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EAGLE ENVIRONMENTAL CONSTRUCTION
"Your Environmental Specialists"

SEMI-ANNUAL GROUNDWATER MONITORING REPORT

Fifth Sampling Event, December 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

December 23, 2013

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1.0 Introduction

This semi-annual groundwater monitoring report is for the former gasoline service station located at 2145 35th Avenue, Oakland, California (Figure 1). This is the fifth 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" and the recent November 2013 submitted report on the offsite subsurface investigation titled "Soil and Groundwater Investigation."

In this fifth monitoring event and previous sampling event, the following was implemented:

- 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 December 10, 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).

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 0.76% (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 previous sampling events, all the analyzed petroleum hydrocarbons were either non-detected or non-significant in monitoring wells MW-1, MW-3, 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.

Benzene and Naphthalene were detected at their lowest concentrations to date in MW-2. Benzene was detected at 40 µg/l and Naphthalene was detected at 6.7 µg/l (Table 2).

- None of the analyzed contaminants in the groundwater at this site exceeded its limit for Groundwater Screening Levels, Low-Threat Underground Storage Tank Case Closure Policy, Appendix 3, Figure A.

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. These drums are expected to be transported offsite with non-hazardous waste manifest within the next 30-days.

6.0 Conclusions and Recommendations

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

Conclusions

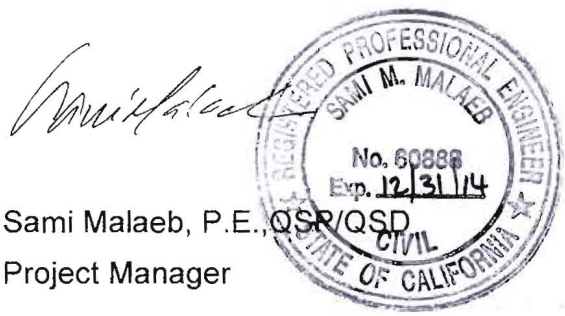
- It appears that the petroleum hydrocarbon plume is stable and limited to the area of the sources onsite, and within ~100 feet downgradient from these sources. BTEX were not detected in Monitoring Well MW-3 in this sampling event or previous sampling event. BTEX and Naphthalene concentrations were detected the lowest in this sampling event, compared to the previous events in Monitoring Well MW-2. BTEX and Naphthalene concentrations are on the decrease for the last three consecutive events (Table 2). This indicates stable or bio-attenuated plume.

Recommendations

- Due to the fact that non-significant to non-detected concentrations were detected in Monitoring wells MW-1, MW-3, and MW-4, EEC recommends discontinuing sampling and analysis of groundwater from these wells. EEC recommends continuing sampling and analysis of groundwater from monitoring well MW-2 on a semi-annual basis. Gauging all wells for depth to water and calculating groundwater flow direction and gradient should continue during sampling MW-2, semi-annually.

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
12/10/2013	Casing Diameter (in)	2	4	4	2
	Total Well Depth (ft)	18	16	18	18
	Depth to Water (ft)	9.84	10.70	10.79	10.64
	Top of Casing Elevation	94.21	94.43	94.61	94.91
	Top of Water Elevation	84.37	83.73	83.82	84.27

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)	Naphthalene (µg/l)
MW-1	07/09/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	12/06/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	03/21/2013	<50	<50	<49	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	06/21/2013	<50	<50	100 (Y)[6]	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	12/10/2013	<50	<50	<49	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
MW-2	07/09/2012	3,800	3,900 (Y)	1,200 (Y)	<300	660 (Y)	82	42	350	189.4	<0.5	44
	12/06/2012	5,000	3,300 (Y)	2,300	<300	1,500 (Y)	92	42	460	179.6	<0.5	62
	03/21/2013	4,500	3,000	1,800 Y	<290	1,000(Y)	77	31	230	115.4	<1.7	25
	06/21/2013	4,300	2,900	1,700 (Y)	<290	1,100 (Y)	50	24	210	96	<1.7	21
	12/10/2013	3,300	2,300 (Y)	1,500 (Y)	<290	710 (Y)	40	21	140	63	<1.7	6.7
MW-3	07/09/2012	85Y	86Y	180 (Y)	<300	<300	0.8	<0.5	<0.5	<1.0	<0.5	<2.0
	12/06/2012	1,200	800Y	2,000	<300	1,600 (Y)	36	0.8	9.2	1.1	<0.5	120
	03/21/2013	130 (Y)	91Y	140 (Y)	<290	<290	1.8	<0.5	<0.5	<1.0	<0.5	<2.0
	06/21/2013	<50	<50	210 (Y)	<290	340 (Y)	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	12/10/2013	<50	<50	54 (Y)	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
MW-4	07/09/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	12/06/2012	<50	<50	<50	<300	<300	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	03/21/2013	<50	<50	<49	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	06/21/2013	<50	<50	76 (Y)	<290	<290	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
	12/10/2013	<50	<50	<51	<310	<310	<0.5	<0.5	<0.5	<1.0	<0.5	<2.0
Groundwater Screening Levels, Low-Threat Underground Storage Tank Case Closure Policy, Appendix 3, Figure A[7]		NA[7]	NA	NA	NA	NA	100	NA	NA	NA	NA	NA

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;
NA [7] = Not Applicable

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
	12/10/2013	<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
	12/10/2013	6.7	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	N/A
	12/10/2013	<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
	12/10/2013	<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, non-drinking water resource (Final Groundwater Screening Level) [3]		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 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

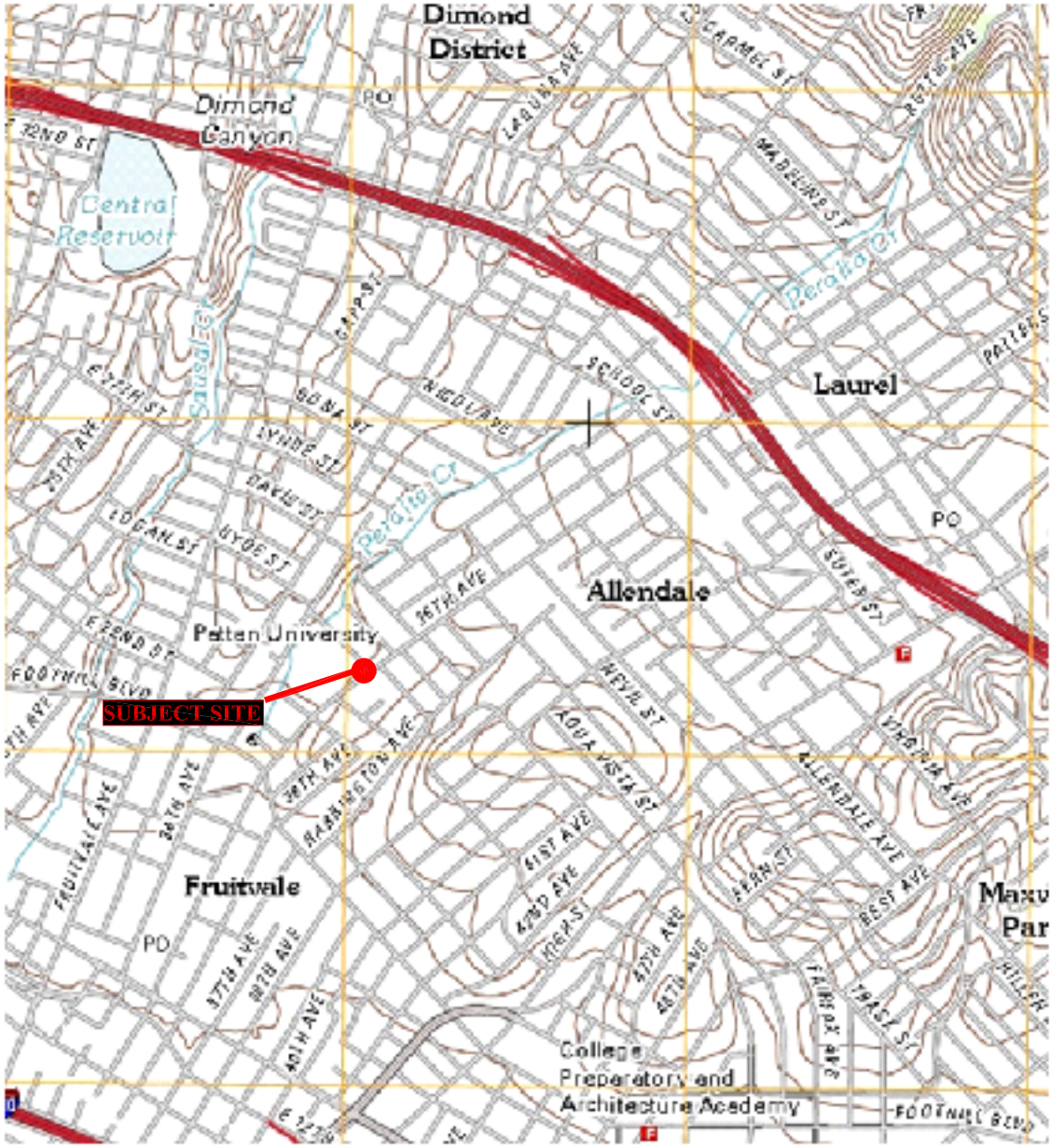
N/A [2] = Not applicable or not analyzed for the indicated compoundTier 1 Environmental Screening Levels (ESLs), Groundwater (3)

(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
1485 BAYSHORE BOULEVARD, SUITE 374
SAN FRANCISCO, CA 94124

SITE LOCATION
2145 35TH AVENUE
OAKLAND, CA 94601

FIGURE 1

DECEMBER
2013

RESIDENTIAL HOUSES

SALISBURY STREET

SIDEWALK

(84.37')

(84.27')

0 FEET 10
APPROXIMATE SCALE

SUBJECT SITE

RESIDENTIAL HOUSE

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

FORMER EXCAVATION OF A WASTE OIL UST (1999)

GARAGE DOOR

DOOR

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

FORMER CAR MAINTENANCE PIT

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

(83.82')

LOCATION OF FORMER TWO 500-GALLON GASOLINE USTS

PIPING

FORMER GASOLINE DISPENSER ISLAND

DOOR

DOOR

VACANT ROOM

DOOR

FORMER HYDRAULIC LIFT

DOOR

REST ROOM

(83.73')

35TH AVENUE

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%)

CALCULATED GROUNDWATER FLOW DIRECTION (12/10/13) (GRADIENT 0.76%)

APPROXIMATE TOPOGRAPHIC SLOPE

N

FENCE PROPERTY BORDER

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

APARTMENT BUILDING

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

DECEMBER 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: EFC S.M.

Date: 12/10/13

Well Diameter:	2"
Total Well Depth:	17.70'
Depth to Water:	9.84'
Water Column:	7.86'
Calculated Purge:	3.84
Actual Purge:	4.5 gallons
Free Product:	None
Product Sheen:	none

Purge Volume Calculations for Three Casing Volume Purge	
Volume Per One Foot of Well:	0.1632 gal
$\pi r^2 \times 1$	
Volume of One Casing:	~~1.284~~ 1.28L gallons
Volume of Three Casings:	~~3.84~~ 3.85 gallons

Purge Method: purge and sample

Did Well go dry?

Sampling Method: from bailer

Sample Time: 10:30 am

Post Purge Depth to Water (DTW)

Time	DTW
10:28 am	9.87'

Analyze for:

Time	Conductivity	Temperature	pH	Salinity	Volume Purged
10:04 am	474 µs	18.3°c	6.94		1 GAL
10:08 am	460 µs	18.9°c	6.94		1.5 GAL
10:13 am	473 µs	18.7°c	6.93		3.0 GAL
10:18 am	462 µs	18.7°c	6.91		3.5 GAL
10:22 am	457 µs	18.7°c	6.88		4.0 GAL
10:27 am	459 µs	18.6°c	6.90		4.5 GAL

Comments:

WELL SAMPLING LOG

Project No. :

Project Name: SALISBURY

Location: 2145 35th Avenue
Oakland, CA

Well ID: MW-2

Sampled by: EFC S.M.

Date: 12/10/13

Well Diameter:	4"
Total Well Depth:	15.4'
Depth to Water:	10.70'
Water Column:	4.70'
Calculated Purge:	9.20 Gal
Actual Purge:	9.75 Gal
Free Product:	none
Product Sheen:	none

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:	3.07 ~~2.88~~ gallons
Volume of Three Casings:	~~8.60~~ gallons 9.20

Purge Method: Purge and Sample

Did Well go dry? No

Sampling Method: From bailer

Sample Time: 1:40 P.M.

Post Purge Depth to Water (DTW)

Time	DTW
1:45 P.M.	

Analyze for:

Time	Conductivity	Temperature	pH	Salinity	Volume Purged
1:05 P.M.	626 µs	19.7°C	6.59		2 gallons
1:15 P.M.	628 µs	19.7°C	6.67		5 gallons
1:20 P.M.	615 µs	19.6°C	6.71		7 gallons
1:25 P.M.	615 µs	19.6°C	6.74		8 gallons
1:30 P.M.	609 µs	19.6°C	6.74		9.5 gal
1:35 P.M.	607 µs	19.4°C	6.77		9.75 gal

Comments:

WELL SAMPLING LOG

Project No. :

Project Name: SALISBURY

Location: 2145 35th Avenue
Oakland, CA

Well ID: MW-3

Sampled by: EEC S.M.

Date: 12/10/13

Well Diameter:	4"
Total Well Depth:	17.68'
Depth to Water:	10.79'
Water Column:	6.89
Calculated Purge:	13.50 gallons
Actual Purge:	
Free Product:	No
Product Sheen:	No

Purge Volume Calculations for Three Casing Volume Purge	
Volume Per One Foot of Well:	0.653 gal/ft
$\pi r^2 \times 1$	
Volume of One Casing:	4.50 gallons
Volume of Three Casings:	13.50 gallons

Purge Method: purge and sample

Did Well go dry? No

Sampling Method: From bailer

Sample Time: 12:30 p.m.

Post Purge Depth to Water (DTW)

Time	DTW
12:45	10.80'

Analyze for:

Time	Conductivity	Temperature	pH	Salinity	Volume Purged
11:54 a.m.	430 µS	20.0 °C	6.72		2 gallons
12:00 p.m.	427 "	20.0 °C	6.80		5 gallons
12:13 p.m.	426 "	20.1 °C	6.81		10 gallons
12:17 p.m.	423 "	20.0 °C	6.80		12 gallons
12:21 p.m.	424 "	19.8 °C	6.84		13 gallons
12:25 p.m.	420 "	19.8 °C	6.87		13.50 gallons

Comments:

WELL SAMPLING LOG

Project No. : _____

Project Name: SALISBURY

Location: 2145 35th Avenue
Oakland, CA

Well ID: MW-4

Sampled by: EEC, D.M.

Date: 12/10/13

Well Diameter:	2"
Total Well Depth:	17.72
Depth to Water:	10.64'
Water Column:	7.08
Calculated Purge:	3.50 Gallons
Actual Purge:	3.50 gallons
Free Product:	None
Product Sheen:	no

Purge Volume Calculations for Three Casing Volume Purge	
Volume Per One Foot of Well:	0.163
$\pi r^2 \times 1$	
Volume of One Casing:	1.16
Volume of Three Casings:	3.75 gallons
	3.50

Purge Method: purge and sample

Did Well go dry? No

Sampling Method: From bailer

Sample Time: 11:15 am

Post Purge Depth to Water (DTW)

Time	DTW
11:20	10.63'

Analyze for:

Time	Conductivity	Temperature	pH	Salinity	Volume Purged
10:55 a.m	485 µs	20.1 °c	6.72		1 GALLON
11:00 a.m	490 µs	20.0 °c	6.73		2 "
11:03 am	482 µs	20.0 °c	6.68		2.5 "
11:06 a.m	485 µs	19.8 °c	6.71		3.0 "
11:10 am	481 µs	19.8 °c	6.72		3.5 gallons

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 251504
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	251504-001
MW-2	251504-002
MW-3	251504-003
MW-4	251504-004

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: 12/17/2013

Tracy Babjar
Project Manager
tracy.babjar@ctberk.com
(510) 204-2226

NELAP # 01107CA

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**251504**
Client:	**Eagle Env. Construction**
Project:	**SALISBURY PROJECT**
Location:	**Salisbury Project**
Request Date:	**12/10/13**
Samples Received:	**12/10/13**

This data package contains sample and QC results for four water samples, requested for the above referenced project on 12/10/13. 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):
MW-2 (lab # 251504-002) was diluted due to high non-target analytes. No other analytical problems were encountered.

CHAIN OF CUSTODY

Geotracker GLOBAL ID: T0619778840

Page 1 of 2

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

C&T LOGIN # 251504

Project No:

Project Name: SALISBURY PROJECT

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

EDD Format: Report Level ☐ II ☐ III ☐ IV

Turnaround Time: ☐ RUSH ______ ☑ Standard

Sampler: EEC S.M.

Report To: SAMI MALAEB

Company: EEC

Telephone: (925) 858-9608

Email: S.MALAEB@COMCAST.NET

Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid	# of Containers	HCl	H2SO4	HNO3	NaOH	None	TPH-G; TPH-SS by 8015	BTEX; Naphthalene; and MTBE by 8260B	TPH-D; TPH-Motor oil; and TPH-Hydraulic oil by 8015
1	MW-1	12/10/13	10:30am	x		3	x					x		
	MW-1	"	"	x		3	x						x	
	MW-1	"	"	x		2					x			x
2	MW-2	12/10/13	1:40pm	x		3	x					x		
	MW-2	"	"	x		3	x						x	
	MW-2	"	"	x		2					x			x
3	MW-3	12/10/13	12:30pm	x		3	x					x		
	MW-3	"	12:30pm	x		3	x						x	
	MW-3	"	12:30pm	x		2					x			x

Notes:

SAMPLE RECEIPT
☑ Intact
☑ Cold
☑ On Ice
☐ Ambient

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	12/10/13	3:00	[signature]	12/10/13	3:00

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

2323 Fifth Street
Berkeley, CA 94710

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

C&T LOGIN # 251504

Project No:
Project Name: SALISBURY PROJECT
Project P. O. No: 2145 35th Ave., Oakland
EDD Format: Report Level ☐ II ☐ III ☐ IV
Turnaround Time: ☐ RUSH ☒ Standard

Sampler: EEC S.M.
Report To: SAMI MALAEB
Company: EEC
Telephone: (925) 858-9608
Email: S.MALAEB@COMCAST.NET

Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid			# of Containers	HCl	H2SO4	HNO3	NaOH	None	TPH-G; TPH-SS by 8015	BTEX; Naphthalene; and MTBE by 8260B	TPH-D; TPH-motor oil; and TPH-Hydraulic oil by 8015
4	MW-4	12/10/13	11:15am	x				3	x					x		
	MW-4	"	"	x				3	x						x	
	MW-4	"	"	x				2					x			x

Notes:

SAMPLE RECEIPT
☐ Intact
☒ Cold
☒ On Ice
☐ Ambient

RELINQUISHED BY:	DATE:	TIME:	RECEIVED BY:	DATE:	TIME:
[signature]	12/10/13	3:05	[signature]	12/10/13	3:05

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 251504 Date Received 12/10/13 Number of coolers 1
Client EEC Project SALISBURY PROJECT

Date Opened 12/10/13 By (print) AM (sign) Amy Mull
Date Logged in 12/10/13 By (print) IK (sign) Ilma Kanka

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) 2.4

☐ 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 #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/10/13
Units:	ug/L	Received:	12/10/13
Diln Fac:	1.000	Analyzed:	12/16/13
Batch#:	206194		

Field ID: MW-1 Lab ID: 251504-001
Type: SAMPLE

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

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	77-128

Field ID: MW-2 Lab ID: 251504-002
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	3,300	50
Stoddard Solvent C7-C12	2,300 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	116	77-128

Field ID: MW-3 Lab ID: 251504-003
Type: SAMPLE

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

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	77-128

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

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/10/13
Units:	ug/L	Received:	12/10/13
Diln Fac:	1.000	Analyzed:	12/16/13
Batch#:	206194		

Field ID: MW-4 Lab ID: 251504-004
Type: SAMPLE

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

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	77-128

Type: BLANK Lab ID: QC720675

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

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	102	77-128

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

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC720674	Batch#:	206194
Matrix:	Water	Analyzed:	12/16/13
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,052	105	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	77-128

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	206194
MSS Lab ID:	251565-001	Sampled:	12/11/13
Matrix:	Water	Received:	12/11/13
Units:	ug/L	Analyzed:	12/17/13
Diln Fac:	1.000		

Type: MS Lab ID: QC720676

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	26.65	2,000	1,828	90	74-120

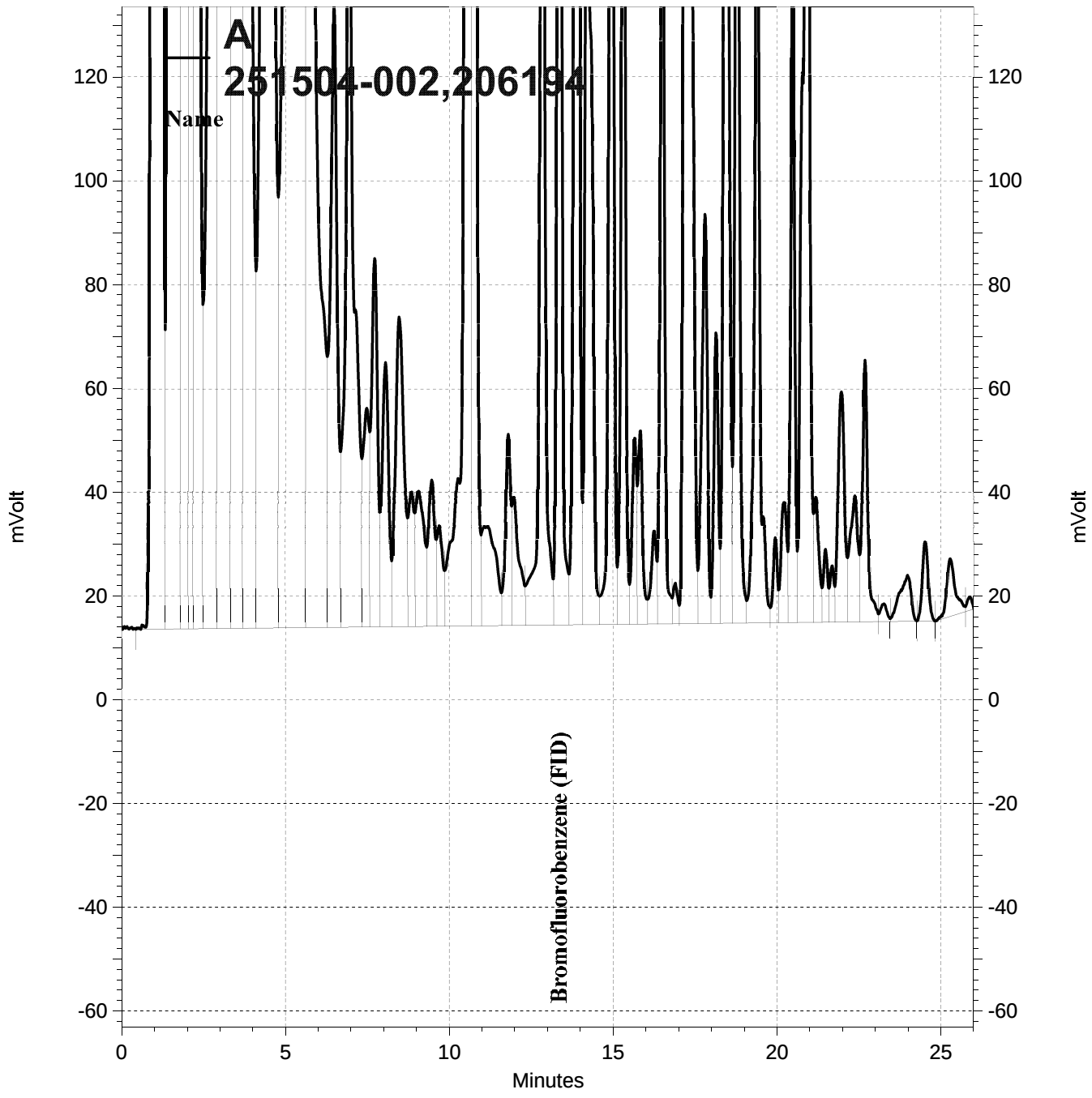
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	77-128

Type: MSD Lab ID: QC720677

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,829	90	74-120	0	27

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	110	77-128

RPD= Relative Percent Difference



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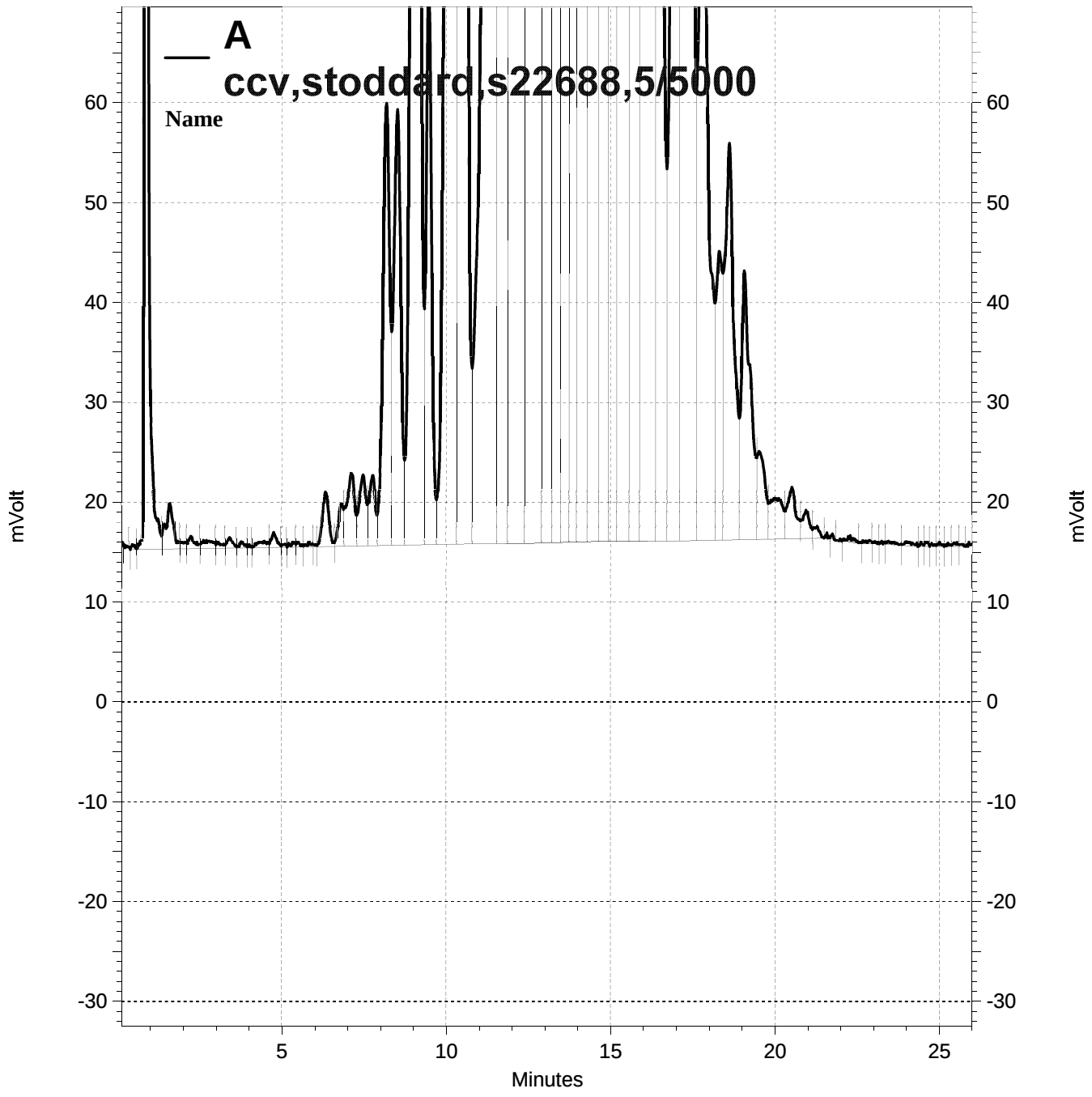

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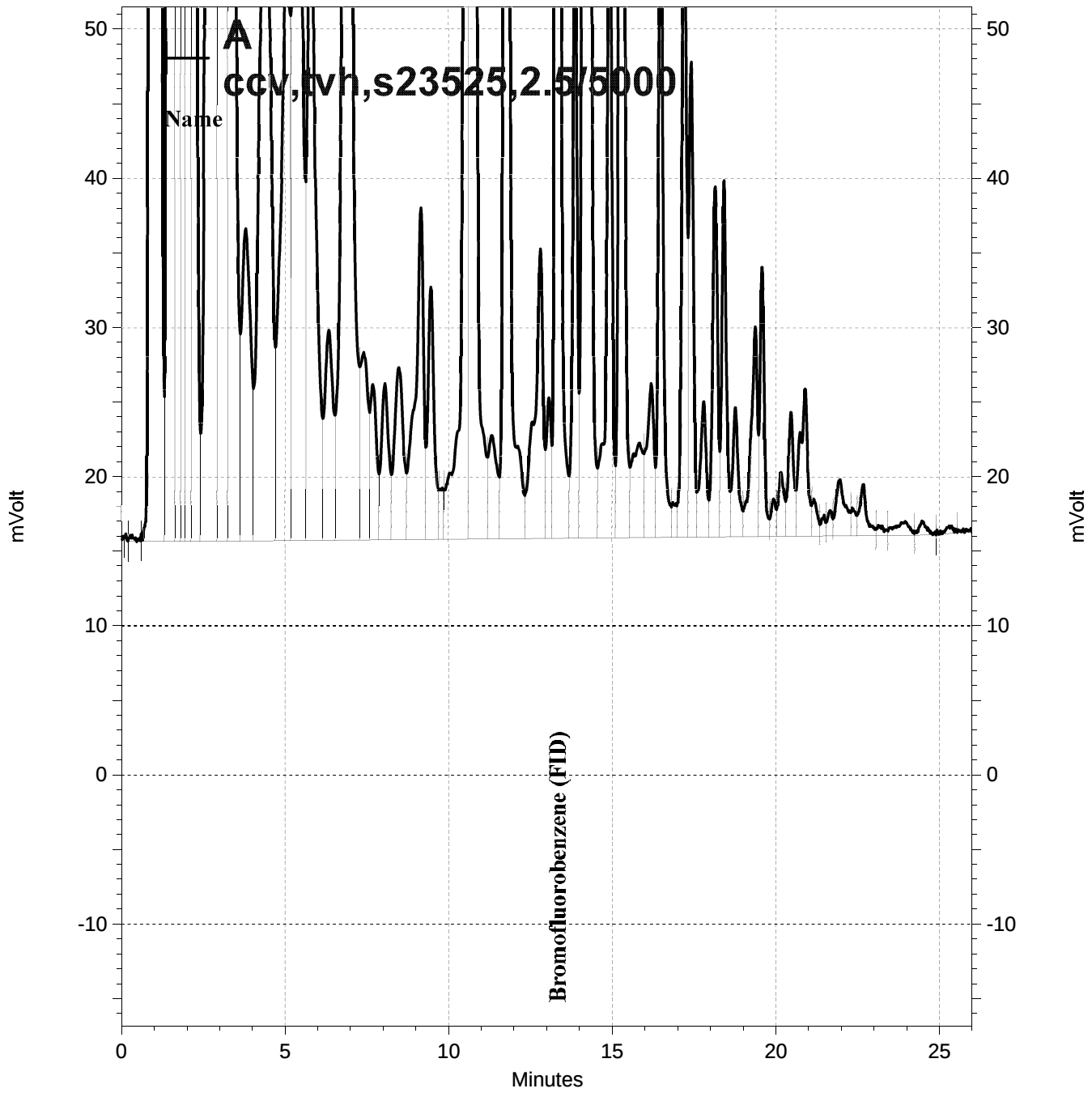

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Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/10/13
Units:	ug/L	Received:	12/10/13
Diln Fac:	1.000	Prepared:	12/12/13
Batch#:	206070	Analyzed:	12/13/13

Field ID: MW-1 Lab ID: 251504-001
Type: SAMPLE

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

Surrogate	%REC	Limits
o-Terphenyl	103	66-129

Field ID: MW-2 Lab ID: 251504-002
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	1,500 Y	49
Motor Oil C24-C36	ND	290
Hydraulic Fluid, C12-40	710 Y	290

Surrogate	%REC	Limits
o-Terphenyl	101	66-129

Field ID: MW-3 Lab ID: 251504-003
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	54 Y	49
Motor Oil C24-C36	ND	290
Hydraulic Fluid, C12-40	ND	290

Surrogate	%REC	Limits
o-Terphenyl	90	66-129

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

Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/10/13
Units:	ug/L	Received:	12/10/13
Diln Fac:	1.000	Prepared:	12/12/13
Batch#:	206070	Analyzed:	12/13/13

Field ID: MW-4 Lab ID: 251504-004
Type: SAMPLE

Analyte	Result	RL
Diesel C10-C24	ND	51
Motor Oil C24-C36	ND	310
Hydraulic Fluid, C12-40	ND	310

Surrogate	%REC	Limits
o-Terphenyl	103	66-129

Type: BLANK Lab ID: QC720156

Analyte	Result	RL
Diesel C10-C24	ND	50
Motor Oil C24-C36	ND	300
Hydraulic Fluid, C12-40	ND	300

Surrogate	%REC	Limits
o-Terphenyl	98	66-129

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 #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 3520C
Project#:	SALISBURY PROJECT	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	206070
Units:	ug/L	Prepared:	12/12/13
Diln Fac:	1.000	Analyzed:	12/13/13

Type: BS Lab ID: QC720157

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,176	87	61-120

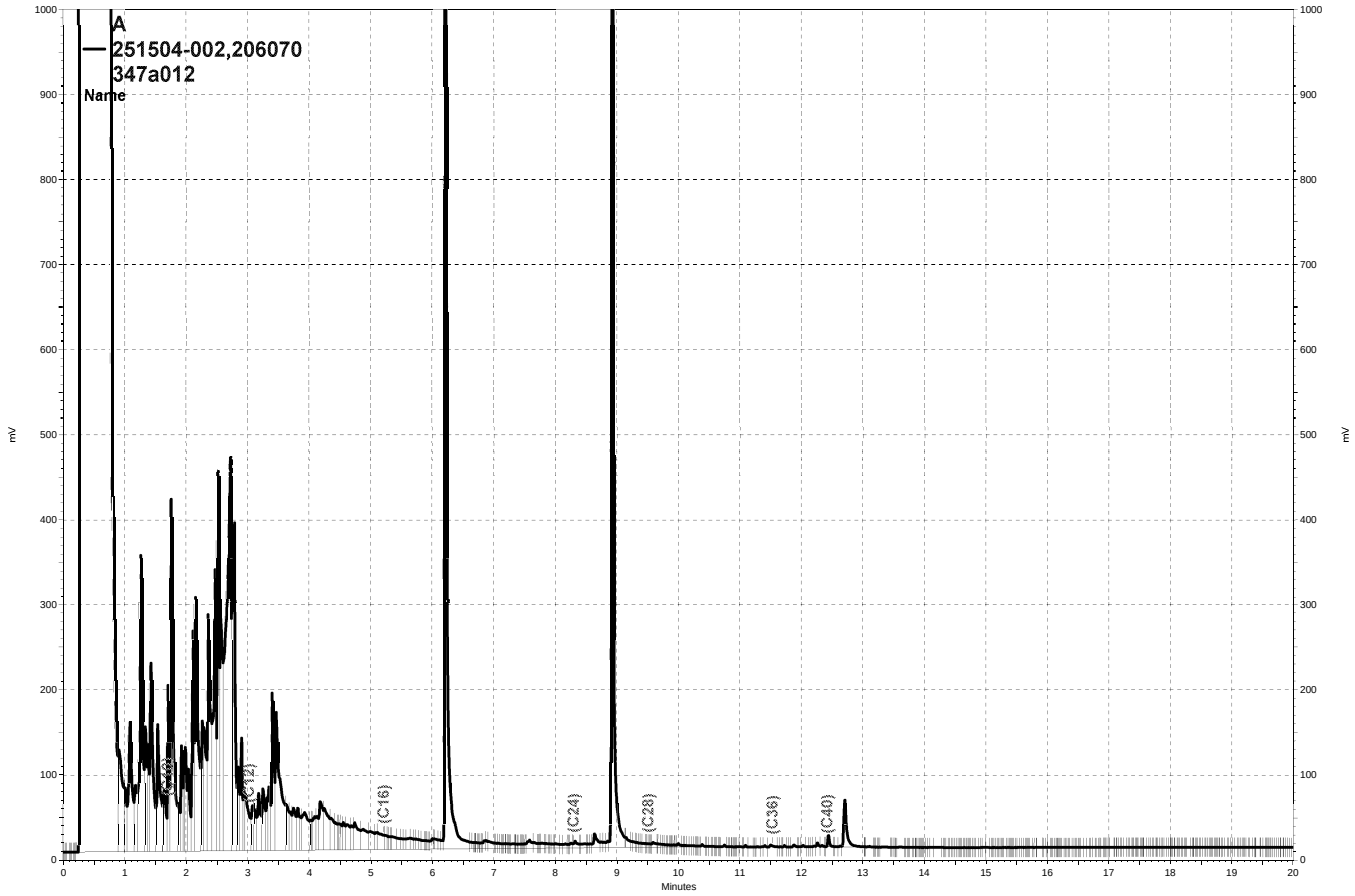
Surrogate	%REC	Limits
o-Terphenyl	101	66-129

Type: BSD Lab ID: QC720158

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,063	83	61-120	5	45

Surrogate	%REC	Limits
o-Terphenyl	99	66-129

RPD= Relative Percent Difference



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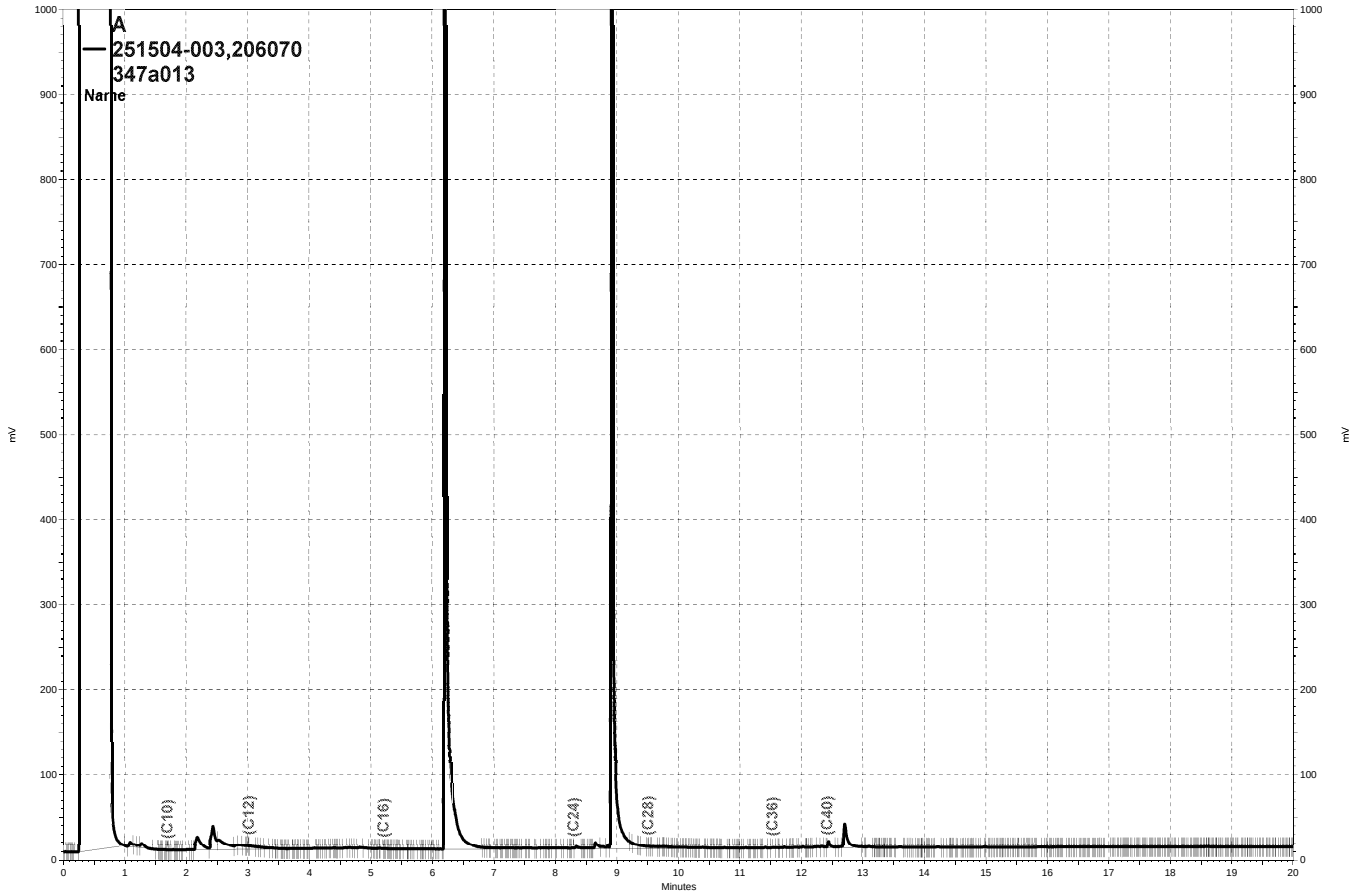

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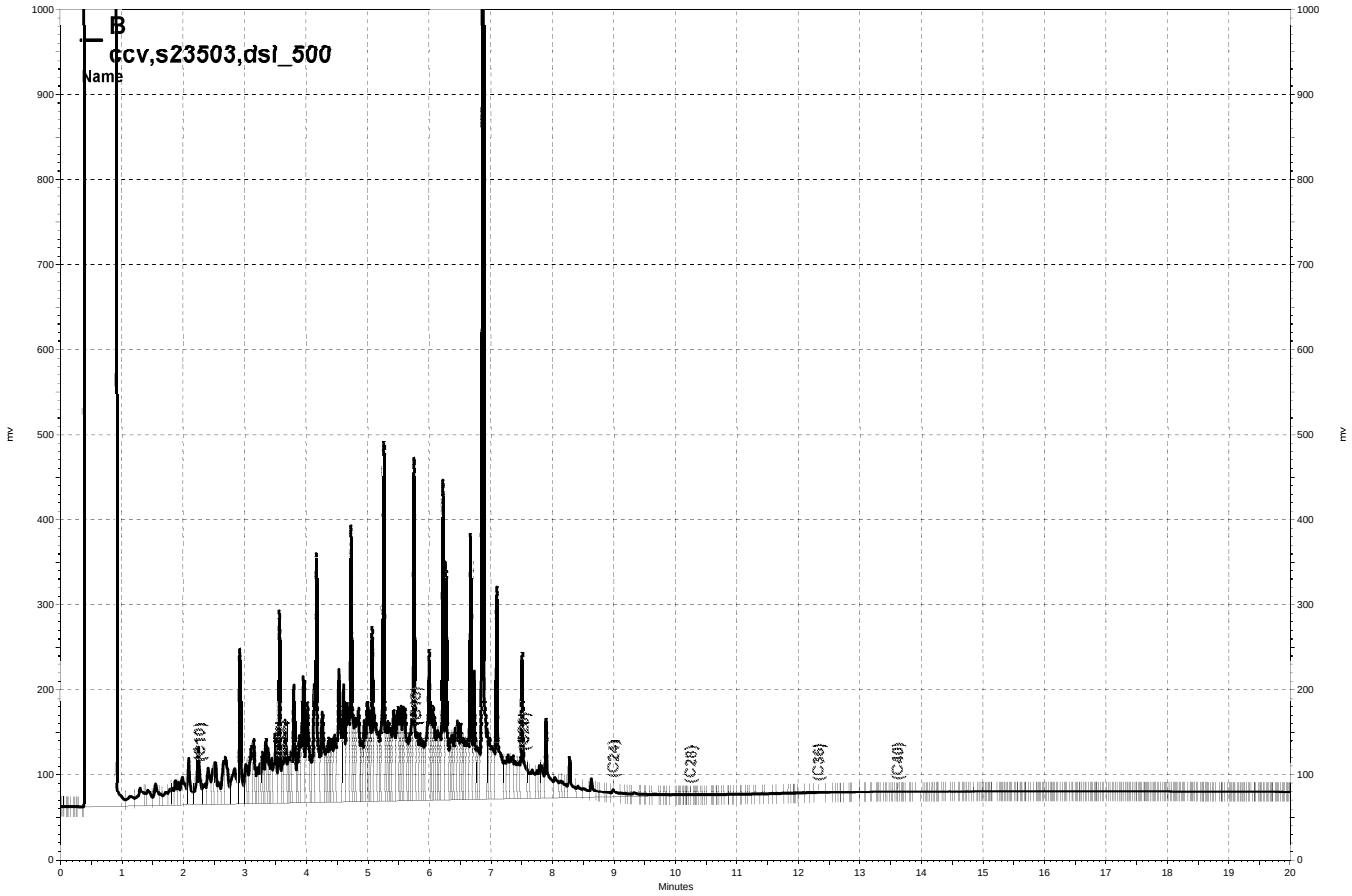

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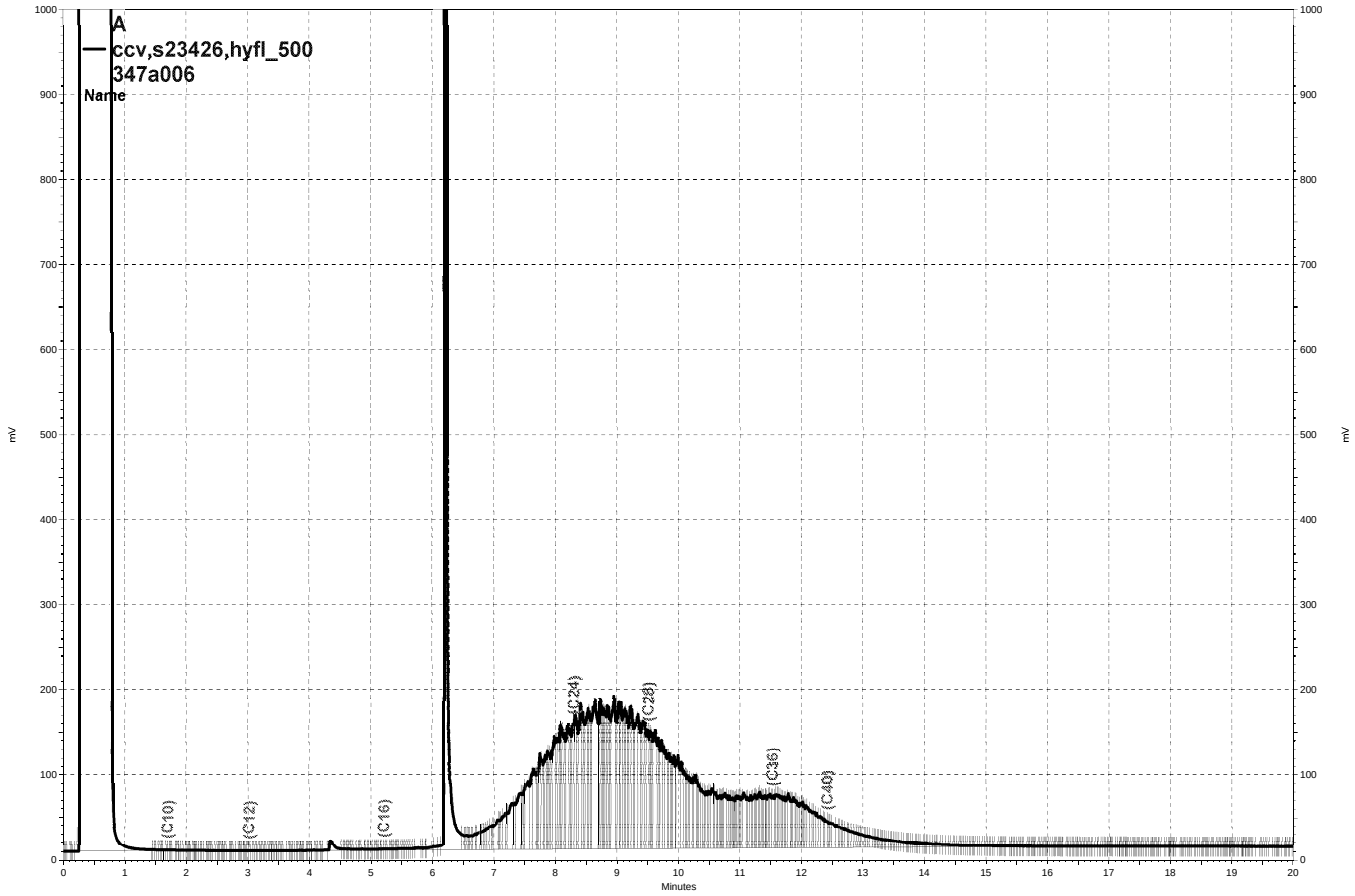

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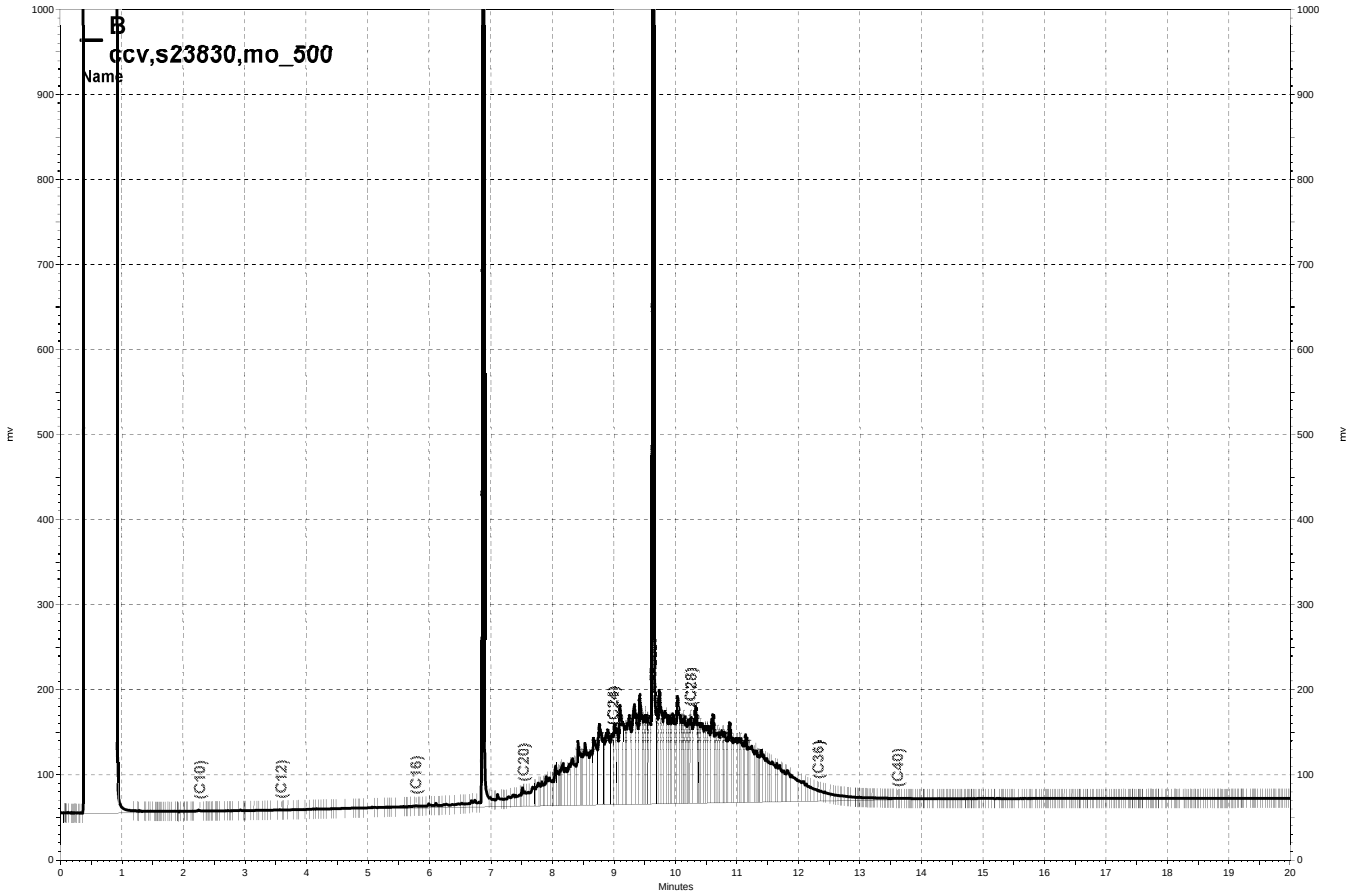

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Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	206090
Lab ID:	251504-001	Sampled:	12/10/13
Matrix:	Water	Received:	12/10/13
Units:	ug/L	Analyzed:	12/13/13
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	106	77-136
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	206056
Lab ID:	251504-002	Sampled:	12/10/13
Matrix:	Water	Received:	12/10/13
Units:	ug/L	Analyzed:	12/12/13
Diln Fac:	3.333		

Analyte	Result	RL
MTBE	ND	1.7
Benzene	40	1.7
Toluene	21	1.7
Ethylbenzene	140	1.7
m,p-Xylenes	59	1.7
o-Xylene	4.0	1.7
Naphthalene	21	6.7

Surrogate	%REC	Limits
Dibromofluoromethane	98	77-136
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	206090
Lab ID:	251504-003	Sampled:	12/10/13
Matrix:	Water	Received:	12/10/13
Units:	ug/L	Analyzed:	12/13/13
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	107	77-136
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	206090
Lab ID:	251504-004	Sampled:	12/10/13
Matrix:	Water	Received:	12/10/13
Units:	ug/L	Analyzed:	12/13/13
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	108	77-136
1,2-Dichloroethane-d4	115	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206056
Units:	ug/L	Analyzed:	12/12/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720091

Analyte	Spiked	Result	%REC	Limits
MTBE	12.50	11.98	96	64-121
Benzene	12.50	13.05	104	80-124
Toluene	12.50	12.66	101	80-122
Ethylbenzene	12.50	12.83	103	80-124
m,p-Xylenes	25.00	26.55	106	80-122
o-Xylene	12.50	13.56	109	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	96	77-136
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	95	80-120

Type: BSD Lab ID: QC720092

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	12.50	11.32	91	64-121	6	20
Benzene	12.50	12.12	97	80-124	7	20
Toluene	12.50	11.85	95	80-122	7	20
Ethylbenzene	12.50	11.91	95	80-124	7	20
m,p-Xylenes	25.00	24.81	99	80-122	7	20
o-Xylene	12.50	12.87	103	77-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	95	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	95	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC720093	Batch#:	206056
Matrix:	Water	Analyzed:	12/12/13
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	94	77-136
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	206056
MSS Lab ID:	251523-006	Sampled:	12/10/13
Matrix:	Water	Received:	12/10/13
Units:	ug/L	Analyzed:	12/12/13
Diln Fac:	1.000		

Type: MS Lab ID: QC720184

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1000	12.50	12.75	102	66-120
Benzene	<0.1000	12.50	13.35	107	80-127
Toluene	<0.1000	12.50	13.11	105	80-123
Ethylbenzene	<0.1000	12.50	13.29	106	80-126
m,p-Xylenes	<0.1316	25.00	27.20	109	80-123
o-Xylene	<0.1000	12.50	14.03	112	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	99	80-120

Type: MSD Lab ID: QC720185

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	12.50	12.70	102	66-120	0	27
Benzene	12.50	12.83	103	80-127	4	23
Toluene	12.50	12.67	101	80-123	3	22
Ethylbenzene	12.50	12.60	101	80-126	5	22
m,p-Xylenes	25.00	26.37	105	80-123	3	22
o-Xylene	12.50	13.46	108	76-120	4	23

Surrogate	%REC	Limits
Dibromofluoromethane	98	77-136
1,2-Dichloroethane-d4	103	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	98	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	206090
Units:	ug/L	Analyzed:	12/13/13
Diln Fac:	1.000		

Type: BS Lab ID: QC720245

Analyte	Spiked	Result	%REC	Limits
MTBE	12.50	11.26	90	64-121
Benzene	12.50	13.29	106	80-124
Toluene	12.50	13.18	105	80-122
Ethylbenzene	12.50	13.46	108	80-124
m,p-Xylenes	25.00	26.61	106	80-122
o-Xylene	12.50	13.31	107	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	108	77-136
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-120

Type: BSD Lab ID: QC720246

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	12.50	11.64	93	64-121	3	20
Benzene	12.50	13.19	106	80-124	1	20
Toluene	12.50	12.95	104	80-122	2	20
Ethylbenzene	12.50	13.18	105	80-124	2	20
m,p-Xylenes	25.00	26.35	105	80-122	1	20
o-Xylene	12.50	13.14	105	77-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	108	77-136
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	98	80-120

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC720247	Batch#:	206090
Matrix:	Water	Analyzed:	12/13/13
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	106	77-136
1,2-Dichloroethane-d4	112	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	251504	Location:	Salisbury Project
Client:	Eagle Env. Construction	Prep:	EPA 5030B
Project#:	SALISBURY PROJECT	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	206090
MSS Lab ID:	251563-003	Sampled:	12/06/13
Matrix:	Water	Received:	12/11/13
Units:	ug/L	Analyzed:	12/13/13
Diln Fac:	1.000		

Type: MS Lab ID: QC720284

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1000	12.50	12.18	97	66-120
Benzene	<0.1000	12.50	13.60	109	80-127
Toluene	<0.1000	12.50	13.30	106	80-123
Ethylbenzene	<0.1124	12.50	13.34	107	80-126
m,p-Xylenes	<0.1000	25.00	26.35	105	80-123
o-Xylene	<0.1000	12.50	12.91	103	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-136
1,2-Dichloroethane-d4	121	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	100	80-120

Type: MSD Lab ID: QC720285

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	12.50	12.15	97	66-120	0	27
Benzene	12.50	13.43	107	80-127	1	23
Toluene	12.50	12.97	104	80-123	3	22
Ethylbenzene	12.50	13.00	104	80-126	3	22
m,p-Xylenes	25.00	25.56	102	80-123	3	22
o-Xylene	12.50	12.90	103	76-120	0	23

Surrogate	%REC	Limits
Dibromofluoromethane	111	77-136
1,2-Dichloroethane-d4	121	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference