND	0.09
Benzo(g,h,i)perylene	ND	0.09

Surrogate	%REC	Limits
Nitrobenzene-d5	64	48-130
2-Fluorobiphenyl	85	47-120
Terphenyl-d14	64	33-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM

Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8270C-SIM
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC681138	Batch#:	196634
Matrix:	Water	Prepared:	03/22/13
Units:	ug/L	Analyzed:	03/27/13

Analyte	Result	RL
Naphthalene	ND	0.1
Acenaphthylene	ND	0.1
Acenaphthene	ND	0.1
Fluorene	ND	0.1
Phenanthrene	ND	0.1
Anthracene	ND	0.1
Fluoranthene	ND	0.1
Pyrene	ND	0.1
Benzo(a)anthracene	ND	0.1
Chrysene	ND	0.1
Benzo(b)fluoranthene	ND	0.1
Benzo(k)fluoranthene	ND	0.1
Benzo(a)pyrene	ND	0.1
Indeno(1,2,3-cd)pyrene	ND	0.1
Dibenz(a,h)anthracene	ND	0.1
Benzo(g,h,i)perylene	ND	0.1

Surrogate	%REC	Limits
Nitrobenzene-d5	90	48-130
2-Fluorobiphenyl	84	47-120
Terphenyl-d14	110	33-120

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Semivolatile Organics by GC/MS SIM			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8270C-SIM
Matrix:	Water	Batch#:	196634
Units:	ug/L	Prepared:	03/22/13
Diln Fac:	1.000	Analyzed:	03/27/13

Type: BS Lab ID: QC681139

Analyte	Spiked	Result	%REC	Limits
Acenaphthene	1.000	0.8271	83	52-120
Pyrene	1.000	0.7857	79	45-120

Surrogate	%REC	Limits
Nitrobenzene-d5	83	48-130
2-Fluorobiphenyl	76	47-120
Terphenyl-d14	80	33-120

Type: BSD Lab ID: QC681140

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Acenaphthene	1.000	0.9786	98	52-120	17	72
Pyrene	1.000	0.9572	96	45-120	20	53

Surrogate	%REC	Limits
Nitrobenzene-d5	102	48-130
2-Fluorobiphenyl	97	47-120
Terphenyl-d14	107	33-120

RPD= Relative Percent Difference

Dissolved Nickel			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	METHOD
Project#:	SALISBURY PROJECT	Analysis:	EPA 6010B
Analyte:	Nickel	Sampled:	03/21/13
Matrix:	Filtrate	Received:	03/21/13
Units:	ug/L	Prepared:	03/27/13
Diln Fac:	1.000	Analyzed:	03/28/13
Batch#:	196784		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	243973-001	5.5	5.0
MW-2	SAMPLE	243973-002	ND	5.0
MW-3	SAMPLE	243973-003	5.1	5.0
MW-4	SAMPLE	243973-004	8.7	5.0
	BLANK	QC681716	ND	5.0

ND= Not Detected
 RL= Reporting Limit

Dissolved Lead			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	METHOD
Project#:	SALISBURY PROJECT	Analysis:	EPA 6010B
Analyte:	Lead	Sampled:	03/21/13
Matrix:	Filtrate	Received:	03/21/13
Units:	ug/L	Prepared:	03/27/13
Diln Fac:	1.000	Analyzed:	03/28/13
Batch#:	196784		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	243973-001	ND	5.0
MW-2	SAMPLE	243973-002	ND	5.0
MW-3	SAMPLE	243973-003	ND	5.0
MW-4	SAMPLE	243973-004	ND	5.0
	BLANK	QC681716	ND	5.0

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Dissolved Nickel			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	METHOD
Project#:	SALISBURY PROJECT	Analysis:	EPA 6010B
Analyte:	Nickel	Batch#:	196784
Field ID:	MW-1	Sampled:	03/21/13
MSS Lab ID:	243973-001	Received:	03/21/13
Matrix:	Filtrate	Prepared:	03/27/13
Units:	ug/L	Analyzed:	03/28/13
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC681717		500.0	510.7	102	80-120		
BSD	QC681718		500.0	514.2	103	80-120	1	20
MS	QC681719	5.495	500.0	489.9	97	73-120		
MSD	QC681720		500.0	487.7	96	73-120	0	20

RPD= Relative Percent Difference

Batch QC Report

Dissolved Lead			
Lab #:	243973	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	METHOD
Project#:	SALISBURY PROJECT	Analysis:	EPA 6010B
Analyte:	Lead	Batch#:	196784
Field ID:	MW-1	Sampled:	03/21/13
MSS Lab ID:	243973-001	Received:	03/21/13
Matrix:	Filtrate	Prepared:	03/27/13
Units:	ug/L	Analyzed:	03/28/13
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC681717		100.0	103.2	103	78-120		
BSD	QC681718		100.0	103.8	104	78-120	1	20
MS	QC681719	<0.8472	100.0	101.0	101	68-120		
MSD	QC681720		100.0	100.1	100	68-120	1	24

RPD= Relative Percent Difference