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EAGLE ENVIRONMENTAL CONSTRUCTION
"Your Environmental Specialists"

QUARTERLY GROUNDWATER MONITORING REPORT

Fourth Sampling Event, June 2013

For the Site Located at:

2145 35TH Avenue

Oakland, California 94601

Prepared for:

Salisbury Avenue Associates LLC

PO Box 27428

Oakland CA 94602-0925

Prepared by:

Eagle Environmental Construction (EEC)

1485 Bayshore Boulevard, Suite 374

San Francisco, CA 94124

June 28, 2013

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APPENDICES

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 fourth 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 fourth quarterly monitoring event from the previous three events is the following:

- Eliminated the full suite analysis of Polycyclic Aromatic Hydrocarbons (PAHs) by EPA Method 8270sim due to the fact that only Naphthalene was detected. The remaining PAHs were non-detected in past analysis. Resumed the analysis of Naphthalene by using 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 discontinued the analysis for metals in the monitoring wells at this site.

- Updated Environmental Screening Levels (ESLs) in the Tables to the revised May 2013 version.

2.0 Groundwater Sampling Activities

The wells were purged and sampled on June 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-millileter 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. All containers, VOAs and amber jars were obtained from the laboratory and filled with water from the bailer for the analyses.

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;
- Total Recoverable Petroleum Hydrocarbons (TRPH) as Motor Oil and Hydraulic Oil , EPA Method 8015;
- Volatile Organics by the GC/MS EPA Method 8260B, 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); and

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 0.71% (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, second, and third sampling events in July and December 2012 and in March 2013, all the analyzed petroleum hydrocarbons were either non-detected or non-significant in monitoring wells MW-1 and MW-4.

- Consistent with the previous 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-Hydraulic oil (Tables 2 and 3).

- Naphthalene was detected at a maximum of 21 µg/l in monitoring well MW-2.

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

- It appears that the petroleum hydrocarbon plume is stable and limited to the area of the sources onsite, and downgradient from these sources. BTEX were not detected in Monitoring Well MW-3 in this sampling event. BTEX concentrations were detected the lowest in this sampling event, compared to the previous events in Monitoring Well MW-2.

Recommendations

- As suggested by the Alameda County Environmental Health, EEC will start the sampling and analysis of the existing wells MW-1 through MW-4 on semi-annual basis. Next sampling event will be conducted in December 2013.

- 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 past 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, no further analysis for metals will be conducted in the future 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.

Salisbury Avenue Associates LLC

Peter Robertson

Property Owner

TABLES

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
06/21/2013	Casing Diameter (in)	2	4	4	2
	Total Well Depth (ft)	18	16	18	18
	Depth to Water (ft)	10.09	10.87	10.95	10.84
	Top of Casing Elevation	94.21	94.43	94.61	94.91
	Top of Water Elevation	84.12	83.56	83.66	84.07

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
	12/06/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5
	03/21/2013	<50	<50	<49	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5
	06/21/2013	<50	<50	100 (Y) [6]	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5
MW-2	07/09/2012	**3,800**	**3,900 (Y)**	**1,200 (Y)**	<300	**660 (Y)**	**82**	42	**350**	**189.4**	<0.5
	12/06/2012	**5,000**	**3,300 (Y)**	**2,300**	<300	**1,500 (Y)**	**92**	42	**460**	**179.6**	<0.5
	03/21/2013	**4,500**	**3,000**	**1,800 Y**	<290	**1,000V**	**77**	31	**230**	**115.4**	<1.7
	06/21/2013	**4,300**	**2,900**	**1,700 (Y)**	<290	**1,100 (Y)**	**50**	24	**210**	96	<1.7
MW-3	07/09/2012	85Y	86Y	**180 (Y)**	<300	<300	0.8	<0.5	<0.5	<1.0	<0.5
	12/06/2012	**1,200**	**800Y**	**2,000**	<300	**1,600 (Y)**	**36**	0.8	9.2	1.1	<0.5
	03/21/2013	**130 (Y)**	91Y	**140 (Y)**	<290	<290	**1.8**	<0.5	<0.5	<1.0	<0.5
	06/21/2013	<50	<50	**210Y**	<290	**340Y**	<0.5	<0.5	<0.5	<1.0	<0.5
MW-4	07/09/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5
	12/06/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5
	03/21/2013	<50	<50	<49	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5
	06/21/2013	<50	<50	76Y	<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	150	300	1,800	13.0
Groundwater Screening Levels, non-drinking water resource (Final Groundwater Screening Levels) [8]		500	640	640	640	640	27	130	43	100	18,000
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	27	95,000	310	37,000	No Value

TPH-G [1] = Total petroleum hydrocarbons as gasoline by EPA Method 8015B
(µg/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 (Revised May 2013).

[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 (Revised May 2013).

[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 (Revised May 2013).

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
	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
	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
	06/21/2013	<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	07/09/2012	**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
	12/06/2012	**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
	03/21/2013	**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
	06/21/2013	**21**	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	07/09/2012	<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
	12/06/2012	**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
	03/21/2013	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
	06/21/2013	<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-4	07/09/2012	<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
	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
	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
	06/21/2013	<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
Groundwater Screening Levels, drinking water resource (Final Groundwater Screening Level)[3]		6.2	2,000	20	950	4.6	410	22	130	68	560	0.56	0.56	0.20	0.56	0.016	0.13
Groundwater Screening Levels, non-drinking water resource (Final Groundwater Screening Level) [4]		8.2	30	23	3.9	4.6	0.73	8.0	2.0	0.027	0.35	0.056	0.40	0.014	0.056	0.25	0.10

*Stopped analyzing for full suite PAHs due to the fact only Naphthalene was detected in previous sampling and analysis.

(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-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 (Revised May 2013).

[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 (Revised May 2013).

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
GROUNWATER 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
	12/06/2012	<5.0	<5.0	<5.0	7.6	<20
	03/21/2013	N/A [2]	N/A	<5.0	5.5	NA
	06/21/2013*	N/A	N/A	N/A	N/A	N/A
MW-2	07/09/2012	<5.0	<5.0	<5.0	<5.0	<20
	12/06/2012	<5.0	<5.0	<5.0	<5.0	<20
	03/21/2013	N/A	N/A	<5.0	<5.0	NA
	06/21/2013*	N/A	N/A	N/A	N/A	N/A
MW-3	07/09/2012	<5.0	<5.0	<5.0	<5.0	<20
	12/06/2012	<5.0	<5.0	<5.0	6.1	<20
	03/21/2013	N/A	N/A	<5.0	5.1	NA
	06/21/2013*	N/A	N/A	N/A	N/A	N/A
MW-4	07/09/2012	<5.0	<5.0	<5.0	6.6	<20
	12/06/2012	<5.0	<5.0	<5.0	9.7	<20
	03/21/2013	N/A	N/A	<5.0	8.7	NA
	06/21/2013*	N/A	N/A	N/A	N/A	N/A
Groundwater Screening Levels, drinking water Toxicity [3]		5.0	50	15	100	5,000

*Stopped analyzing for LUFT 5 metals due to non-detected to non-significant levels in the water.

(µg/l) [1] = Microgram per liter

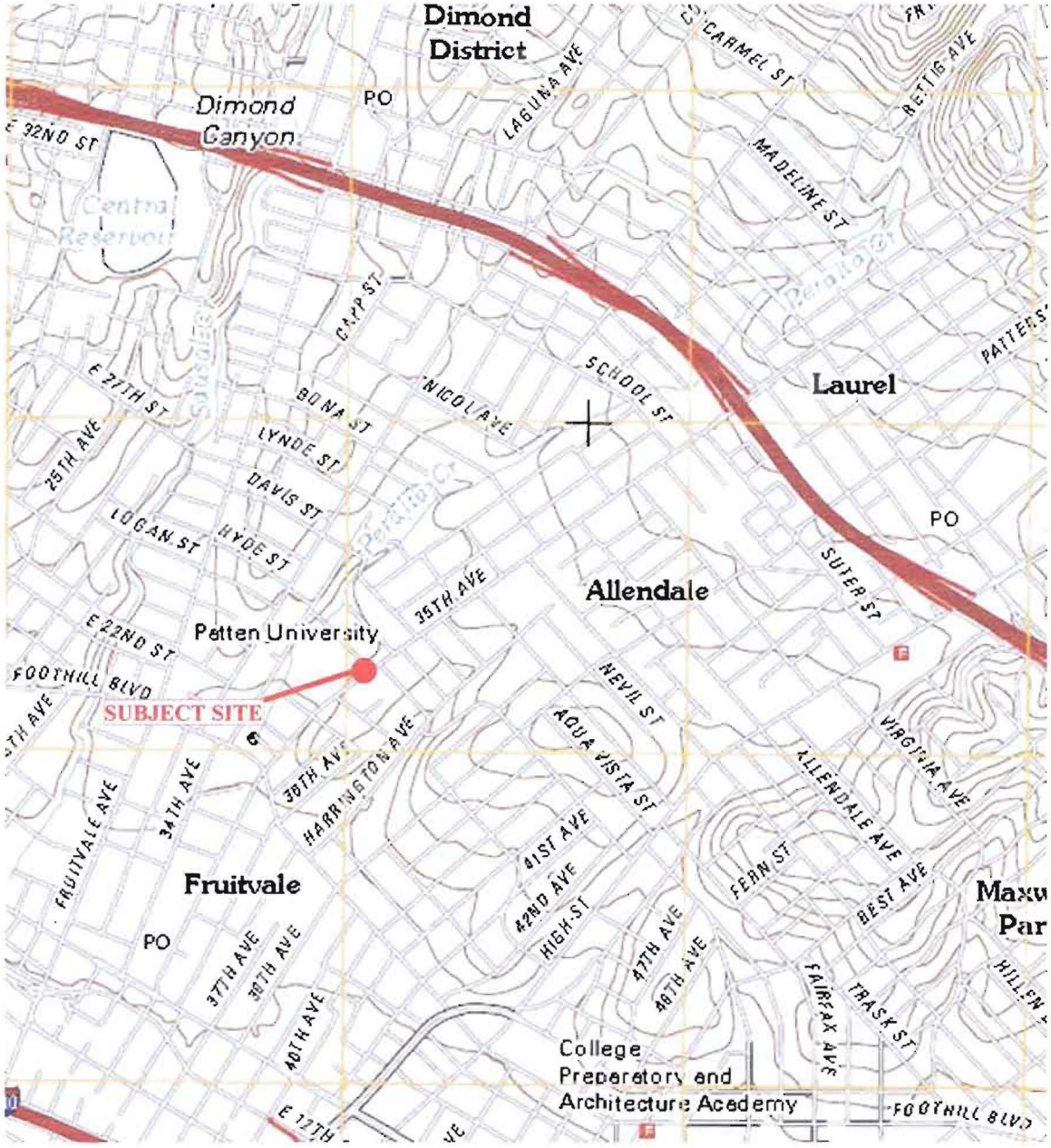
N/A [2] = Not applicable or not analyzed for the indicated compoundTier 1 Environmental Screening Levels (ESLs), Groundwater (3)

(3) = 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 (Revised May 2013).

FIGURES

OAKLAND EAST QUADRANGLE
CALIFORNIA
7.5-MINUTE SERIES

OAKLAND EAST, CA
2012



SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2

1000 500 0 METERS 1000 2000

1 0.5 0 1

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

FEET

EEC
EAGLE ENVIRONMENTAL CONSTRUCTION

1485 BAYSHORE BOULEVARD, SUITE 374
SAN FRANCISCO, CA 94124

SITE LOCATION
2145 35TH AVENUE
OAKLAND, CA 94601

FIGURE 1

JUNE
2013

RESIDENTIAL HOUSES

SALISBURY STREET

SIDEWALK

(84.12')

(84.07')

(83.66')

0 FEET 10
APPROXIMATE SCALE

SUBJECT SITE

MW-4
(84.07')
07/21/2013

FORMER EXCAVATION OF A WASTE OIL UST (1999)

GARAGE DOOR

DOOR

MW-3
(83.66')
07/21/2013

LOCATION OF FORMER TWO 500-GALLON GASOLINE USTS

PIPING

FORMER GASOLINE DISPENSER ISLAND

DOOR

DOOR

VACANT ROOM

MW-1
(84.12')
07/21/2013

RESIDENTIAL HOUSE

FORMER CAR MAINTENANCE PIT

FORMER HYDRAULIC LIFT

DOOR

REST ROOM

DOOR

35TH AVENUE

(83.56')

FENCE
PROPERTY
BORDER

APPROXIMATE TOPOGRAPHIC SLOPE

N

MW-2 (83.56')
03/21/2013

APARTMENT BUILDING

CALCULATED GROUNDWATER FLOW DIRECTION (07/18/12) (GRADIENT 0.0076 OR 0.76%)

CALCULATED GROUNDWATER FLOW DIRECTION (12/06/12) (GRADIENT 0.024 OR 2.4%)

CALCULATED GROUNDWATER FLOW DIRECTION (03/21/13) (GRADIENT 0.00089 OR 0.89%)

CALCULATED GROUNDWATER FLOW DIRECTION (07/21/13) (GRADIENT 0.71%)

RESIDENTIAL HOUSES

NOTE:
(84.33')
03/21/2013
GROUNDWATER ELEVATION AND DATE OF MEASUREMENT

EAGLE ENVIRONMENTAL CONSTRUCTION
"Your Environmental Specialists"

1485 BAYSHORE BOULEVARD, SUITE 374
SAN FRANCISCO, CA 94124

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

FIGURE 2

JUNE 2013

APPENDIX A
WELL PURGING AND SAMPLING LOGS

WELL SAMPLING LOG

Project No. : _____

Project Name: SALISBURY

Location: 2145 35th Ave. Oakland, CA

Well ID: MW-1

Sampled by: SM. EEC

Date: 06/21/2013

Well Diameter:	2"
Total Well Depth:	17.70'
Depth to Water:	10.09'
Water Column:	7.61
Calculated Purge:	3.75 gallo
Actual Purge:	
Free Product:	NO
Product Sheen:	NO

Purge Volume Calculations for Three Casing Volume Purge	
Volume Per One Foot of Well:	0.163 gallon
$\pi r^2 \times 1$	
Volume of One Casing:	1.242
Volume of Three Casings:	

Purge Method: using Disposable Bailer

Did Well go dry? NO

Sampling Method: 3 volume purge or parameter stabilization

Sample Time: 8:50

Post Purge Depth to Water (DTW)

Time	DTW
8:20 a.m	10.09' PVG-Purge
8:50 a.m	10.05 after P

Analyze for:

Time	Conductivity MS	Temperature °C	pH	Salinity	Volume Purged
8:25 a.m	437	18.6	6.84		0.50 gallon
8:29 a.m	409	18.1	6.75		1.0 gallon
8:35 a.m	390	17.9	6.55		1.5 gallon
8:36 a.m	383	17.8	6.50		2.0 gallon
8:40 a.m	380	17.8	6.44		3.0 gallon
8:45 a.m	382	17.9	6.47		3.5 gallon
8:50 a.m	380	17.8	6.46		4.0 gallon
Sample					

Comments: _____

WELL SAMPLING LOG

Project No. : _____

Project Name: SALISBURY

Location: 2145 35th Ave. Oakland, CA

Well ID: MW-2

Sampled by: R.V. EEC

Date: 06/21/2013

Well Diameter:	
Total Well Depth:	15.40'
Depth to Water:	10.87'
Water Column:	4.53'
Calculated Purge:	8.90 gallons
Actual Purge:	
Free Product:	
Product Sheen:	

Purge Volume Calculations for Three Casing Volume Purge	
Volume Per One Foot of Well:	0.653
$\pi r^2 \times 1$	
Volume of One Casing:	2.96 gallons
Volume of Three Casings:	8.90 gall

Purge Method: Wing disposable bailer

Did Well go dry? No

Sampling Method: 3 volumes or parameter stabilization

Sample Time: 12:35 p.m.

Post Purge Depth to Water (DTW)

Time	DTW
11:47 a.m.	10.87' Pre-Purge
12:30 p.m.	11.60 After Purge

Analyze for:

Time	Conductivity MS	Temperature °C	pH	Salinity	Volume Purged
12:05 P.m.	512	20.3	6.62		1.0 gallon
12:15 p.m.	518	19.2	6.45		5.0 gallons
12:20 P.m.	514	19.0	6.28		6.0 gallons
12:25 p.m.	516	18.7	6.42		7.0 gallons
12:30 p.m.	513	18.6°	6.42		8.0 gallons
12:35 p.m.	513	18.6	6.32		9.0 gallons
sample					

Comments: _____

WELL SAMPLING LOG

Project No. :

Project Name: SALISBURY

Location: 2145 35th Ave. Oakland, CA

Well ID: MW-3

Sampled by: S.Y. GEC

Date: 06/21/2013

Well Diameter:	
Total Well Depth:	17.68
Depth to Water:	10.95'
Water Column:	6.73'
Calculated Purge:	13.18 gallons
Actual Purge:	
Free Product:	
Product Sheen:	

Purge Volume Calculations for Three Casing Volume Purge	
Volume Per One Foot of Well:	0.653 gallons
$\pi r^2 \times 1$	
Volume of One Casing:	4.40
Volume of Three Casings:	13.18 gallons

Purge Method: by Disposable bailer

Did Well go dry? NO

Sampling Method: 3 volumes or parameter stabilization

Sample Time: 11:10

Post Purge Depth to Water (DTW)

Time	DTW
10:20 a.m.	10.95' pre purge
11:10 a.m.	11.20 after purge

Analyze for:

Time	Conductivity µS	Temperature °C	pH	Salinity	Volume Purged
10:30	416	18.8	6.84		0.5 gallons
10:40	416	18.9	6.83		5.0 gallons
10:52	413	18.7	6.80		10.0 gallons
11:02	410	18.7	6.88		12.0 gallons
11:03	410	18.4	6.88		13.0 gallons
11:10	408	18.4	6.82		13.50 gallons
sample					

Comments:

WELL SAMPLING LOG

Project No. :

Project Name: SALISBURY

Location: 2145 35th Ave. Oakland, CA

Well ID: MW-4

Sampled by: SM EEC

Date: 06/21/2013

Well Diameter:	
Total Well Depth:	~~5.12 10.84~~ 17.72'
Depth to Water:	10.84'
Water Column:	6.88'
Calculated Purge:	3.37 gallons
Actual Purge:	
Free Product:	
Product Sheen:	

Purge Volume Calculations for Three Casing Volume Purge	
Volume Per One Foot of Well:	0.163 gallons
$\pi r^2 \times 1$	
Volume of One Casing:	1.13 gallons
Volume of Three Casings:	3.37 gallons

Purge Method: by Disposable bailer

Did Well go dry? No

Sampling Method: 3 Volumes or parameter stabilization

Sample Time: 9:55

Post Purge Depth to Water (DTW)

Time	DTW
9:30 am	10.84' pre purge
9:55 am	11.20 after purge

Analyze for:

Time	Conductivity ms	Temperature °C	pH	Salinity	Volume Purged
9:38 am	428	19.1	6.62		0.5 gal
9:43 am	427	18.4	6.37		1.0 gal
9:46 am	425	18.7	6.34		2.0 gallons
9:50 am	421	18.2	6.36		3.0 gal
9:55 am	420	18.1	6.37		4.0 gal
Sample					

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 246406
ANALYTICAL REPORT

Eagle Env. Construction	Project : SALISBURY PROJECT
3150 Hilltop Road	Location : Salisbury Project
Richmond, CA 94806	Level : II

Sample ID	Lab ID
MW-1	246406-001
MW-2	246406-002
MW-3	246406-003
MW-4	246406-004

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 Date: 06/28/2013

Tracy Babjar
Project Manager
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**246406**
Client:	**Eagle Env. Construction**
Project:	**SALISBURY PROJECT**
Location:	**Salisbury Project**
Request Date:	**06/21/13**
Samples Received:	**06/21/13**

This data package contains sample and QC results for four water samples, requested for the above referenced project on 06/21/13. 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):
Low recovery was observed for ethylbenzene in the MSD for batch 200042; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits. No other analytical problems were encountered.

CHAIN OF CUSTODY

Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
In Business Since 1878

2323 Fifth Street
Berkeley, CA 94710

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

Geotracker Global ID: T0619778840

Page 1 of 2

Chain of Custody #

C&T LOGIN # 246406

Project No:

Sampler: EEC S.M.

Project Name: SALISBURY PROJECT

Report To: SAMI MALAEB

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

Company: EEC

EDD Format:

Report Level ☐ II ☐ III ☐ IV

Telephone: (925) 858-9608

Turnaround Time: ☐ RUSH ☑ Standard

Email: S.MALAEB@COMCAST.NET

Lab No.	Sample ID.	SAMPLING		MATRIX				# of Containers	CHEMICAL PRESERVATIVE				
		Date Collected	Time Collected	Water	Solid				HCl	H2SO4	HNO3	NaOH	None
1	MW-1	06/21/13	8:50 a.m.	X				3	X				
	MW-1	"	"	X				3	X				
	MW-1	"	"	X				2					X
2	MW-2	06/21/13	12:35 p.m.	X				3	X				
	MW-2	"	"	X				3	X				
	MW-2	"	"	X				2					X
3	MW-3	06/21/13	11:10 a.m.	X				3	X				
	MW-3	"	"	X				3	X				
	MW-3	"	"	X				2					X

ANALYTICAL REQUEST

- TPH-G; TPH-SS by 8015B
- BTEX; Naphthalene; and MTBE by 8260B
- TPH-D; TPH-MO; and
- TPH-Hydraulic Oil by 8011

Notes:

SAMPLE RECEIPT
☐ Intact
☒ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:
Sami Malaeb DATE: 06/21/13 TIME: 14:10
DATE: TIME:
DATE: TIME:

RECEIVED BY:
DATE: 6/21/13 TIME: 14:10
DATE: TIME:
DATE: TIME:

CHAIN OF CUSTODY

Geotracker Global ID: T0619778840

Page 2 of 2

Chain of Custody # _____

Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
In Business Since 1878

C&T LOGIN # 246406

2323 Fifth Street
Berkeley, CA 94710

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

Project No: _____ Sampler: FEC S.M.

Project Name: SALISBURY project Report To: SAMI MALAEB

~~Project P. O. No:~~ 2145 35th Ave. Oakland Company: FEC

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

Turnaround Time: ☐ RUSH _____ ☒ ~~Standard~~ Email: S. MALAEB@comcast.net

Lab No.	Sample ID.	SAMPLING		MATRIX				# of Containers	CHEMICAL PRESERVATIVE				
		Date Collected	Time Collected	Water	Solid				HCl	H2SO4	HNO3	NaOH	None
	MW-4	06/21/13	9:55a	X				3	X				
4	MW-4	"	"	X				3	X				
	MW-4	"	"	X				2					X

ANALYTICAL REQUEST

TPH-G; TPH-sc by 8015	BTEX; Naphthalene; Gnd MTBE by 8260B	TPH-D; TPH-MO; and TPH-Hydraulic oil by 8015
X		
	X	
		X

Notes:

SAMPLE RECEIPT
☐ Intact
☒ ~~Cold~~
☒ ~~On Ice~~
☐ Ambient

RELINQUISHED BY:
_____ DATE: 06/21/13 TIME: 14:10
_____ DATE: _____ TIME: _____
_____ DATE: _____ TIME: _____

RECEIVED BY:
_____ DATE: 6/21/13 TIME: 1410
_____ DATE: _____ TIME: _____
_____ DATE: _____ TIME: _____

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 246406 Date Received 6/21/13 Number of coolers 1
Client EEC Project Salisbury Project

Date Opened 6/21/13 By (print) MG (sign)
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) 1.7

☐ 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

Rev 10, 11/11

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/21/13
Units:	ug/L	Received:	06/21/13
Diln Fac:	1.000	Analyzed:	06/25/13
Batch#:	200076		

Field ID: MW-1 Lab ID: 246406-001
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	76-128

Field ID: MW-2 Lab ID: 246406-002
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	4,300	50
Stoddard Solvent C7-C12	2,900	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	76-128

Field ID: MW-3 Lab ID: 246406-003
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	103	76-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/21/13
Units:	ug/L	Received:	06/21/13
Diln Fac:	1.000	Analyzed:	06/25/13
Batch#:	200076		

Field ID: MW-4 Lab ID: 246406-004
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	76-128

Type: BLANK Lab ID: QC695219

Analyte	Result	RL
Gasoline C7-C12	ND	50
Stoddard Solvent C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	76-128

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC695218	Batch#:	200076
Matrix:	Water	Analyzed:	06/25/13
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,060	106	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	76-128

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	200076
MSS Lab ID:	246414-001	Sampled:	06/21/13
Matrix:	Water	Received:	06/21/13
Units:	ug/L	Analyzed:	06/25/13
Diln Fac:	1.000		

Type: MS Lab ID: QC695220

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	110.2	2,000	2,104	100	76-120

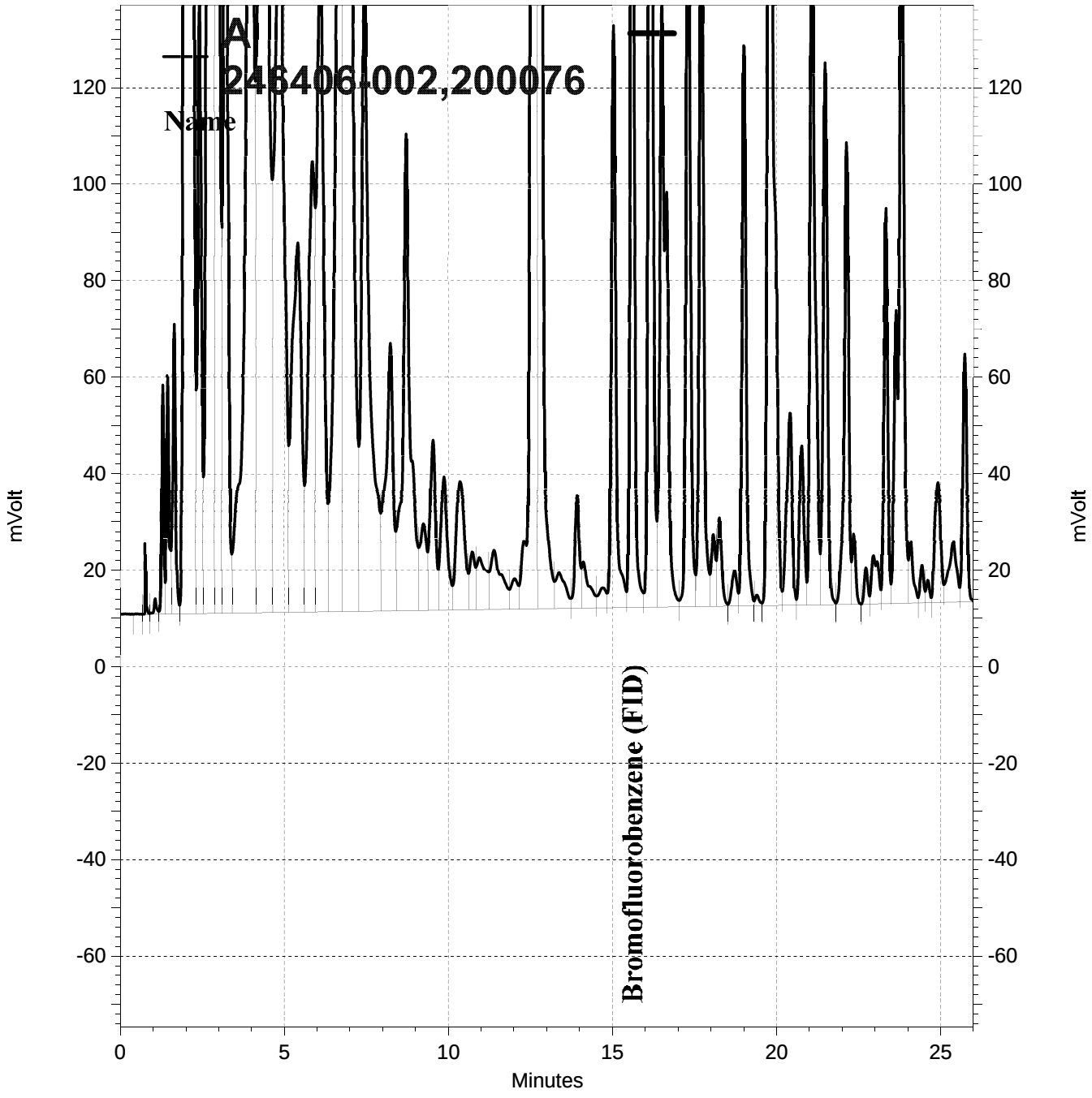
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	76-128

Type: MSD Lab ID: QC695221

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,055	97	76-120	2	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	76-128

RPD= Relative Percent Difference



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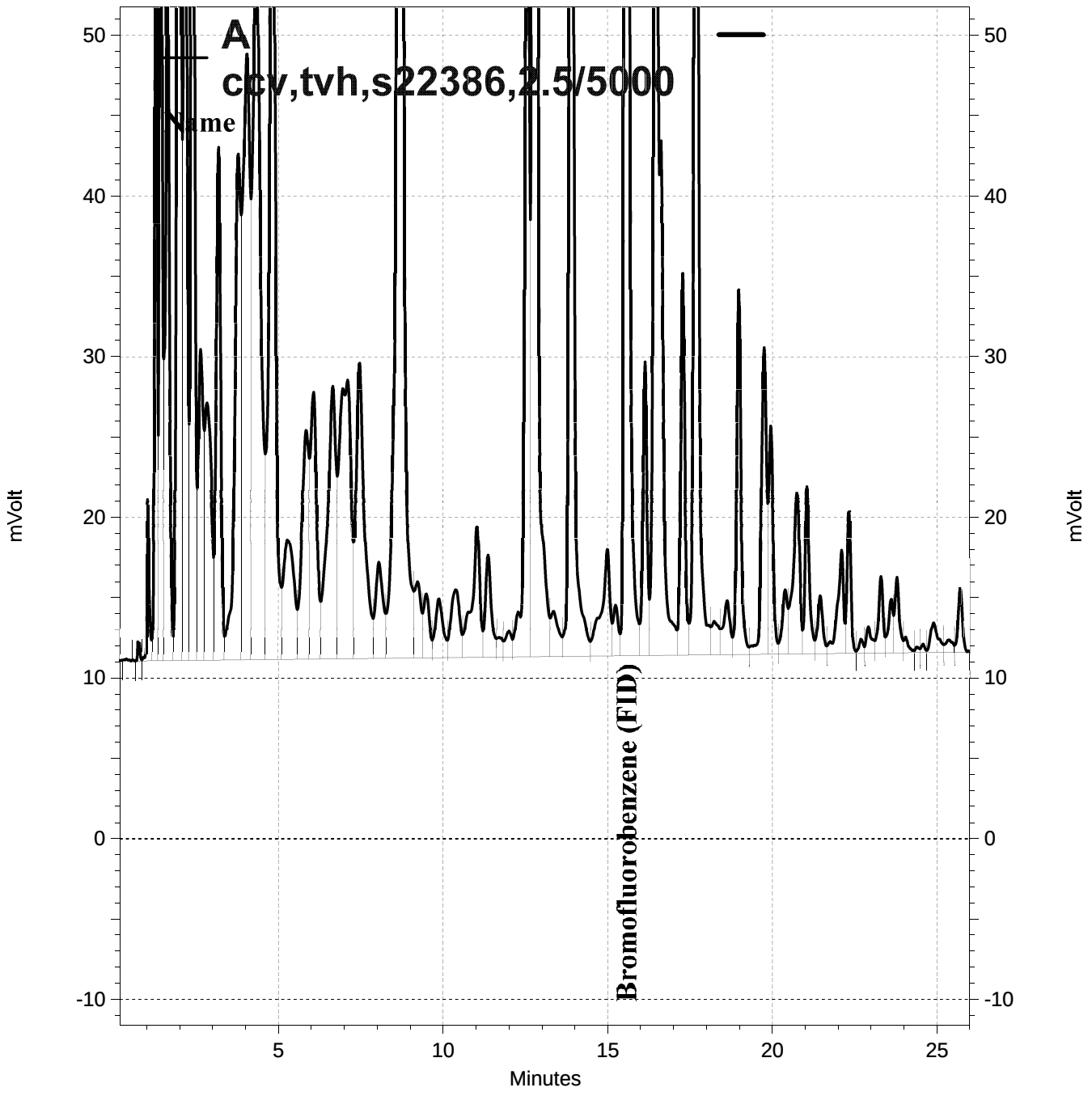

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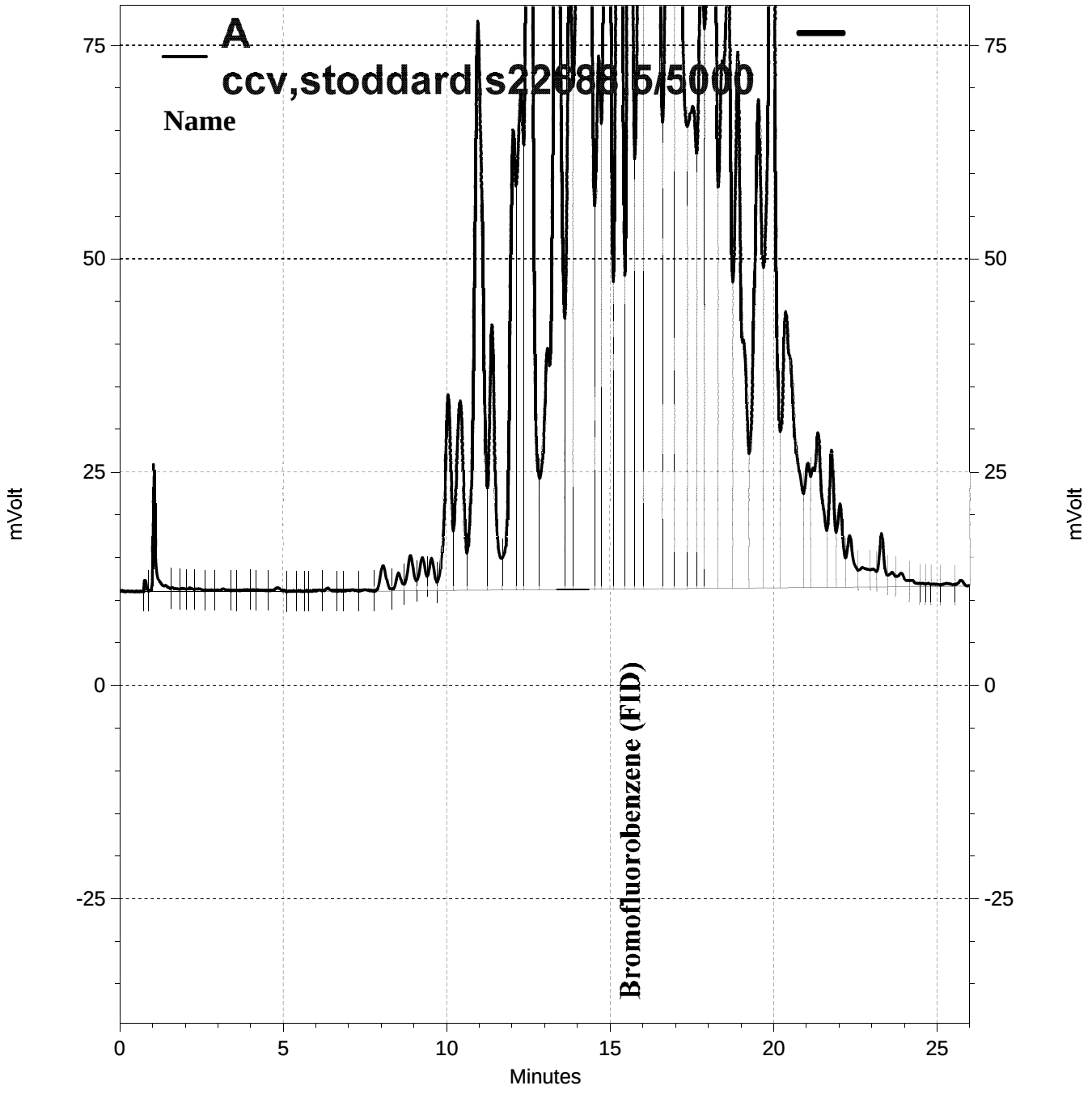

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Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/21/13
Units:	ug/L	Received:	06/21/13
Diln Fac:	1.000	Prepared:	06/25/13
Batch#:	200070		

Field ID: MW-1 Lab ID: 246406-001
Type: SAMPLE Analyzed: 06/26/13

Analyte	Result	RL
Diesel C10-C24	100 Y	49
Motor Oil C24-C36	ND	290
Hydraulic Fluid, C12-40	ND	290

Surrogate	%REC	Limits
o-Terphenyl	109	62-133

Field ID: MW-2 Lab ID: 246406-002
Type: SAMPLE Analyzed: 06/26/13

Analyte	Result	RL
Diesel C10-C24	1,700 Y	49
Motor Oil C24-C36	ND	290
Hydraulic Fluid, C12-40	1,100 Y	290

Surrogate	%REC	Limits
o-Terphenyl	105	62-133

Field ID: MW-3 Lab ID: 246406-003
Type: SAMPLE Analyzed: 06/26/13

Analyte	Result	RL
Diesel C10-C24	210 Y	49
Motor Oil C24-C36	ND	290
Hydraulic Fluid, C12-40	340 Y	290

Surrogate	%REC	Limits
o-Terphenyl	113	62-133

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	06/21/13
Units:	ug/L	Received:	06/21/13
Diln Fac:	1.000	Prepared:	06/25/13
Batch#:	200070		

Field ID: MW-4 Lab ID: 246406-004
Type: SAMPLE Analyzed: 06/26/13

Analyte	Result	RL
Diesel C10-C24	76 Y	49
Motor Oil C24-C36	ND	290
Hydraulic Fluid, C12-40	ND	290

Surrogate	%REC	Limits
o-Terphenyl	103	62-133

Type: BLANK Lab ID: QC695174

Analyte	Result	RL	Analyzed
Diesel C10-C24	ND	50	06/27/13
Motor Oil C24-C36	ND	300	06/26/13
Hydraulic Fluid, C12-40	ND	300	06/26/13

Surrogate	%REC	Limits	Analyzed
o-Terphenyl	122	62-133	06/27/13

Y= Sample exhibits chromatographic pattern which does not resemble standard
ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC695175	Batch#:	200070
Matrix:	Water	Prepared:	06/25/13
Units:	ug/L	Analyzed:	06/26/13

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,167	87	59-120

Surrogate	%REC	Limits
o-Terphenyl	100	62-133

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	200070
MSS Lab ID:	246342-003	Sampled:	06/19/13
Matrix:	Water	Received:	06/20/13
Units:	ug/L	Prepared:	06/25/13
Diln Fac:	10.00	Analyzed:	06/27/13

Type: MS Cleanup Method: EPA 3630C
Lab ID: QC695176

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	95,980	2,907	100,500	156 NM	61-120

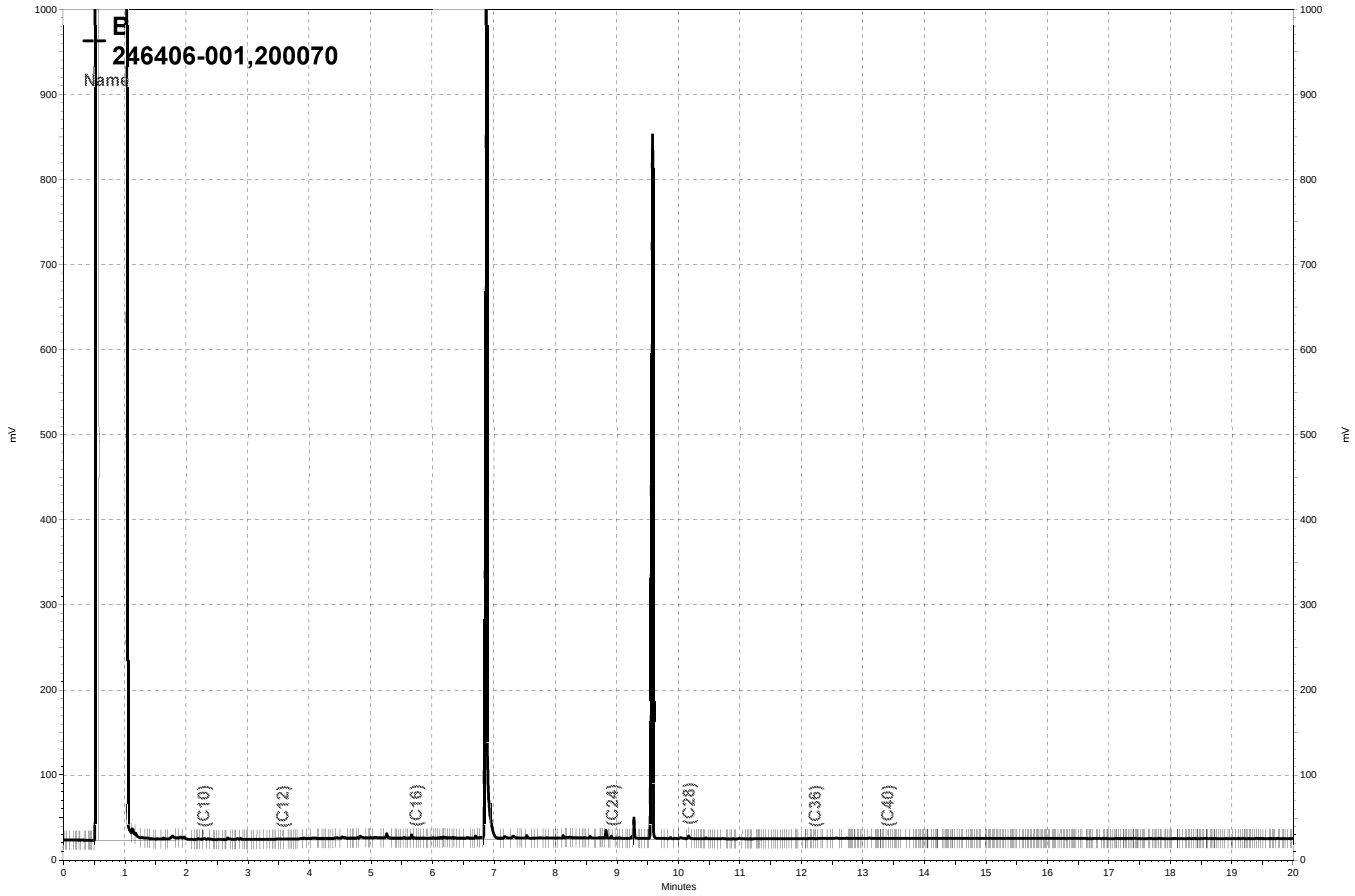
Surrogate	%REC	Limits
o-Terphenyl	DO	62-133

Type: MSD Cleanup Method: EPA 3630C
Lab ID: QC695177

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,717	78,140	-656 NM	61-120	25	43

Surrogate	%REC	Limits
o-Terphenyl	DO	62-133

DO= Diluted Out
NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference



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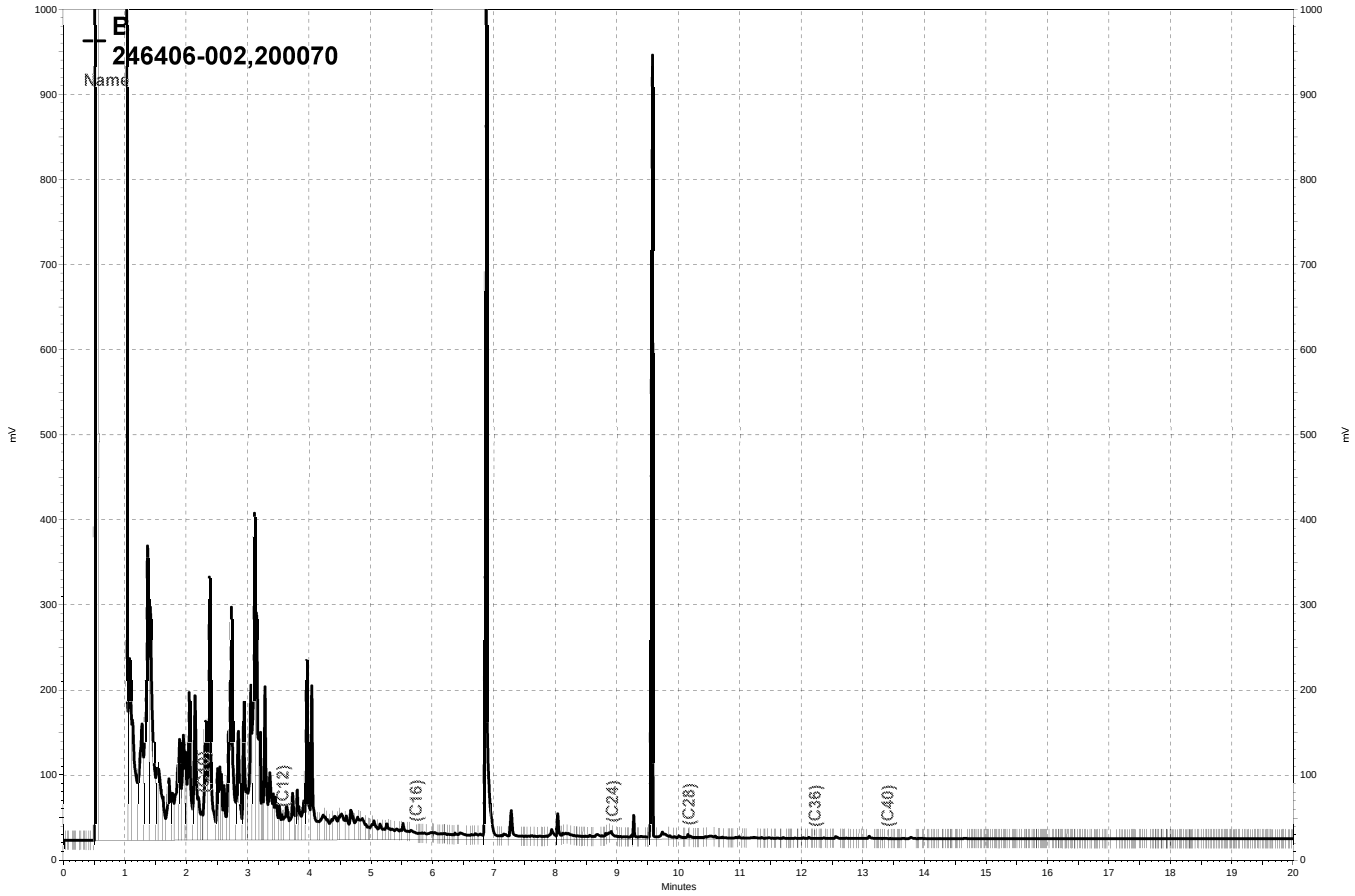

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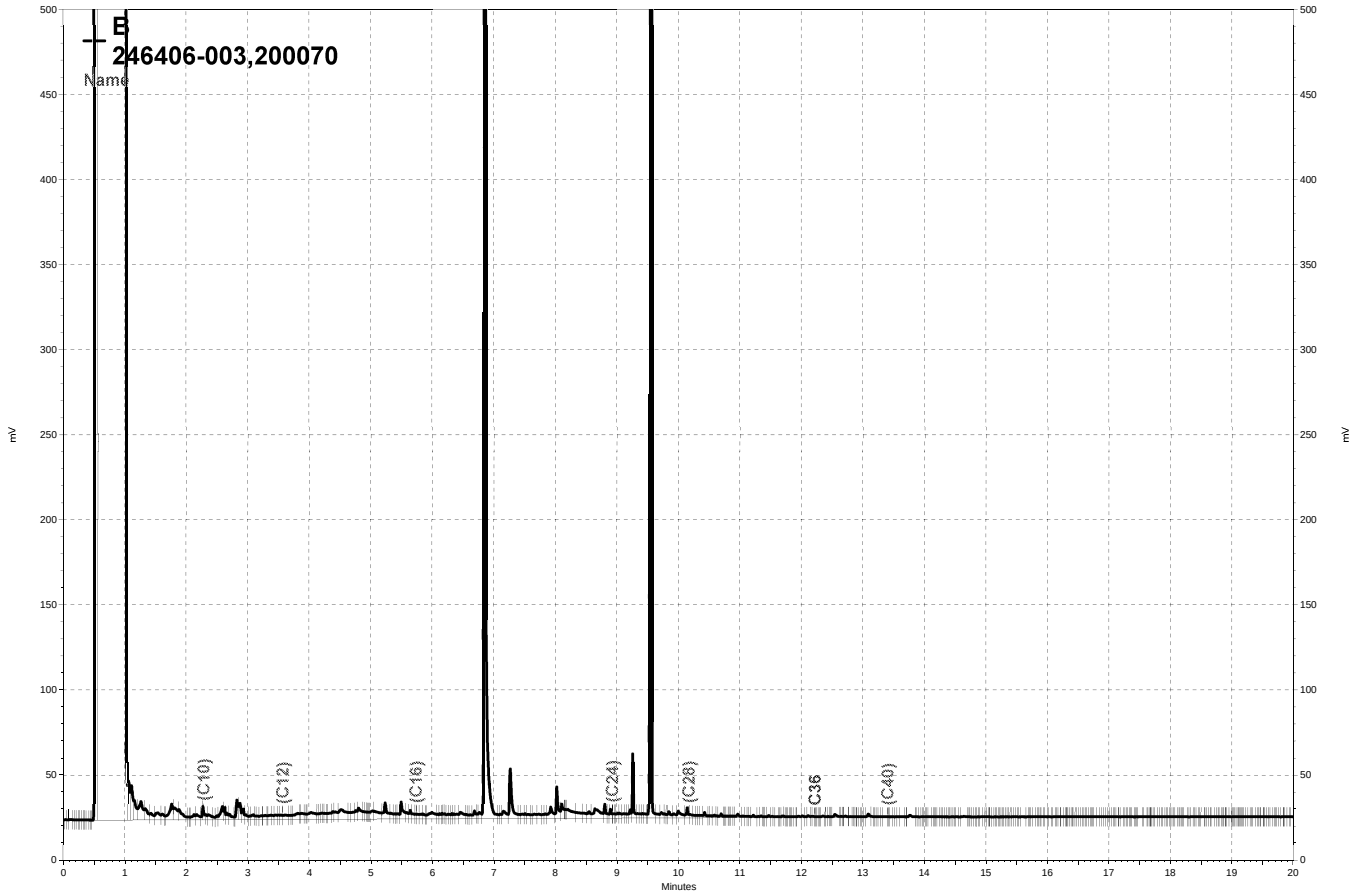

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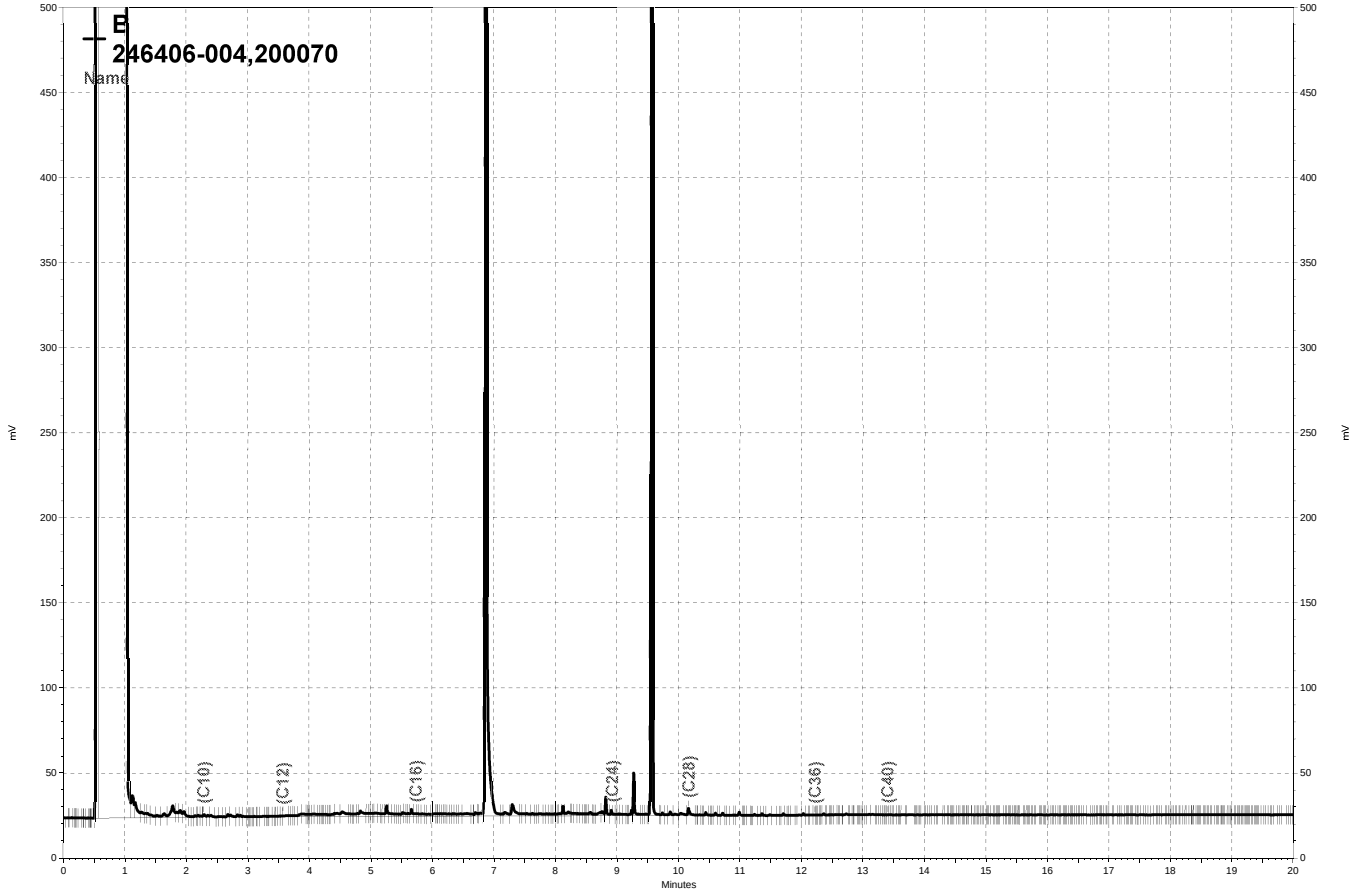

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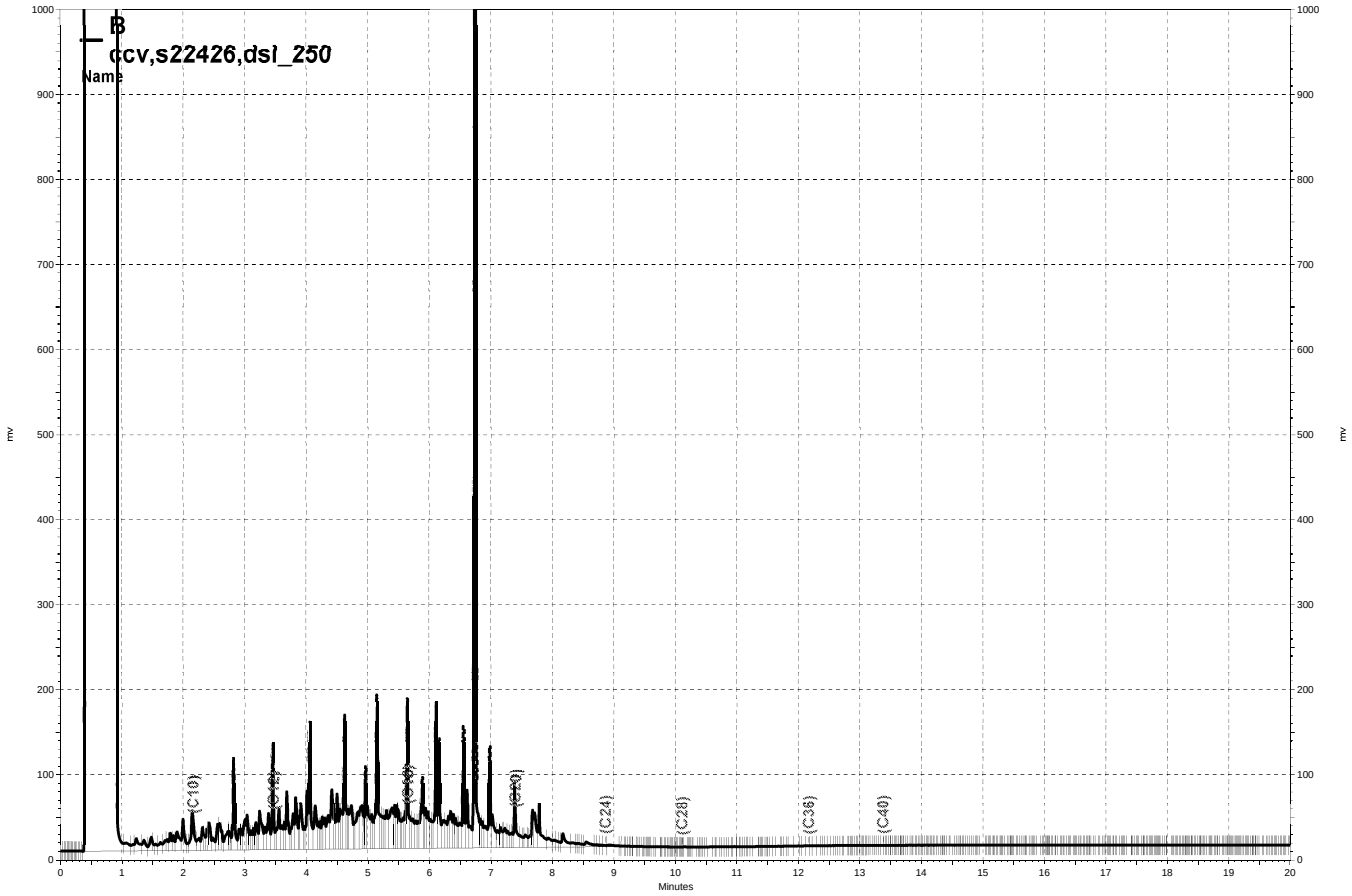

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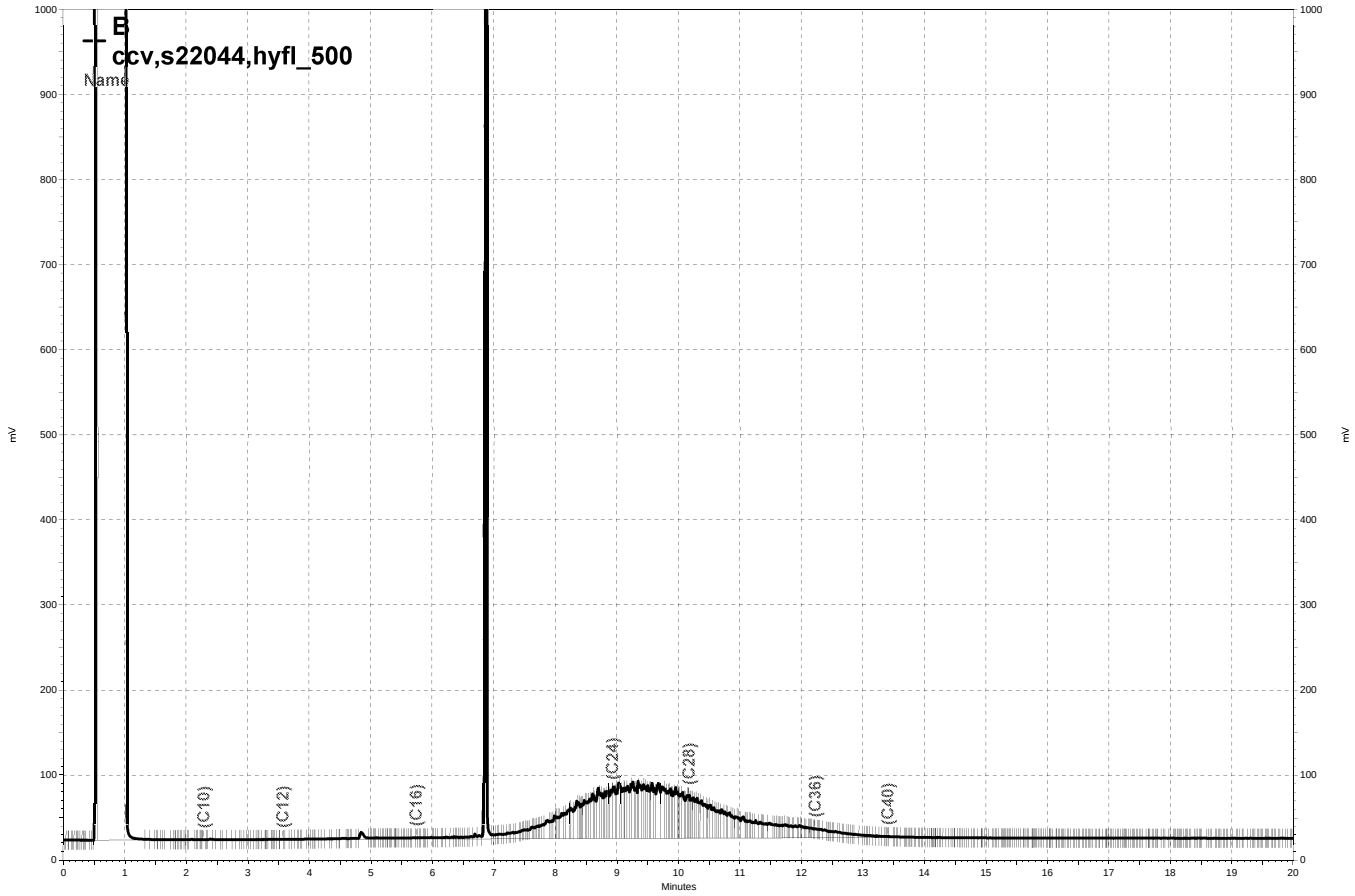

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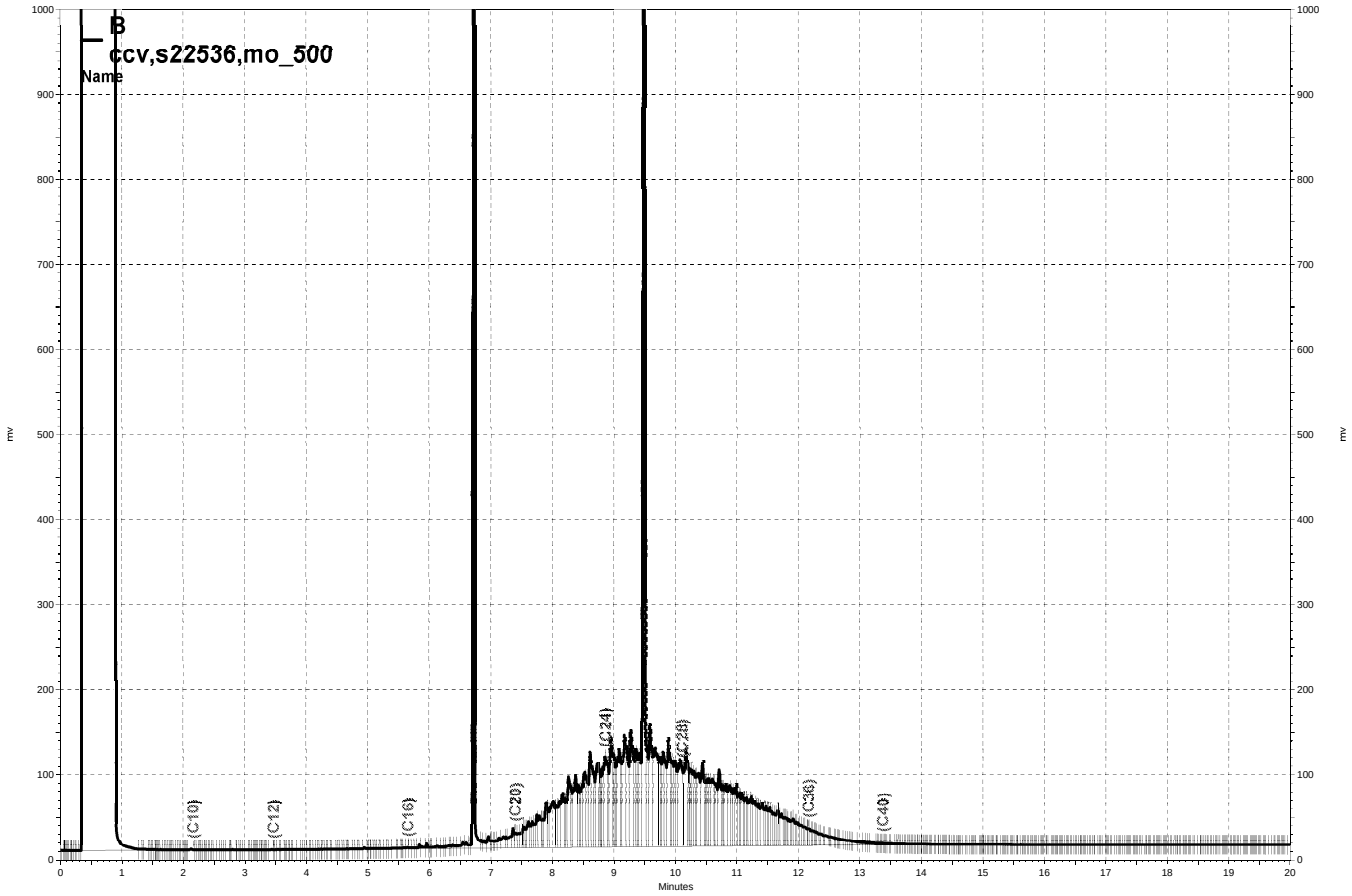

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Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	200041
Lab ID:	246406-001	Sampled:	06/21/13
Matrix:	Water	Received:	06/21/13
Units:	ug/L	Analyzed:	06/25/13
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	98	77-134
1,2-Dichloroethane-d4	117	72-140
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	200088
Lab ID:	246406-002	Sampled:	06/21/13
Matrix:	Water	Received:	06/21/13
Units:	ug/L	Analyzed:	06/26/13
Diln Fac:	3.333		

Analyte	Result	RL
MTBE	ND	1.7
Benzene	50	1.7
Toluene	24	1.7
Ethylbenzene	210	1.7
m,p-Xylenes	92	1.7
o-Xylene	4.0	1.7
Naphthalene	21	6.7

Surrogate	%REC	Limits
Dibromofluoromethane	104	77-134
1,2-Dichloroethane-d4	111	72-140
Toluene-d8	99	80-120
Bromofluorobenzene	88	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	200042
Lab ID:	246406-003	Sampled:	06/21/13
Matrix:	Water	Received:	06/21/13
Units:	ug/L	Analyzed:	06/25/13
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	91	77-134
1,2-Dichloroethane-d4	95	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	94	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	200042
Lab ID:	246406-004	Sampled:	06/21/13
Matrix:	Water	Received:	06/21/13
Units:	ug/L	Analyzed:	06/25/13
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	93	77-134
1,2-Dichloroethane-d4	90	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200041
Units:	ug/L	Analyzed:	06/25/13
Diln Fac:	1.000		

Type: BS Lab ID: QC695067

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	24.26	97	58-120
Benzene	25.00	22.84	91	78-125
Toluene	25.00	24.15	97	79-123
Ethylbenzene	25.00	25.75	103	80-126
m,p-Xylenes	50.00	50.07	100	80-123
o-Xylene	25.00	22.76	91	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	77-134
1,2-Dichloroethane-d4	125	72-140
Toluene-d8	100	80-120
Bromofluorobenzene	101	80-120

Type: BSD Lab ID: QC695068

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	22.54	90	58-120	7	23
Benzene	25.00	21.99	88	78-125	4	20
Toluene	25.00	23.21	93	79-123	4	20
Ethylbenzene	25.00	25.09	100	80-126	3	20
m,p-Xylenes	50.00	47.24	94	80-123	6	20
o-Xylene	25.00	22.00	88	75-120	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	77-134
1,2-Dichloroethane-d4	123	72-140
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC695069	Batch#:	200041
Matrix:	Water	Analyzed:	06/25/13
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	99	77-134
1,2-Dichloroethane-d4	124	72-140
Toluene-d8	103	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200042
Units:	ug/L	Analyzed:	06/25/13
Diln Fac:	1.000		

Type: BS Lab ID: QC695070

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	21.63	87	58-120
Benzene	25.00	23.46	94	78-125
Toluene	25.00	23.75	95	79-123
Ethylbenzene	25.00	24.35	97	80-126
m,p-Xylenes	50.00	49.61	99	80-123
o-Xylene	25.00	23.76	95	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	91	77-134
1,2-Dichloroethane-d4	88	72-140
Toluene-d8	93	80-120
Bromofluorobenzene	87	80-120

Type: BSD Lab ID: QC695071

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	23.40	94	58-120	8	23
Benzene	25.00	25.12	100	78-125	7	20
Toluene	25.00	25.75	103	79-123	8	20
Ethylbenzene	25.00	26.17	105	80-126	7	20
m,p-Xylenes	50.00	52.63	105	80-123	6	20
o-Xylene	25.00	24.72	99	75-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	90	77-134
1,2-Dichloroethane-d4	87	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	90	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC695072	Batch#:	200042
Matrix:	Water	Analyzed:	06/25/13
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	91	77-134
1,2-Dichloroethane-d4	92	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	200042
MSS Lab ID:	246415-003	Sampled:	06/20/13
Matrix:	Water	Received:	06/21/13
Units:	ug/L	Analyzed:	06/25/13
Diln Fac:	12.50		

Type: MS Lab ID: QC695150

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<1.250	312.5	296.6	95	63-120
Benzene	1.321	312.5	313.9	100	80-125
Toluene	6.139	312.5	325.1	102	80-122
Ethylbenzene	730.1	312.5	1,116	123	80-124
m,p-Xylenes	46.24	625.0	670.7	100	80-121
o-Xylene	105.0	312.5	434.9	106	77-120

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

Type: MSD Lab ID: QC695151

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	312.5	275.1	88	63-120	8	27
Benzene	312.5	279.6	89	80-125	12	21
Toluene	312.5	278.4	87	80-122	15	21
Ethylbenzene	312.5	976.2	79 *	80-124	13	21
m,p-Xylenes	625.0	618.1	91	80-121	8	21
o-Xylene	312.5	389.6	91	77-120	11	22

Surrogate	%REC	Limits
Dibromofluoromethane	94	77-134
1,2-Dichloroethane-d4	90	72-140
Toluene-d8	93	80-120
Bromofluorobenzene	92	80-120

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	200088
Units:	ug/L	Analyzed:	06/26/13
Diln Fac:	1.000		

Type: BS Lab ID: QC695261

Analyte	Spiked	Result	%REC	Limits
MTBE	12.50	12.67	101	58-120
Benzene	12.50	13.07	105	78-125
Toluene	12.50	12.34	99	79-123
Ethylbenzene	12.50	12.05	96	80-126
m,p-Xylenes	25.00	24.56	98	80-123
o-Xylene	12.50	10.24	82	75-120

Surrogate	%REC	Limits
Dibromofluoromethane	115	77-134
1,2-Dichloroethane-d4	118	72-140
Toluene-d8	95	80-120
Bromofluorobenzene	91	80-120

Type: BSD Lab ID: QC695262

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	12.50	13.20	106	58-120	4	23
Benzene	12.50	12.54	100	78-125	4	20
Toluene	12.50	12.27	98	79-123	1	20
Ethylbenzene	12.50	11.98	96	80-126	1	20
m,p-Xylenes	25.00	24.11	96	80-123	2	20
o-Xylene	12.50	10.05	80	75-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	115	77-134
1,2-Dichloroethane-d4	120	72-140
Toluene-d8	97	80-120
Bromofluorobenzene	92	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	246406	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC695263	Batch#:	200088
Matrix:	Water	Analyzed:	06/26/13
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	131	77-134
1,2-Dichloroethane-d4	122	72-140
Toluene-d8	96	80-120
Bromofluorobenzene	90	80-120

ND= Not Detected
RL= Reporting Limit