

Limited Phase II Site Investigation, Martin Extension Property

Prepared for:

Pacific Gas and Electric
Company

1755 Egbert Avenue
San Francisco, California

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Pacific Gas and Electric Company

Limited Phase II Site Investigation, Martin Extension Property

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November 2016

Project No. 0363086



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EXECUTIVE SUMMARY

ERM-West, Inc. (ERM) completed a geophysical survey and the subsurface soil and groundwater investigation for the Martin Extension Property located at 1755 Egbert Avenue, San Francisco, San Francisco County, California. This preliminary investigation was scoped to identify any potential significant environmental impact due to historical site operations at the site, which is being considered as a potential location of a PG&E infrastructure improvement.

A Phase I Environmental Site Assessment identified a potential underground storage tank and fueling island previously present within the central portion of the site. The results of the geophysical survey suggest that the tank and associated distribution piping were removed. The soil results do not indicate significant impact of the site due to historical site activities. Fuel compounds, volatile organic compounds, semivolatile organic compounds, polychlorinated biphenyls, pesticides, and metals in soil samples were either not detected or generally detected at low concentrations below applicable screening levels.

The groundwater results indicate that the site groundwater is impacted with fuel-related compounds and metals. Fuel compounds and several metals were detected in groundwater samples exceeding their applicable screening levels. The lack of exceedances of these compounds in site soil samples suggest that the occurrence of these compounds in site groundwater may be from offsite sources.

1.0

INTRODUCTION

ERM-West, Inc. (ERM) is pleased to provide this report to Pacific Gas and Electric Company (PG&E) presenting the results of a geophysical survey and the subsurface soil and groundwater investigation for the Martin Extension Property located at 1755 Egbert Avenue, San Francisco, San Francisco County, California (the “site” or “subject property”; Figure 1). The investigation area and sampling locations are shown on Figure 2. The purpose of the sampling and analysis was to provide information on the environmental condition of soil and groundwater at the site that is being considered as a potential location of a PG&E infrastructure improvement. The following subsections provide an executive summary, description of the field activities completed, the analytical strategy, the results of the investigation, and the conclusions based on the analytical results.

2.0

SCOPE OF WORK

The scope of work involved a limited subsurface sampling of soil at the site to determine general soil and shallow groundwater conditions at the site. To achieve this objective, Cascade Drilling LP (Cascade) completed four soil borings (SB-1 through SB-5) to first groundwater using a direct push rig. Boring depths ranged from 15 to 19 feet below ground surface (bgs). The boring locations are presented on Figure 2. Prior to any subsurface activities, the proposed boring locations were marked and Underground Service Alert was contacted a minimum of 48 hours prior to subsurface work. In addition, a private utility locating service was used to screen the proposed locations for underground utilities; none were found during the private utility screening.

The Phase I Environmental Site Assessment identified a potential underground storage tanks (UST) and fueling island on the property in the past. To determine if the UST and distribution piping were still present on site, a geophysical survey was conducted by Ground Penetrating Radar Systems, Inc. (GPRS) within the area shown on the map. GPRS used two separate detection equipment to assist in the survey. Ground Penetrating Radar (GPR) was used by sending pulses of energy into a material and recording the strength and the time required for the return of the reflected signal. Reflections are produced when the energy pulses enter into a material with different electrical conduction properties from the material it left. This GPR unit, which used a 40 megahertz (mhz) antenna, achieved a total depth of as much as 5 feet bgs. An RD7000 pipe locator was used to detect electromagnetic fields from line power or radio frequency signals. It is also used in conjunction with a transmitter to connect directly to accessible, metallic, pipes, risers or tracer wires. The GPRS survey report is included as Appendix A.

Limited subsurface sampling of soil and groundwater was completed by Cascade to evaluate general soil and shallow groundwater conditions at the site.

Five soil borings (SB-1 through SB-5) were completed to first groundwater using a direct push rig, with boring depths ranging from 15 to 19 feet bgs. The boring locations are presented on Figure 2.

The soil cores were logged by an ERM geologist using the Unified Soil Classification System and an organic vapor analyzer with a photoionization detector (PID) was used to screen each soil core recovered during the sampling activities. The results are presented on the boring logs provided as Appendix B.

Up to five soil samples were collected from each soil boring with two of the samples collected in the top five feet. Additional soil samples were collected between approximately 5 and 10 feet bgs and/or 1 foot above the vadose zone. If potential impacts were observed in vadose zone soils (either staining or elevated PID readings), additional samples were collected at depths where impacts were observed. Once groundwater was encountered within each boring, a temporary groundwater monitoring point was installed, consisting of dedicated threaded polyvinyl chloride casing with a five-foot slotted-screen. A grab groundwater sample was collected from each temporary groundwater monitoring point utilizing low-flow sampling techniques including dedicated polyethylene tubing and a peristaltic pump. Grab groundwater samples were collected in laboratory-provided sample containers necessary for the analytical parameters specified below.

Following completion of the sampling, each borehole was backfilled with neat cement consistent with county regulations and the boring locations were located using a global positioning system (GPS) unit.

Soil and groundwater samples were labeled, placed in sealed plastic bags, stored in an iced cooler, and transported to Curtis & Tompkins Ltd., a California state-certified laboratory in Berkeley, California. All samples were recorded on a chain-of-custody form that accompanied the samples to the laboratory. The two shallowest samples from each boring were analyzed for the following constituents:

- Total petroleum hydrocarbons (TPH) as diesel and motor oil (TPH-d and -mo) by U.S. Environmental Protection Agency (USEPA) Method 8015M;
- Volatile organic compounds (VOCs) and TPH-gasoline (TPH-g) by USEPA Method 8260;
- Semivolatile organic compounds (SVOCs) by USEPA Method 8270C; and

California Title 22 Metals by USEPA Methods 6010 and 7000 series.

In addition, the uppermost sample in each boring was analyzed for polychlorinated biphenyls (PCBs) by USEPA Method 8082 and organochlorine pesticides by USEPA Method 8081. The remaining soil samples were submitted

to the laboratory for potential analysis if the evaluation of the shallower analytical results warranted additional characterization.

Groundwater samples collected during the investigation were analyzed for the following constituents:

- TPH-d and TPH-mo by USEPA Method 8015M;
- VOCs and TPH-g by USEPA Method 8260; and
- SVOCs by USEPA Method 8270C; and
- California Title 22 Metals by USEPA Methods 200.7 and 6010 series.

Based on initial analytical results, additional analyses were requested for select samples to further characterize site soil. One soil sample had high reporting limits above the appropriate screening levels (San Francisco Bay Regional Water Quality Board's [RWQCB] Environmental Screening Levels [ESLs] for commercial industrial sites) for SVOCs. In order to confirm that SVOCs were not present at this location, the deeper soil sample collected was analyzed for SVOCs using USEPA Method 8270C and extractable TPH. In addition, the 7-foot soil sample from SB-3, near the presumed UST site, was analyzed to provide information on the condition of native soil beneath the potential UST backfill in this area.

3.0 GEOLOGY AND HYDROGEOLOGY

Shallow soils encountered during the limited investigation consisted of a sand and gravel fill layer from approximately 0 to 5 feet bgs. Below the fill layer, site soils were primarily clay and silty clay up to approximately 10 feet bgs. A fine moist to wet sand layer was observed from approximately 10 feet bgs to total depth in all borings. Detailed descriptions of site soils are included on the boring logs provided as Appendix B. Saturated soil was encountered between 9.5 and 12.5 feet bgs in each of the soil borings and the initial water levels measured in the boreholes ranged between 7.86 and 9.01 feet bgs.

4.0 GEOPHYSICAL SURVEY RESULTS

Based on the GPR survey activities, there were no indications that the UST and the associated piping are still in place. The former UST area as seen in Figure 2 was noted by GPRS to have softer soil and appeared to be a possible excavation area. Personnel at the site further explained that the area with softer soil was covered with plywood at the surface, as depicted in photographs seen in GPRS's report, due to the tendency of the area to cave in. Underground scans of the former excavation area are provided in Appendix A.

5.0

ANALYTICAL RESULTS

ERM performed a data quality assurance/quality control (QA/QC) review of the analytical results in accordance with the *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, October 1999, and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, July 2004. The data quality review evaluated holding times, preservation methods, method blank sample results, laboratory control sample recoveries, and matrix and surrogate spike recoveries. Based on ERM's data quality review, the quality of the data generated during this investigation is acceptable for the preparation of technically defensible documents. The laboratory data packages and the QA/QC review are provided in Appendix C.

5.1

Soil Analytical Results

The soil analytical results are provided on Tables 1 through 5. These soil results were compared to the Tier 1 screening levels set by the RWQCB in their February 2016 Interim Final ESL Workbook (Revision 3), which are the most conservative available screening levels and take into account all prospective exposure pathways including residential exposure. This evaluation also includes a comparison to the lowest applicable ESL based on the property's usage as commercial/industrial, which is consistent with the current and future use of the property. Detections below the ESLs are generally not considered threats to human health or the environment under the relevant land use.

As seen in Table 1, all shallow soil samples had detections of TPH-d, TPH-mo, and TPH-g. All TPH detections in shallow soil were below their respective Tier-1 ESL. In addition, low concentrations of acetone, 2-butanone and methylene chloride were detected in a number of the shallow soil samples; however, all of these VOC detections were below their respective Tier 1 ESL. Other VOCs were not detected in site soil samples analyzed.

Table 2 shows the results for SVOCs in shallow soil; only SVOCs with detectable concentrations are presented. As seen in Table 2, all detections of SVOCs were detected at low levels below their applicable ESLs. The sample collected from SB-5 at 5 feet bgs had reporting limits above the applicable ESLs for SVOCs. To evaluate this potential data gap, the next deeper sample collected from SB-5 (9 feet bgs) was analyzed for SVOCs and extractable TPH (TPH-d and TPH-mo). This sample was non-detect for all SVOCs, TPH-d, and TPH-mo with lower detection limits for these compounds.

Given the lack of TPH, VOCs, and SVOC concentrations in excess of their applicable ESLs, none of the other deeper soil samples were analyzed.

Table 3 shows the results for metals in shallow soil. As shown, all metals except for selenium were detected in at least one soil sample above laboratory reporting

limits. All metals detections were below ESLs with the exception of arsenic and one lead concentration. As seen in Table 2, arsenic was detected in all 10 soil samples with concentrations above the applicable ESL and Tier 1 ESL; however, the concentrations, which range from 0.82 to 12 milligrams per kilogram (mg/kg), are within the accepted background levels for Bay Area soil (Duverge, 2011) and do not show evidence of impact from onsite activities. Lead was detected above the direct exposure ESL of 320 mg/kg in the shallow sample (0.5 to 1 foot bgs) at SB-5 with a concentration of 790 mg/kg. The deeper soil sample collected at this location had a lead concentration of 14 mg/kg, which is below both the Tier 1 and applicable ESLs for lead. Given the lack of metals concentrations within the deeper soil samples analyzed in excess of their applicable ESL, or background concentrations in the case of arsenic, none of the deeper soil samples were analyzed.

The results of PCB and organochlorine pesticides analyses in shallow soil are provided in Tables 4 and 5, respectively. As seen in the tables, PCBs and organochlorine pesticides were not detected in any soil sample above Tier-1 ESLs. Given the lack PCBs and organochlorine pesticide concentrations in excess of their applicable ESL, none of the deeper soil samples were analyzed.

6.0 GROUNDWATER ANALYTICAL RESULTS

Groundwater analytical results are presented in Tables 6 through 8. The results of the groundwater analyses are compared to Tier-1 ESLs and applicable ESLs based on current and future site use as a commercial/industrial site.

As seen in Table 6 and Figure 3, all site groundwater samples collected had detections of TPH-d above laboratory reporting limits. Three groundwater samples had TPH-d concentrations above the Tier-1 ESL of micrograms per liter ($\mu\text{g}/\text{L}$) and at or above the applicable direct exposure ESL of 150 $\mu\text{g}/\text{L}$. These detections ranged from 150 $\mu\text{g}/\text{L}$ at SB-3 to 16,000 $\mu\text{g}/\text{L}$ at SB-2.

As seen in Table 6 and Figure 3, TPH-mo was detected in three of the five site groundwater samples collected ranging from 400 (SB-3-GW) to 85,000 $\mu\text{g}/\text{L}$ (SB-2-GW). The detection at SB-2-GW (85,000 $\mu\text{g}/\text{L}$) was above the ESL of 50,000 $\mu\text{g}/\text{L}$ set for TPH-mo.

Only one groundwater sample (SB-2-GW) contained a detectable concentration of TPH-g of 9.2 $\mu\text{g}/\text{L}$, which is well below the Tier-1 ESL of 100 $\mu\text{g}/\text{L}$. As seen in Table 6, MTBE was detected in all site groundwater samples collected ranging from 0.8 to 1,200 $\mu\text{g}/\text{L}$. Three of the groundwater samples had MTBE detections above the applicable ESL of 5 $\mu\text{g}/\text{L}$ and the California Maximum Contaminant Level from drink water set at 13 $\mu\text{g}/\text{L}$. These detections ranged from 560 $\mu\text{g}/\text{L}$ at SB-3 to 1,200 $\mu\text{g}/\text{L}$ at SB-5. As seen in Table 6, low concentrations of other VOCs

were detected in site groundwater samples. The detected concentrations of other VOCs were well below their respective Tier-1 ESLs.

As presented on Table 7, groundwater samples from all five borings were analyzed for SVOCs by USEPA Method 8270. Only one groundwater sample (SB-2-GW) contained a low concentration of phenol at 19 µg/L, which is well below the applicable ESL of 4,200 µg/L.

Table 8 and Figure 4 present the results of the metals analyses on the five groundwater samples collected during the investigation. All metals except for barium, cadmium, copper, mercury, molybdenum, silver, and zinc were detected above ESLs in at least one site groundwater sample. A summary of metals above applicable ESL is as follows:

- Antimony was detected at or above its applicable ESL of 6 µg/L at four of the five groundwater samples collected at concentrations ranging from 6.0 µg/L (SB-3-GW) to 48 µg/L (SB-1-GW).
- Arsenic was detected above its applicable ESL of 10 µg/L in all five groundwater samples collected at concentrations ranging from 12 µg/L (SB-2-GW) to 37 µg/L (SB-4-GW).
- Beryllium was detected in all groundwater samples collected, with one detection (4.5 µg/L at SB-1-GW) above its applicable ESL of 4 µg/L.
- Chromium was detected above its applicable ESL of 50 µg/L in all five groundwater samples collected at concentrations ranging from 160 µg/L (SB-3-GW) to 1,100 µg/L (SB-1-GW).
- Cobalt was detected above its applicable ESL of 6 µg/L in all five groundwater samples collected at concentrations ranging from 32 µg/L (SB-3-GW) to 120 µg/L (SB-1-GW).
- Lead was detected above its applicable ESL of 15 µg/L in all five groundwater samples collected at concentrations ranging from 17 µg/L (SB-3-GW and SB-4-GW) to 90 µg/L (SB-1-GW).
- Nickel was detected above its applicable ESL of 100 µg/L at four of the five groundwater samples collected at concentrations ranging from 150 µg/L (SB-3-GW) to 500 µg/L (SB-5-GW).
- Selenium was detected above its applicable ESL of 50 µg/L in on one groundwater sample collected at SB-2-GW (150 µg/L).
- Thallium was detected above its applicable ESL of 2 µg/L in two groundwater samples collected, SB-2-GW (3.4 µg/L) and SB-5-GW (5.1 µg/L).
- Vanadium was detected above its applicable ESL of 50 µg/L in all five groundwater samples collected at concentrations ranging from 210 µg/L (SB-3-GW) to 810 µg/L (SB-1-GW).

The presence of elevated concentrations of metals in groundwater may be due to the historical presence of a leather tanning facility on the property directly west of the site.

7.0

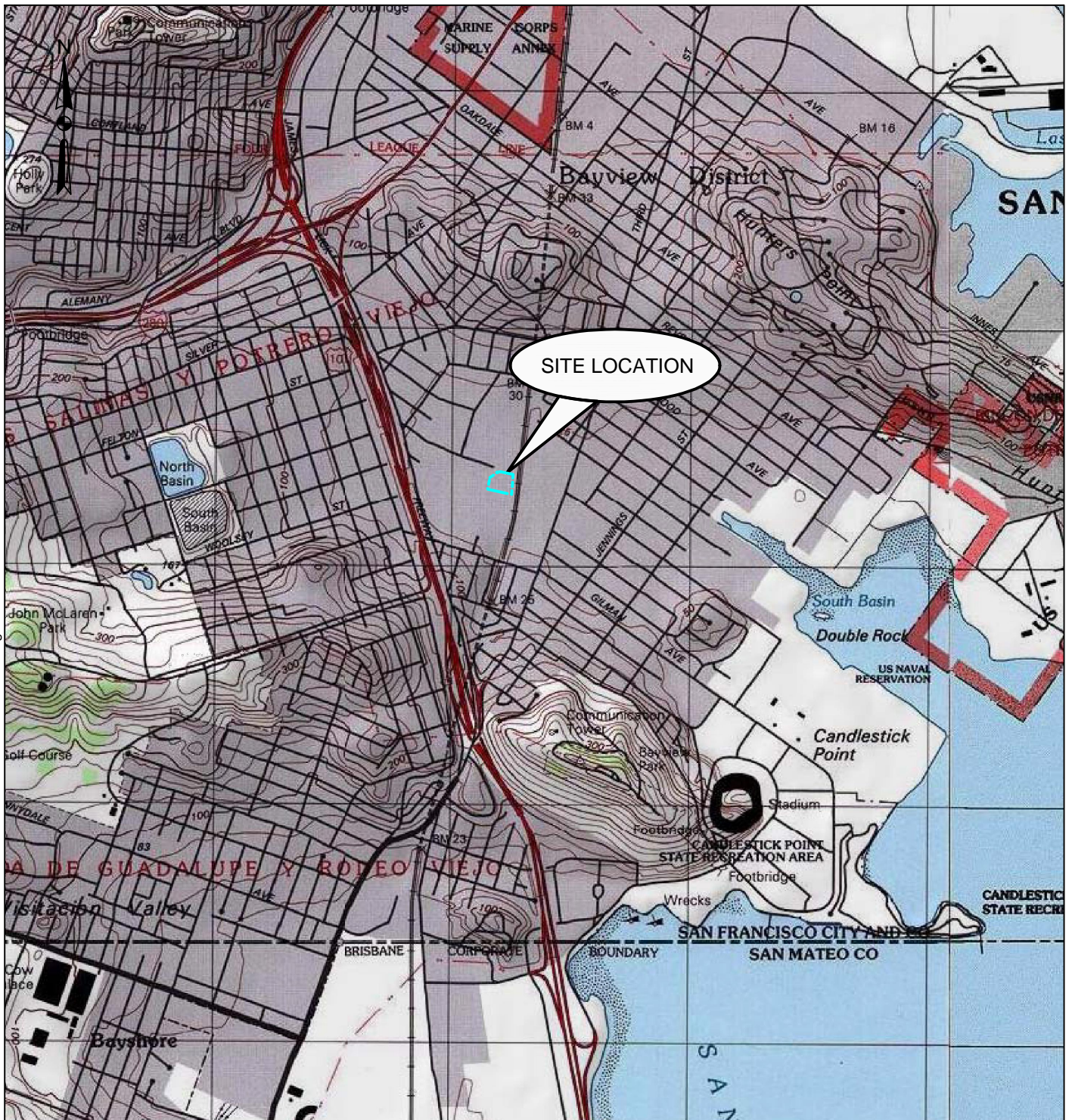
CONCLUSIONS

This soil and groundwater investigation was completed to determine the subsurface conditions at the site. The results of the investigation were as follows:

- The results of the GPR survey suggest that the former UST and associated piping at the site has been removed.
- TPH-d, TPH-mo, TPH-g, VOCs, SVOCs, PCBs, and organochlorine pesticides in soil samples were either non-detect or detected at low concentrations below applicable ESLs.
- With the exception of selenium, all metals analyzed were detected above laboratory reporting limits in one or more site soil samples. The concentrations of metals were generally detected at relatively consistent concentrations in all the samples indicating background concentrations and, with the exception of arsenic and one lead concentration discussed below, at concentrations below their applicable ESLs. The arsenic concentrations detected at the site fall within the accepted background levels for Bay Area soil (Duverge, 2011). Therefore, detections of arsenic in soil appear to be naturally-occurring background concentrations and are not due to historic site operations.
- Lead was detected at a concentration of 790 mg/kg in the sample collected at 0.5 to 1 foot bgs from SB-5, which is above its applicable ESL of 320 mg/kg. The deeper soil sample (4.5 to 5 feet bgs) collected from this location had a lead concentration well below its applicable ESL. None of the other soil samples analyzed contained concentrations above its applicable ESL.
- Groundwater at the site contained concentrations of TPH-d, TPH-mo, and MTBE in excess of their applicable ESLs. The lack of exceedances of these compounds in samples of site soil collected during this investigation suggest that the occurrence of these compounds in site groundwater may be from offsite sources.
- The occurrence of numerous metals in groundwater, including antimony, arsenic, beryllium, chromium, cobalt, lead, nickel, selenium, thallium, and vanadium, at concentrations above their applicable ESLs indicates that the site's groundwater has been impacted. However, due to the lack of elevated concentrations of metals in site soils, it is unlikely that historical operations at the site are the source of the elevated metals concentrations. It appears that the source of metals in shallow groundwater is due to an offsite source and may be related to the former tannery operated on the property west of the site that was identified during the Phase I ESA.

The soil results of this limited subsurface investigation do not indicate significant impact of the subject property due to historic site activities. However, the groundwater results indicate that the site groundwater is impacted with fuel-related compounds and metals that appear to be due to migration of compounds of concern from nearby properties.

Figures



CAD File: G:\DWGS\0363086 PG&E Martin Extension\02\04\03630860204-04.dwg
 Project No: 0363086.02.04

Date: 11/11/2016

Drawn By: J. Estrada

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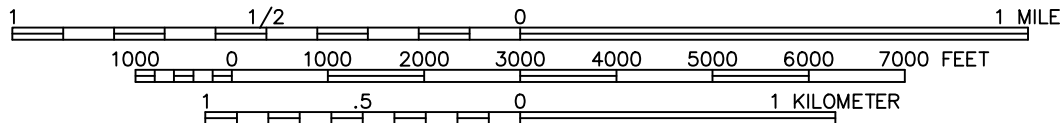
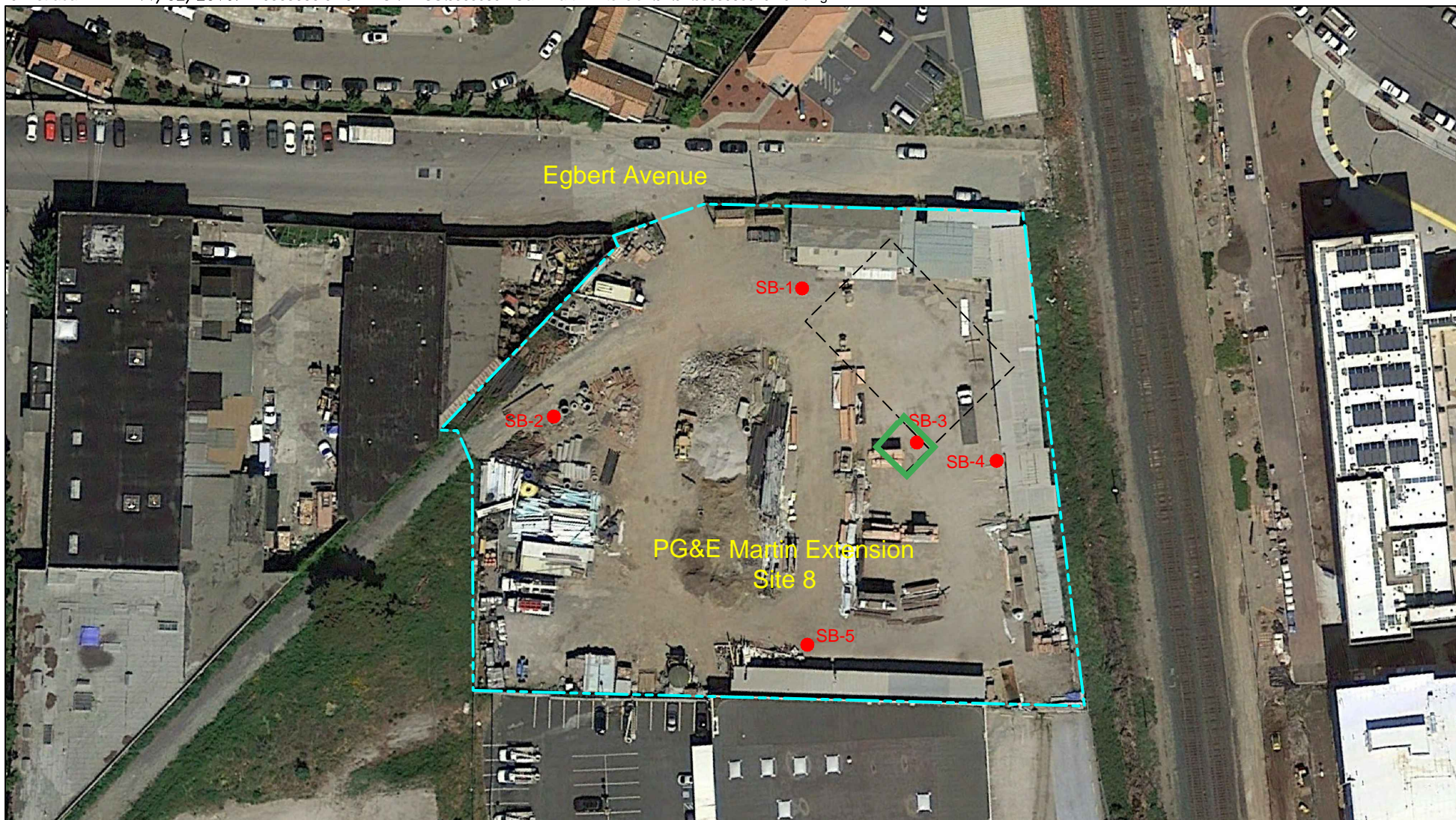





Figure 1
Site Location Map
PG&E Martin Extension - Site 8
1775 Egbert Avenue
San Francisco, California

References:
 TOPO!® Software
 U.S.G.S. 7.5 Minute Series (Topographic) Quadrangle,
 San Francisco South, CA
 Version: 1995; Current: 1999





Legend

-  Property Boundary
-  Former Building Footprint
-  SB-1 ● Soil Boring Location

 **GPR Survey Area**

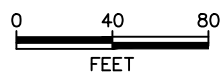


Figure 2
Site Plan Map
PG&E Martin Extension - Site 8
1755 Egbert Avenue
San Francisco, California



Legend

- Property Boundary
- Former Building Footprint
- SB-1 Soil Boring Location

SB-1 (10/13/16)	—	Sample ID/Date
DEPTH 9-19'	—	Sample Screen Interval (feet bgs)
TPH-D 32J	—	Concentration in $\mu\text{g/L}$
TPH-mo <300	—	
MTBE 0.8	—	

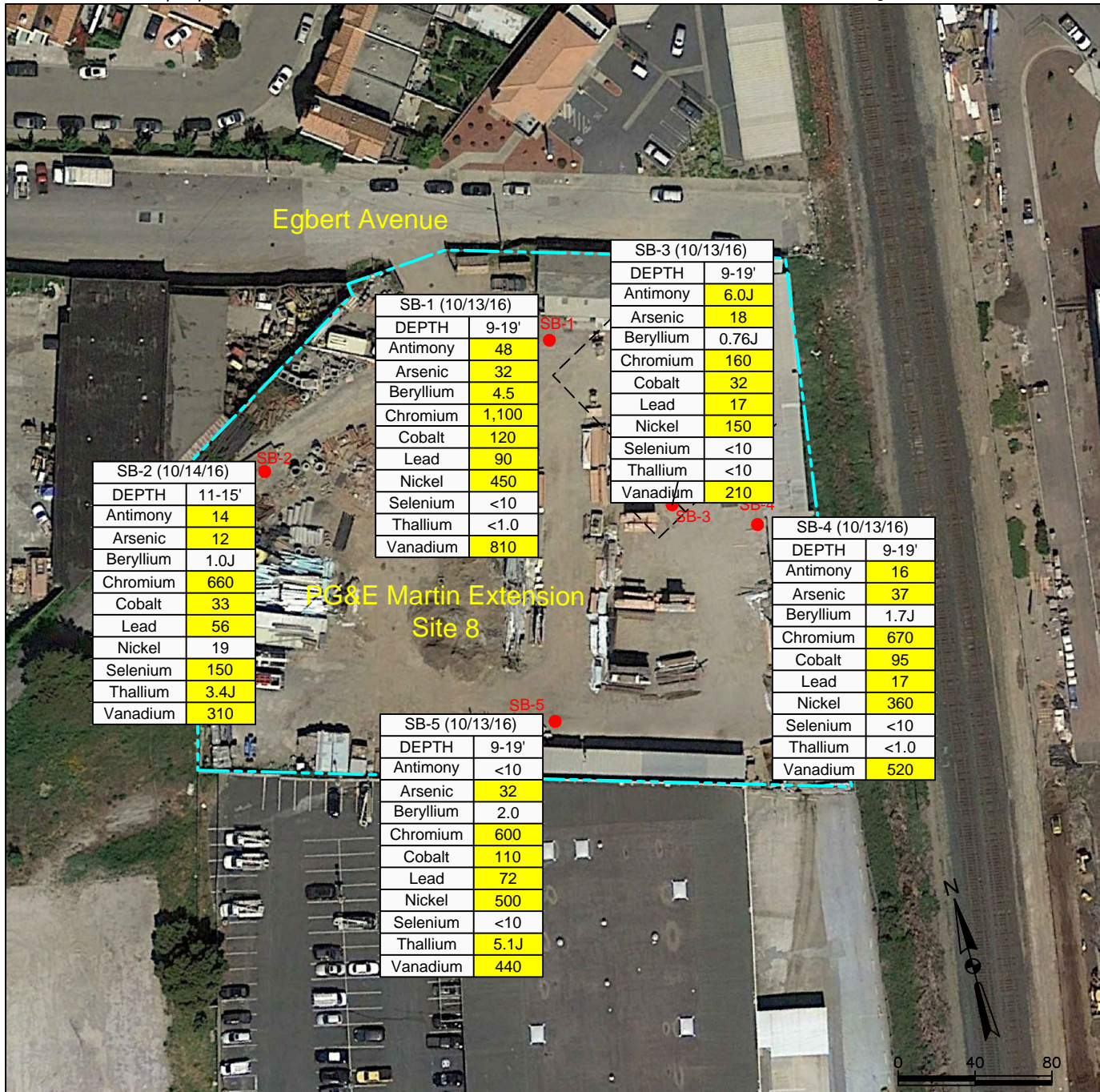
Yellow shading indicates concentrations above Direct Exposure ESLs

Applicable ESLs ($\mu\text{g/L}$)

TPH-d	50
TPH-mo	50,000
MTBE	5

J = Estimated value
 Y = Estimated value, chromatogram did not resemble standard hydrocarbon pattern
 TPD-d = Total Petroleum Hydrocarbons as diesel
 TPH-mo = Total Petroleum Hydrocarbons as motor oil
 MTBE = methyl tert-butyl ether
 ESL = Environmental Screening Level

Figure 3
 TPH and VOCs in Groundwater
 PG&E Martin Extension - Site 8
 1755 Egbert Avenue
 San Francisco, California



Legend

- - - - Property Boundary
- - - - Former Building Footprint
- SB-1 Soil Boring Location

SB-1 (10/13/16)	Sample ID/Date
DEPTH 9-19'	Sample Screen Interval (feet bgs)
Cobalt 22	Concentration in $\mu\text{g/L}$
Lead 17	
Nickel 150	

Yellow shading indicates concentrations above Direct Exposure ESLs

Applicable ESLs ($\mu\text{g/L}$)

Antimony	6
Arsenic	10
Beryllium	4
Chromium	50
Cobalt	6
Lead	15
Nickel	100
Selenium	50
Thallium	2
Vanadium	50

J = Estimated value
 ESL = Environmental Screening Level

SB-1 (10/13/16)	
DEPTH	9-19'
Antimony	48
Arsenic	32
Beryllium	4.5
Chromium	1,100
Cobalt	120
Lead	90
Nickel	450
Selenium	<10
Thallium	<1.0
Vanadium	810

SB-2 (10/14/16)	
DEPTH	11-15'
Antimony	14
Arsenic	12
Beryllium	1.0J
Chromium	660
Cobalt	33
Lead	56
Nickel	19
Selenium	150
Thallium	3.4J
Vanadium	310

SB-3 (10/13/16)	
DEPTH	9-19'
Antimony	6.0J
Arsenic	18
Beryllium	0.76J
Chromium	160
Cobalt	32
Lead	17
Nickel	150
Selenium	<10
Thallium	<10
Vanadium	210

SB-4 (10/13/16)	
DEPTH	9-19'
Antimony	16
Arsenic	37
Beryllium	1.7J
Chromium	670
Cobalt	95
Lead	17
Nickel	360
Selenium	<10
Thallium	<1.0
Vanadium	520

SB-5 (10/13/16)	
DEPTH	9-19'
Antimony	<10
Arsenic	32
Beryllium	2.0
Chromium	600
Cobalt	110
Lead	72
Nickel	500
Selenium	<10
Thallium	5.1J
Vanadium	440

Figure 4
Metals in Groundwater
 PG&E Martin Extension - Site 8
 1755 Egbert Avenue
 San Francisco, California

Tables

Table 1
Total Petroleum Hydrocarbons, Volatile Organic Compounds in Soil
Phase II Site Investigation
1755 Egbert Avenue
San Francisco, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	TPH-d*	TPH-mo*	TPH-g*	Acetone	2-Butanone	Methylene Chloride
		Tier-1 ESLs	230	5,100	100	0.5	---	0.077
		Applicable ESLs	1,100	140,000	3,900	630,000	---	25
SB-1	0.5-1	10/13/2016	15 NJ	190	0.23 J	0.0048 J	<0.0094	<0.019
SB-1	4.5-5	10/13/2016	26 NJ	510	0.23 J	<0.019	<0.0094	<0.019
SB-2	0.5-1	10/13/2016	100 NJ	930	0.083 J	0.054	0.0069 J	<0.019
SB-2	2.5-3	10/13/2016	12 NJ	120	0.077 J	0.065	0.0095	0.0012 J
SB-3	0.5-1	10/13/2016	2.1 NJ	28	0.13 J	<0.018	<0.0091	<0.018
SB-3	4.5-5	10/13/2016	65 NJ	730	0.25 J	<0.019	<0.0097	<0.019
SB-3	6.5-7	10/13/2016	4.7 Y b	32 b	<1.0 b	0.0056 J b	0.0012 J b	<0.018 b
SB-4	0.5-1	10/13/2016	81 NJ	1,200	0.22 J	0.02	0.0027 J	<0.019
SB-4	4.5-5	10/13/2016	0.44 J	5.9	0.20 J	<0.019	<0.0097	<0.019
SB-5	0.5-1	10/13/2016	32 NJ	210	0.096 J	0.0038 J	<0.0095	<0.019
SB-5	4.5-5	10/13/2016	43 NJ	570	0.069 J	0.0048 J	<0.0084	<0.017
SB-5	8.5-9	10/13/2016	<1.0 UJ	<5.0 UJ	NS	NS	NS	NS

Notes:

All concentrations reported in milligrams per kilogram (mg/kg).

* = Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8015B Modified (M).

VOCs were analyzed by USEPA Method 8260B.

SVOCs were analyzed by USEPA Method 8270C. SVOCs were not detected above laboratory reporting limits in the samples analyzed. The full list of SVOCs are included in the analytical reports in Attachment B of the report.

Tier-1 ESL = Tier 1 Environmental Screening Level for Shallow Soils, San Francisco Bay Regional Water Quality Control Board, ESL Workbook, Tier-1 ESL Table, February 2016.

Applicable ESL = Appropriate ESL based on current and future site use as a Commercial/Industrial site using the Soil Summary Table from the San Francisco Bay Regional Water Quality Control Board ESL Workbook, February 2016.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the Applicable ESLs. Assumes direct exposure for a commercial/industrial site.

Legend:

ft bgs = feet below ground surface

TPH-d = Total Petroleum Hydrocarbons as Diesel

TPH-mo = Total Petroleum Hydrocarbons as Motor Oil

TPH-g = Total Petroleum Hydrocarbons as Gasoline

SVOC = Semivolative organic compounds

VOC = Volatile organic compound

ESL = Environmental Screening Level

--- = No screening level established

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

NA = Not analyzed

ND = Not detected

NS = Not sampled

Qualifiers:

J = Lab Qualifier - Estimated Value

b = Lab Qualifier - Sample was analyzed out of hold time

Y = Lab Qualifier - Sample exhibits chromatographic pattern which does not resemble standard

NJ = ERM Qualifier - Sample exhibits chromatographic pattern which does not resemble standard

UJ = ERM Qualifier - Nondetected, estimated report limit.

Table 2
Semivolatile Organic Compounds in Soil
Phase II Site Investigation
1755 Egbert Avenue
San Francisco, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	Benzo (a) Anthracene	Benzo (a) Pyrene	Benzo (b) Fluoranthene	Benzo (g,h,i) Perylene	Chrysene	Fluoranthene	Indeno (1,2,3-c,d) Pyrene	Pyrene
<i>Tier-1 ESLs</i>			0.16	0.016	0.16	2.5	3.8	60	0.16	85
<i>Applicable Soil ESLs</i>			2.9	0.29	2.9	---	260	30,000	2.9	23,000
SB-1	0.5-1	10/13/2016	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6
SB-1	4.5-5	10/13/2016	<17	<17	<17	<17	<17	<17	<17	<17
SB-2	0.5-1	10/13/2016	1.2 J	<6.6	0.95 J	<6.6	<6.6	<6.6	<6.6	<6.6
SB-2	2.5-3	10/13/2016	<0.830	<0.830	<0.830	<0.830	<0.830	<0.830	<0.830	<0.830
SB-3	0.5-1	10/13/2016	<0.2	0.038 J	0.03 J	0.029 J	<0.2	<0.2	0.13 J	<0.2
SB-3	4.5-5	10/13/2016	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7
SB-4	0.5-1	10/13/2016	<67	<67	<67	<67	<67	<67	<67	<67
SB-4	4.5-5	10/13/2016	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066	<0.066
SB-5	0.5-1	10/13/2016	0.037 J	0.032 J	0.040 J	<0.2	0.045 J	0.038 J	<0.2	0.051 J
SB-5	4.5-5	10/13/2016	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6	<6.6
SB-5	8.5-9	10/13/2016	<0.67 UJ	<0.67 UJ	<0.67 UJ	<0.67 UJ	<0.67 UJ	<0.67 UJ	<0.67 UJ	<0.67 UJ

Notes:

All concentrations reported in milligrams per kilogram (mg/kg).

Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8270C.

Tier-1 ESL = Tier 1 Environmental Screening Level for Shallow Soils, San Francisco Bay Regional Water Quality Control Board, ESL Workbook, Tier-1 ESL Table, February 2016.

Applicable ESL = Appropriate ESL based on current and future site use as a Commercial/Industrial site using the Soil Summary Table from the San Francisco Bay Regional Water Quality Control Board ESL Workbook, February 2016.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the Applicable ESLs. Assumes direct exposure for a commercial/industrial site.

Legend:

ft bgs = feet below ground surface

C/I = Commercial/Industrial

ESL = Environmental Screening Level

--- = No screening level established

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

Qualifiers:

J = Lab Qualifier - Estimated Value

U - Nondetected

UJ = ERM Qualifier. Nondetected, estimated report limit.

Table 3
Metals in Soil
Phase II Site Investigation
1755 Egbert Avenue
San Francisco, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
		Tier-1 ESLs	31	0.067	3,000	42	39	120,000	23	3,100	80	390	86	390	390	0.78	390	23,000	13
		Applicable ESLs	470	0.31	220,000	2,200	580	1,800,000	350	47,000	320	5,800	11,000	5,800	5,800	12	5,800	350,000	190
SB-1	0.5-1	10/13/2016	4.0	5.3	240	0.39	0.61	51	12	42	99	0.83	45	<2.0	<0.27	<0.54	53	130	0.43
SB-1	4.5-5	10/13/2016	3.3	3.5	220	0.42	0.48	42	21	48	16	0.27	21	<1.8	<0.23	<0.45	41	34	0.056
SB-2	0.5-1	10/13/2016	1.2 J	3.3	150	0.29	0.56	120	8.1	25	31	0.86	32	<2.0	<0.27	0.39 J	42	86	0.15
SB-2	2.5-3	10/13/2016	4.4	4.1	110	0.23	0.93	100	9	71	110	0.77	26	<2.0	<0.26	<0.52	49	170	0.17
SB-3	0.5-1	10/13/2016	2.8	19	110	0.26	0.75	72	7.7	9.6	35	0.37	21	<1.9	<0.24	<0.48	52	66	0.11
SB-3	4.5-5	10/13/2016	2.7	3.1	150	0.27	0.38	52	7.6	27	53	0.81	27	<1.9	<0.24	<0.47	44	48	0.40
SB-4	0.5-1	10/13/2016	2.7	0.82	43	0.088 J	0.42	6.2	8	46	3.3	0.12 J	13	<2.0	<0.25	0.42 J	57	33	0.074
SB-4	4.5-5	10/13/2016	2.7	2.7	63	0.26	0.32	50	7.1	5.8	9.3	0.27	25	<1.9	<0.24	0.35 J	50	29	0.044
SB-5	0.5-1	10/13/2016	21	12	290	0.35	1.9	99	8.4	130	790	0.57	22	<1.9	<0.24	<0.49	55	860	4.2
SB-5	4.5-5	10/13/2016	1.9 J	6.2	62	0.21	0.36	40	28	12	14	0.54	21	<2.0	2.7	0.33 J	40	33	0.098

Notes:

All concentrations reported in milligrams per kilogram (mg/kg).

Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 6010/7000 series.

Tier-1 ESL = Tier 1 Environmental Screening Level for Shallow Soils, San Francisco Bay Regional Water Quality Control Board, ESL Workbook, Tier-1 ESL Table, February 2016.

Applicable ESL = Appropriate ESL based on current and future site use as a Commercial/Industrial site using the Soil Summary Table from the San Francisco Bay Regional Water Quality Control Board ESL Workbook, February 2016.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the Applicable ESLs. Assumes direct exposure for a commercial/industrial site.

Legend:

ft bgs = feet below ground surface

C/I = Commercial/Industrial

ESL = Environmental Screening Level

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

J = Lab Qualifier - Estimated Value

Table 4
Polychlorinated Biphenyls in Soil
Phase II Site Investigation
1755 Egbert Avenue
San Francisco, California

Sample ID Location	Sample Depth (ft bgs)	Date Sampled	Aroclor-1016	Aroclor-1221	Aroclor-1232	Aroclor-1242	Aroclor-1248	Aroclor-1254	Aroclor-1260
		<i>Tier 1 ESLs</i>	0.25	0.25	0.25	0.25	0.25	0.25	0.25
		<i>Applicable ESLs</i>	1.0	1.0	1.0	1.0	1.0	1.0	1.0
SB-1	0.5-1	10/13/2016	<0.012	<0.024	<0.012	<0.012	<0.012	0.054	0.06
SB-2	0.5-1	10/13/2016	<0.012	<0.024	<0.012	<0.012	<0.012	0.018	0.027
SB-2	2.5-3	10/13/2016	<0.012	<0.024	<0.012	<0.012	<0.012	<0.012	0.087
SB-3	0.5-1	10/13/2016	<0.012	<0.024	<0.012	<0.012	<0.012	<0.012	0.15
SB-4	0.5-1	10/13/2016	<0.083	<0.17	<0.083	<0.083	<0.083	<0.083	<0.083
SB-5	0.5-1	10/13/2016	<0.012	<0.024	<0.012	<0.012	<0.012	0.054	0.2

Notes:

All concentrations reported in milligrams per kilogram (mg/kg).

Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8082.

Tier-1 ESL = Tier 1 Environmental Screening Level for Shallow Soils, San Francisco Bay Regional Water Quality Control Board, ESL Workbook, Tier-1 ESL Table, February 2016.

Applicable ESL = Appropriate ESL based on current and future site use as a Commercial/Industrial site using the Soil Summary Table from the San Francisco Bay Regional Water Quality Control Board *ESL Workbook*, February 2016.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded light gray indicate concentrations detected above the Applicable ESLs.

Legend:

ft bgs = feet below ground surface

C/I = Commercial/Industrial

ESL = Environmental Screening Level

--- = No screening level established

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

NA = Not analyzed

Table 5
Organochlorine Pesticides in Soil
Phase II Site Investigation
1755 Egbert Avenue
San Francisco, California

Sample ID Location	Sample Depth (bgs)	(ft)	Date Sampled	4,4'-DDD	4,4'-DDE	4,4'-DDT	Dieldrin	Endosulfan I	Endrin	Endrin Aldehyde	Gamma-Chlordane	Heptachlor Epoxide
			Tier 1 ESLs	2.7	1.9	1.9	0.00017	0.0046	0.00065	---	---	0.00042
			Applicable ESLs	12	8.5	8.5	0.17	5,800	290	---	---	0.3
SB-1	0.5-1		10/13/2016	<0.066	0.37	0.48	<0.034	<0.034	<0.066	<0.066	0.012 CJ	<0.034
SB-2	0.5-1		10/13/2016	<0.33	<0.33	<0.33	<0.17	<0.17	<0.33	<0.33	<0.17	<0.17
SB-2	2.5-3		10/13/2016	<0.33	<0.33	<0.33	<0.17	<0.17	<0.33	<0.33	<0.17	<0.17
SB-3	0.5-1		10/13/2016	<0.016	0.059	0.013 J	<0.0085	<0.0085	<0.016	<0.016	0.0026 J	<0.0085
SB-4	0.5-1		10/13/2016	<0.65	<0.65	<0.65	<0.34	<0.34	<0.65	<0.65	<0.34	<0.34
SB-5	0.5-1		10/13/2016	0.13 C J	0.51	0.24	<0.085	<0.085	<0.16	<0.16	0.026 C J	<0.085

Notes:

All concentrations reported in milligrams per kilogram (mg/kg).

Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8081A.

Pesticides not listed were not detected above laboratory reporting limits.

Tier-1 ESL = Tier 1 Environmental Screening Level for Shallow Soils, San Francisco Bay Regional Water Quality Control Board, *ESL Workbook*, Tier-1 ESL Table, February 2016.

Applicable ESL = Appropriate ESL based on current and future site use as a Commercial/Industrial site using the Soil Summary Table from the San Francisco Bay Regional Water Quality Control Board *ESL Workbook*, February 2016.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the Applicable ESLs.

Legend:

ft bgs = feet below ground surface

DDD = Dichlorodiphenyldichloroethane

DDE = Dichlorodiphenyldichloroethylene

DDT = Dichlorodiphenyltrichloroethane

ESL = Environmental Screening Level

--- = No screening level established

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

NA = Not analyzed

C = Lab qualifier. Presence confirmed, but RPD between columns exceeds 40%.

J = Lab qualifier. Estimated value.

= CCV drift outside limits; average CCV drift within limits per method requirements.

Table 6
 Total Petroleum Hydrocarbons and Volatile Organic Compounds in Groundwater
 Phase II Site Investigation
 1755 Egbert Avenue
 San Francisco, California

Sample ID Location	Sample Interval/Screen Interval (ft bgs)	Date Sampled	TPH-d ^a	TPH-mo ^b	TPH-g	Benzene	Carbon Disulfide	1,2-Dichloroethane	cis-1,2-Dichloroethene	Tetrachloroethene	Toluene	Trichloroethene	m,p-xylene	Methyl tert-butyl ether (MTBE) ^c	4-Methyl-2-Pentanone	1,2,4-trimethylbenzene
		Tier-1 ESL	100	50,000 ¹	100	1	---	0.5	6	3	40	5	20	5	---	---
		ESL Direct Exposure	150	50,000	220	1	---	0.5	6	5	40	5	20	5	---	---
		C/I Groundwater ESLs for Vapor Intrusion	---	---	---	9.7	---	53	950	26	30,000	49	11,000	11,000	---	---
		MCLs	---	---	---	1	---	0.5	6	5	150	5	1,750	13	---	---
SB-1-GW	9-19	10/13/2016	32 J	<300	<50	<0.5	0.3 J	<0.5	0.2 J	0.2 J	0.1 J	0.2 J	<0.5	0.8	<10	<0.5
SB-2-GW	11-15	10/14/2016	16,000 NJ	85,000	9.2 J	0.1 J	<0.5	<0.5	<0.5	<0.5	0.3 J	<0.5	0.1 J	4.8	1.5 J	0.2 J
SB-3-GW	9-19	10/13/2016	150 NJ	400	<50	<0.5	<0.5	<0.5	0.4 J	<0.5	<0.5	<0.5	<0.5	560	<10	<0.5
SB-4-GW	9-19	10/13/2016	39 J	<300	<50	<0.5	<0.5	0.3 J	<0.5	<0.5	<0.5	<0.5	<0.5	710	<10	<0.5
SB-5-GW	9-19	10/13/2016	270 NJ	1,700	<830	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	<8.3	1,200	<170	<8.3

Notes:

All concentrations reported in micrograms per liter (µg/L).

^a = Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8015B Modified (M).

^b = Samples were analyzed by USEPA Method 8260B. The only VOCs presented in the table are BTEX compounds and MTBE. Samples analyzed were non-detect for all other VOCs in the 8260 compound list. Full list of VOCs are presented in the analytical reports included in Attachment B of the report.

Tier 1 ESLs = Tier 1 Environmental Screening Levels for Groundwater, San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB), *ESL Workbook*, Tier 1 Summary Table, February 2016.

Direct Exposure Groundwater ESLs = San Francisco Bay RWQCB, *ESL Workbook*, Table GW-1, February 2016.

ESLs for Vapor Intrusion = Commercial/Industrial Environmental Screening Levels for Evaluation of Potential Vapor Intrusion, San Francisco Bay RWQCB, *ESL Workbook*, Table GW-3, February 2016.

MCLs = California Maximum Contaminant Levels, 29 September 2016.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the applicable ESLs. For groundwater, assumes direct exposure.

1 - Tier 1 for TPH-mo based on gross contamination level as TPH-mo is not soluble in water.

VOCs not detected not included on table.

Legend:

ft bgs = feet below ground surface

BTEX = benzene, toluene, ethylbenzene, xylene

TPH-d = Total Petroleum Hydrocarbons as Diesel

TPH-mo = Total Petroleum Hydrocarbons as Motor Oil

TPH-g = Total Petroleum Hydrocarbons as Gasoline

C/I = Commercial/Industrial

ESL = Environmental Screening Level

MCL = Maximum Contaminant Level

NS = Not sampled

--- = No screening level established

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

Qualifiers:

J = Lab Qualifier - Estimated Value

NJ = Sample exhibits chromatographic pattern which does not resemble standard

Table 7
Semivolatile Organic Compounds in Groundwater
Phase II Site Investigation
1755 Egbert Avenue
San Francisco, California

Sample ID Location	Sample Interval/ Screen Interval (ft bgs)	Date Sampled	Phenol
		<i>Tier-1 ESL</i>	5
		<i>ESL Direct Exposure</i>	4,200
		<i>C/I Groundwater ESLs for Vapor Intrusion</i>	---
		<i>MCLs</i>	---
SB-1-GW	9-19	10/13/2016	<9.4
SB-2-GW	11-15	10/14/2016	19 J
SB-3-GW	9-19	10/13/2016	<9.4
SB-4-GW	9-19	10/13/2016	<9.4
SB-5-GW	9-19	10/13/2016	<190

Notes:

All concentrations reported in micrograms per liter (µg/L).

Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 8270C.

Only SVOCs with detections above laboratory reporting limits are presented.

Tier 1 ESLs = Tier 1 Environmental Screening Levels for Groundwater, San Francisco Bay Direct Exposure Groundwater ESLs = San Francisco Bay RWQCB, ESL Workbook, Table GW-1, February 2016.

ESLs for Vapor Intrusion = Commercial/Industrial Environmental Screening Levels for Evaluation of Potential Vapor Intrusion, San Francisco Bay RWQCB, ESL Workbook, Table MCLs = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, September 2016.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the applicable ESLs. For groundwater, assumes direct exposure.

Legend:

ft bgs = feet below ground surface

C/I = Commercial/Industrial

ESL = Environmental Screening Level

MCL = Maximum Contaminant Level

--- = No screening level established

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

NA = Not Analyzed

J = Lab Qualifier - Estimated Value

b = Samples were prepared outside of hold time.

*Table 8
Metals in Groundwater
Phase II Site Investigation
1755 Egbert Avenue
San Francisco, California*

Sample ID Location	Sample Interval/ Screen Interval (ft bgs)	Date Sampled	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc	Mercury
		<i>Tier-1 ESL</i>	6	10	1,000	2.7	0.25	50	3	3.1	2.5	100	8.2	5	0.19	2	19	81	0.051
		<i>ESL Direct Exposure</i>	6	10	1,000	4	5	50	6	1,000	15	100	100	50	100	2	50	5,000	2
		<i>MCLs</i>	6	10	1,000	4	5	50	---	1,300	15	---	100	50	---	2	---	---	2
SB-1-GW	9-19	10/13/2016	48	32	660	4.5	4.5 J	1,100	120	99	90	26	450	<10	<5.0	<1.0	810	670	1.5
SB-2-GW	11-15	10/14/2016	14	12	290	1.0 J	<5.0	660	33	37	56	0.33	19	150	<10	3.4 J	310	170	0.33
SB-3-GW	9-19	10/13/2016	6.0 J	18	270	0.76 J	1.4 J	160	32	12	17	23	150	<10	<5.0	<10	210	90	0.072 J
SB-4-GW	9-19	10/13/2016	16	37	440	1.7 J	3.5 J	670	95	24	17	22	360	<10	<5.0	<1.0	520	330	0.28
SB-5-GW	9-19	10/13/2016	<10	32	570	2.0	3.2 J	600	110	51	72	17	500	<10	<5.0	5.1 J	440	320	0.19 J

Notes:

All concentrations reported in micrograms per liter (µg/L).

Samples were analyzed by United States Environmental Protection Agency (USEPA) Method 6010/7000 series.

Tier 1 ESLs = Tier 1 Environmental Screening Levels for Groundwater, San Francisco Bay Regional Water Quality Control Board (San Francisco Bay RWQCB), ESL Workbook, Tier 1 Summary Table, February 2016.

Direct Exposure Groundwater ESLs = San Francisco Bay RWQCB, ESL Workbook, Table GW-1, February 2016.

ESLs for Vapor Intrusion = Commercial/Industrial Environmental Screening Levels for Evaluation of Potential Vapor Intrusion, San Francisco Bay RWQCB, ESL Workbook, Table GW-3, February 2016.

MCLs = Commercial/Industrial Regional Screening Level, EPA Region 9 RSL Summary Table, September 2016.

Bold values indicate detections at or above the laboratory reporting limit.

Values shaded gray indicate concentrations detected above the applicable ESLs. For groundwater, assumes direct exposure.

Legend:

ft bgs = feet below ground surface

C/I = Commercial/Industrial

ESL = Environmental Screening Level

MCL = Maximum Contaminant Level

--- = No screening level established

SB-# = Soil Boring Location

< = Analyte not detected at or above the stated laboratory reporting limit

J = Lab Qualifier - Estimated Value

Appendix A
Geophysical Survey Report



**GROUND
PENETRATING
RADAR
SYSTEMS, INC.**

October 13, 2016

Shannon Martin
ERM

Re: GPR Investigation to Locate underground storage tanks (UST's)

Site: 1755 Egbert Ave, San Francisco, CA

Purpose

The purpose of the survey was to scan for potential UST's.

Equipment

- **Ground Penetrating Radar (GPR), Manufacturer: GSSI, Model: SIR-3000 processing unit with 400 MHz antenna.** GPR works by sending pulses of energy into a material and recording the strength and the time required for the return of the reflected signal. Reflections are produced when the energy pulses enter into a material with different electrical conduction properties from the material it left. The strength of the reflection is determined by the contrast in conductivity between the two materials. The total depth achieved can be as much as 8' with this antenna but can vary widely depending on the dielectric properties of the materials.
- **RD7100 pipe locator, Manufacturer: Radiodetection.** The RD7100 can detect the electromagnetic fields from live power or radio frequency signals. It can also be used in conjunction with a transmitter to connect directly to accessible, metallic pipes, risers, or tracer wires. A tone is sent through the pipe or tracer wire at a specific frequency which can then be detected by the receiver.

Process

Our process begins with collecting scans with GPR across the areas in a grid pattern. Scans are typically spaced 3'-10' apart depending on the size of the targets being searched for. The GPR data is interpreted in real time and anomalies in the data are located and marked on the surface with chalk, spray paint, pin flags, etc.

Findings

During the scanning process, GPRS found no anomalies that appear to be underground storage tanks. We found one area with softer soil that appears to be a previous dig site. See pictures in following pages.

Limitations

Please keep in mind that there are limitations to any subsurface investigation. The equipment may not achieve maximum effectiveness due to soil conditions, above ground obstructions, layers of reinforced concrete, and a variety of other factors. No subsurface investigation or equipment can provide a complete image of what lies below. Our results should always be used in conjunction with as many methods as possible including consulting existing plans and drawings, exploratory excavation or potholing, visual inspection of above ground features, and utilization of services such as Dig Alert/Underground Service Alert. Maximum GPR depth at this site was between 4 and 5 feet.

The following pages will further explain the findings.

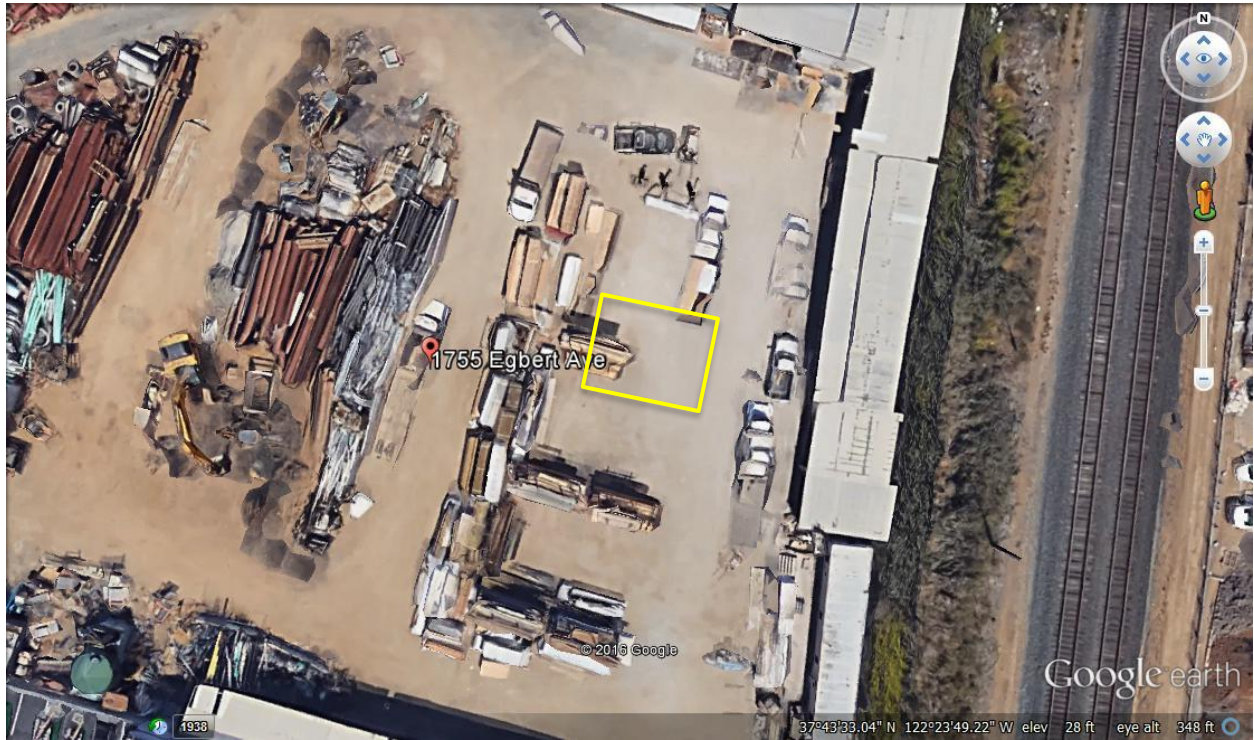
I appreciate the opportunity to have worked with you on this project. Please feel free to contact me if you have any additional questions.

Regards,

Jim Barney
Project Manager, Northern California
Ground Penetrating Radar Systems
408-201-4110
jim.barney@gp-radar.com

AERIAL IMAGE OF APPROXIMATE AREA SCANNED

The approximate limits of the area scanned for UST's are shown below.



Site Photos

All findings in this scan are marked in paint on the surface.

Dimensions represent approximate top of pipe.

Legend for GPRS Field Notes

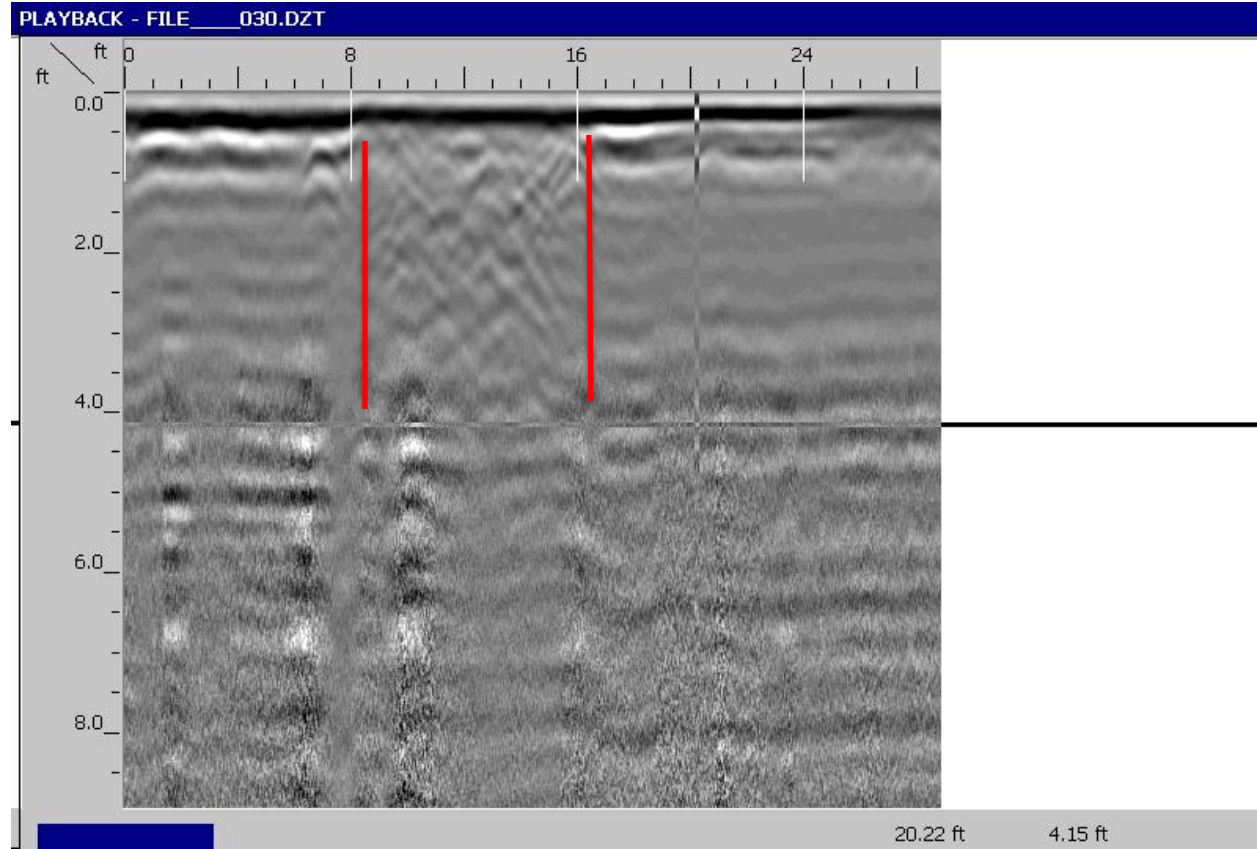
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- Electric —
- Gas —
- Water —
- Data —
- Unknown —



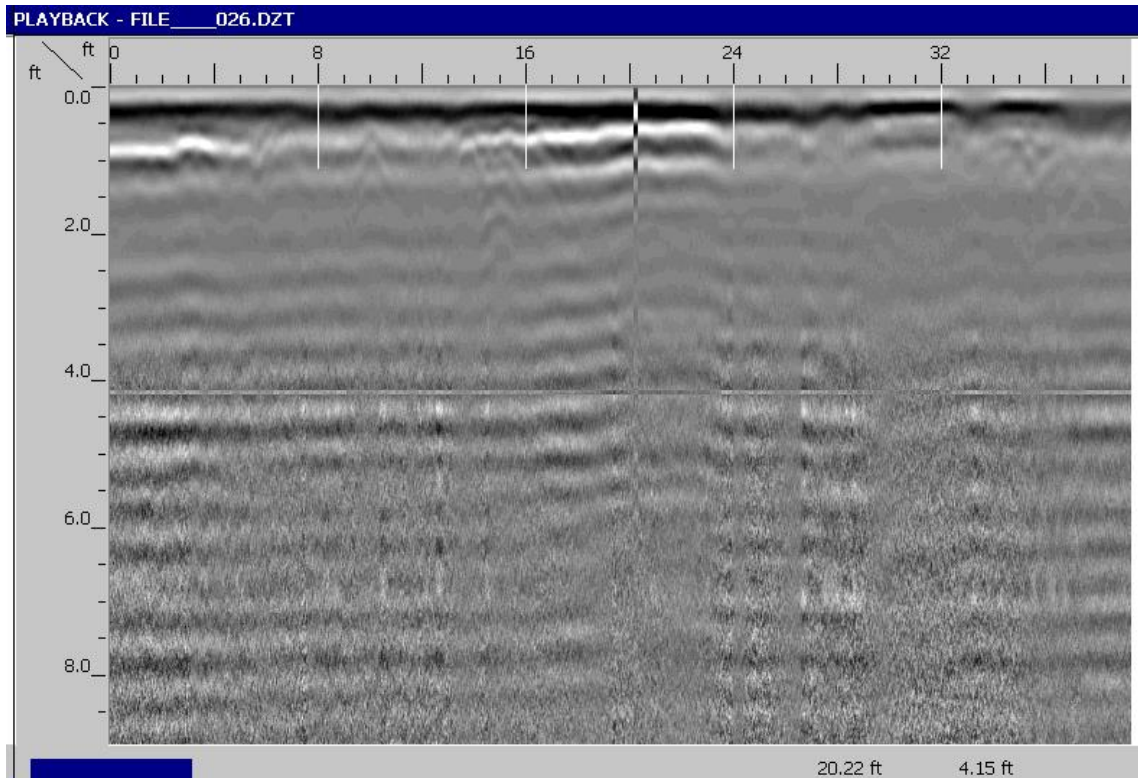




GPR Data

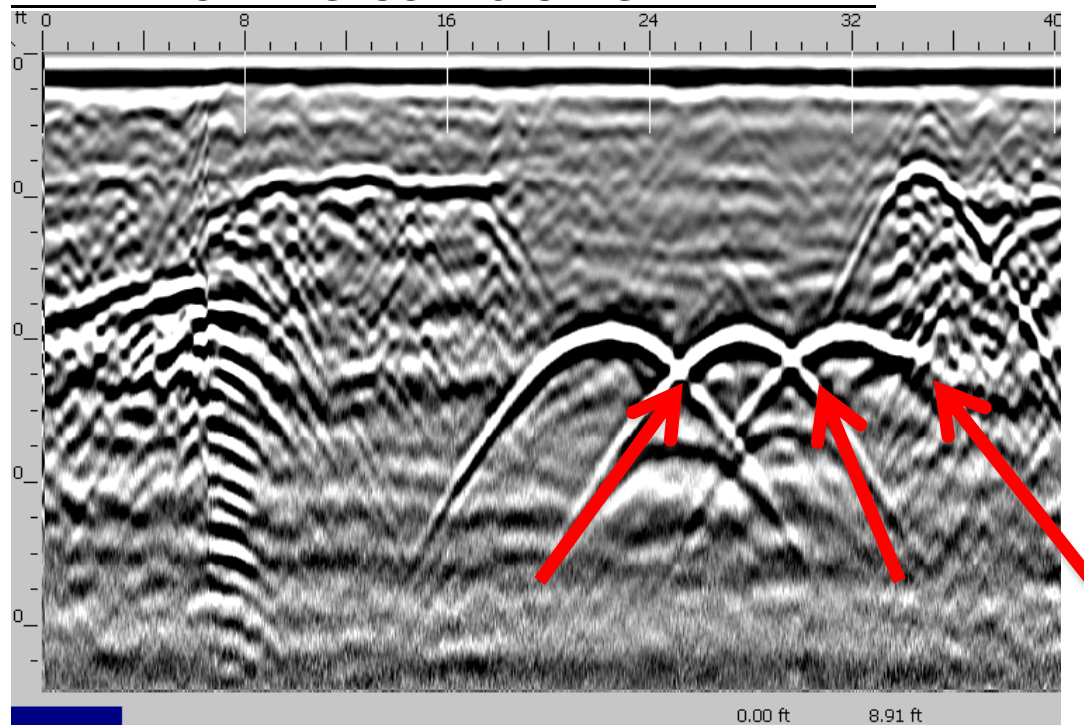


Here is a GPR scan of the soft soil area covered with plywood; no UST's were found, however, the area highlighted above appears to be disturbed soil.



Other scans in the area show no evidence of UST's. See Example below.

EXAMPLE UNDERGROUND STORAGE TANK DATA



Here is an EXAMPLE of GPR data from a DIFFERENT project where UST's were found. The red arrows are pointing to three UST's.

Appendix B
Boring Logs



ERM
 1277 Treat Blvd, Suite 500
 Walnut Creek, CA 94597
 Phone: (925) 946-0455
 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-1

Project Number: 0363086
 Project Name: Martin Extension
 Client Name: PG&E
 Location: San Francisco, California
 Contractor: Cascade Drilling
 Drilling Method: Direct Push
 Logged By: S. Martin

Date Started: 10/13/2016
 Date Completed: 10/13/2016
 Total Depth: 19 feet
 Borehole Diameter: 2"
 Initial Water Level: 12.5 feet bgs
 Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 9-19' bgs. Grab groundwater sample collected.

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					FILL: brown sand, some fine to coarse gravel, dry.
		0.0			SB-1-1
		0.2			
		0.3			AS ABOVE EXCEPT: reddish brown, increase in gravel content, some fines, increase in moisture.
		0.2			
5		0.0			SB-1-5
			SP		SAND WITH CLAY AND GRAVEL (SP): reddish brown, fine to coarse sand, some gravel fill, contains glass fragments, moist.
		1.1			No recovery.
			SM		SILTY SAND (SM): dark gray, fine sand, moist.
		0.7			
		0.9			CLAY (CL): dark gray, 10-15% fine sand, high plasticity, soft, moist.
10			CL		
		0.8			SANDY CLAY (CL): yellowish brown, mottled with greenish gray, fine sand, soft, moist.
		0.0			
		0.0	SM		SILTY SAND (SM): light gray, fine sand, 30% fines, wet at 12.5' bgs.
					No recovery.

BOREHOLE TO 15 WC2 - -11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ



ERM
 1277 Treat Blvd, Suite 500
 Walnut Creek, CA 94597
 Phone: (925) 946-0455
 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-1

Project Number: 0363086	Date Started: 10/13/2016
Project Name: Martin Extension	Date Completed: 10/13/2016
Client Name: PG&E	Total Depth: 19 feet
Location: San Francisco, California	Borehole Diameter: 2"
Contractor: Cascade Drilling	Initial Water Level: 12.5 feet bgs
Drilling Method: Direct Push	Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 9-19' bgs. Grab groundwater sample collected.
Logged By: S. Martin	

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
		0.0	SP		SAND (SP): yellowish brown, medium grained, loose, wet.
		0.0			
		0.0			
Total Depth - 19 feet bgs					
20					
25					

BOREHOLE TO 15 WC2 - -11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ



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 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-2

Project Number: 0363086	Date Started: 10/13/2016
Project Name: Martin Extension	Date Completed: 10/14/2016
Client Name: PG&E	Total Depth: 15 feet
Location: San Francisco, California	Borehole Diameter: 2"
Contractor: Cascade Drilling	Initial Water Level: 10 feet bgs
Drilling Method: Direct Push	Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 11-15' bgs. Grab groundwater sample collected.
Logged By: S. Martin	

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					FILL: sand and gravel fill, brick fragments.
		9.0			SB-2-1
		12.7			FILL: silty gravel fill with some clat, stained black, hydrocarbon-like odor, contains glass.
		21.7			SB-2-3
			SC		CLAYEY SAND (SC): yellowish brown, coarse sand, 30-40% clay, cohesive, moist.
5		2.3			SILTY CLAY (CL-ML): dark gray, soft, some fine sand, moist, hydrocarbon-like odor.
		26.0	CL-ML		
		15.8			CLAY (CL): stained black, soft, high plasticity, moist, hydrocarbon-like odor.
		27.5	CL		
		19.9			
10					SAND (SP): grayish green, medium sand, dense, wet, slight hydrocarbon-like and solvent-like odor.
		14.3	SP		
					No recovery.

Total Depth - 15 feet bgs

BOREHOLE TO 15 WC2 - -11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ



ERM
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 Walnut Creek, CA 94597
 Phone: (925) 946-0455
 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-3

Project Number: 0363086	Date Started: 10/13/2016
Project Name: Martin Extension	Date Completed: 10/13/2016
Client Name: PG&E	Total Depth: 19 feet
Location: San Francisco, California	Borehole Diameter: 2"
Contractor: Cascade Drilling	Initial Water Level: 11.5 feet bgs
Drilling Method: Direct Push	Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 9-19' bgs. Grab groundwater sample collected.
Logged By: S. Martin	

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					FILL: gravel, fine to coarse sand.
		0.0			SB-3-1
		0.0			AS ABOVE EXCEPT: grades to reddish brown, mostly coarse sand.
		0.0			AS ABOVE EXCEPT: pieces of metallic-like fill from 4.5-5' bgs.
5		0.0			SB-3-5
		0.0			SILTY CLAY (CL): stained black, trace fine sand, soft, moist, hydrocarbon-like odor.
		1.7			
		5.0			SANDY CLAY (CL): grayish green, 20-30% fine sand, soft, cohesive, low plasticity.
		4.1	CL		
		2.3			No recovery.
		3.8			SAND (SP): grayish green, medium sand, loose to slightly dense, wet.
		2.6	SP		AS ABOVE EXCEPT: orange oxidation-like staining from 13-14' bgs, strong hydrocarbon-like odor.
		37.6			No recovery.

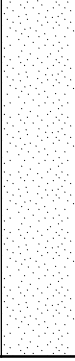
BOREHOLE TO 15 WC2 - -11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ



ERM
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 Phone: (925) 946-0455
 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-3

Project Number: 0363086	Date Started: 10/13/2016
Project Name: Martin Extension	Date Completed: 10/13/2016
Client Name: PG&E	Total Depth: 19 feet
Location: San Francisco, California	Borehole Diameter: 2"
Contractor: Cascade Drilling	Initial Water Level: 11.5 feet bgs
Drilling Method: Direct Push	Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 9-19' bgs. Grab groundwater sample collected.
Logged By: S. Martin	

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
		7.2	SP		SAND (SP): yellowish brown with orange oxidation-like staining, loose, wet, slight hydrocarbon-like odor.
		8.7			
		10.6			
		12.3			
Total Depth - 19 feet bgs					
20					
25					

BOREHOLE TO 15 WC2 - -11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ



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 Phone: (925) 946-0455
 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-4

Project Number: 0363086

Date Started: 10/13/2016

Project Name: Martin Extension

Date Completed: 10/13/2016

Client Name: PG&E

Total Depth: 19 feet

Location: San Francisco, California

Borehole Diameter: 2"

Contractor: Cascade Drilling

Initial Water Level: 11 feet bgs

Drilling Method: Direct Push

Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 9-19' bgs. Grab groundwater sample collected.

Logged By: S. Martin

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					FILL: dark brown, sand and gravel.
		0.1			SB-4-1
		0.6			AS ABOVE EXCEPT: grades to reddish brown, increase in sand content, some fines.
		0.8			SAND (SP): reddish brown, 10% fines, fine to medium sand, loose, moist.
5		0.0	SP		SB-4-5
		0.0			SILTY CLAY (CL): dark gray, soft, medium to high plasticity, moist.
		1.3	CL		SANDY CLAY (CL): stained black, fine sand, soft, moist, hydrocarbon-like odor.
					AS ABOVE EXCEPT: grades to greenish blue, 30% sand, stiff.
10					No recovery.
		0.0			SAND (SP): yellowish brown with some orange mottling/ oxidation-like staining, medium sand, dense, wet.
		0.0	SP		

BOREHOLE TO 15 WC2 - -11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ



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 Walnut Creek, CA 94597
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 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-4

Project Number: 0363086	Date Started: 10/13/2016
Project Name: Martin Extension	Date Completed: 10/13/2016
Client Name: PG&E	Total Depth: 19 feet
Location: San Francisco, California	Borehole Diameter: 2"
Contractor: Cascade Drilling	Initial Water Level: 11 feet bgs
Drilling Method: Direct Push	Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 9-19' bgs. Grab groundwater sample collected.
Logged By: S. Martin	

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
		0.0			SAND (SP): yellowish brown with some orange mottling/ oxidation-like staining, medium sand, dense, wet. AS ABOVE EXCEPT: some fine gravel.
		0.0	SP		
20					Total Depth - 19 feet bgs
25					

BOREHOLE TO 15 WC2 - -11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ



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 Phone: (925) 946-0455
 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-5

Project Number: 0363086	Date Started: 10/13/2016
Project Name: Martin Extension	Date Completed: 10/13/2016
Client Name: PG&E	Total Depth: 19 feet
Location: San Francisco, California	Borehole Diameter: 2"
Contractor: Cascade Drilling	Initial Water Level: 9.5 feet bgs
Drilling Method: Direct Push	Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 9-19' bgs. Grab groundwater sample collected.
Logged By: S. Martin	

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
					FILL: sand and coarse gravel fill, dark brown, dry.
		12.9			SB-5-1
		9.3			
		31.4			
		110			AS ABOVE EXCEPT: grades to dark gray.
5		117			SB-5-5
		73.6	CL-ML		SILTY CLAY (CL-ML): dark gray to brown, cohesive, soft, moist, hydrocarbon-like odor.
		49.6			
		51.3	SC		CLAYEY SAND (SC): orangeish brown, 30% clay, dense, moist.
		41.7	SP		SAND (SP): orangeish brown, fine sand, 10% fines, dense, wet, slight hydrocarbon-like odor.
10		17.9			NO recovery.
		30.7	SP		SAND (SP): yellowish brown, fine sand, dense, wet, slight hydrocarbon-like and solvent-like odor.
		97.4			AS ABOVE EXCEPT: some gray mottling.
		99.5			No recovery.


BOREHOLE TO 15 WC2 - - 11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ



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 Fax: (925) 946-9968

LOG OF BOREHOLE: SB-5

Project Number: 0363086	Date Started: 10/13/2016
Project Name: Martin Extension	Date Completed: 10/13/2016
Client Name: PG&E	Total Depth: 19 feet
Location: San Francisco, California	Borehole Diameter: 2"
Contractor: Cascade Drilling	Initial Water Level: 9.5 feet bgs
Drilling Method: Direct Push	Notes: Hand augered to 5' bgs. Temporary 3/4" diameter PVC casing installed at bottom of borehole with screen 9-19' bgs. Grab groundwater sample collected.
Logged By: S. Martin	

Depth (ft)	Sample Interval	PID (ppm)	USCS Code	GRAPHIC LOG	Soil Descriptions and Observations
		112	SP		SAND (SP): yellowish brown with some gray mottling, medium grained sand, dense, wet, slight hydrocarbon-like and solvent-like odor.
		31.5			
		39.7			
		76.6			
Total Depth - 19 feet bgs					
20					
25					

BOREHOLE TO 15 WC2 - -11/16/16 14:48 - \\WDWALFS01\CAD\GINT BORING LOGS\MARTIN EXTENSION - 0363086\MARTIN EXTENSION.GPJ

Appendix C
QA/QC Review and
Laboratory Reports

Memorandum

Environmental
Resources
Management

To: Shannon Martin

From: Sandra Mulhearn

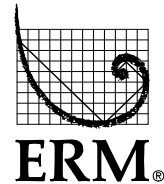
Date: 10 November 2016

Subject: Data Review of Martin Extension 2016 Soil and Groundwater Monitoring Data

Project Number: 0363086

Data Package: Curtis and Tompkins, Ltd. Data Packages 282148, 282196, 282764, and 282898

2525 Natomas Park Drive,
Suite 350
Sacramento, CA 95833
(916) 924-9378
(916) 920-3978 (fax)



The quality of the data was assessed and any necessary qualifiers were applied following the *USEPA National Functional Guidelines for Superfund Organic Methods Data Review, September 2016* and *USEPA National Functional Guidelines for Inorganic Superfund Data Review, September 2016*.

HOLDING TIME AND PRESERVATION EVALUATION

The samples were prepared and analyzed within the method-prescribed time period from the date of collection with limited exceptions. One sample, SB-5-9, was analyzed for EPA 8015B and 8270C outside of the holding time. The samples were non-detect and have been qualified as estimated (U). The qualified samples are listed in Table 1.

The sample shipments were received at the laboratory within the method-prescribed temperature and preservation requirements with limited exceptions. Several samples for metals did not meet the pH requirements and nitric acid was added to achieve the appropriate pH. In addition, several VOA vials had headspace present. However, these affected vials did not represent all of the submitted vials for any one sample, therefore, it was presumed that the laboratory would select a vial that did not have bubbles for analysis. The affected samples are identified in Table 2. None of the data were qualified based on preservation exceedances.

BLANK EVALUATION

The method blank and trip blank sample results were nondetected for each of the target analytes with limited exceptions. VOCs and metals

were detected in method blanks, however, no detected results were within five or ten times the blank concentration, respectively. The method blank detections are listed in Table 3.

BLANK SPIKE EVALUATION

The laboratory control sample (LCS) recoveries were within the laboratory's limits of acceptance. The LCS recoveries indicate acceptable laboratory accuracy and precision.

MATRIX SPIKE EVALUATION

The matrix spike (MS) and matrix spike duplicate (MSD) recoveries were within the laboratory's limits of acceptance with limited exceptions. No data were qualified if the sample concentration was greater than four times the spike concentration, if an outlying recovery is accompanied by an in-control recovery, or if the sample used for MS/MSD analysis was a non-project sample. The outliers are listed in Table 4.

SURROGATE SPIKE EVALUATION

The surrogate recoveries were within acceptable limits with several exceptions. The laboratory noted several recoveries were diluted out. No data were qualified if the dilution factor was 10-fold or greater. In addition, one surrogate recovery from an 8270C analysis was below the lower control limit. For the 8270C analysis, no samples are qualified if only one surrogate recovery is outside control limits. The outliers are presented in Table 5.

FIELD DUPLICATE EVALUATION

No samples were submitted in duplicate.

TPH EVALUATION

The laboratory noted that the hydrocarbon patterns present in several samples were atypical of a standard fuel pattern. ERM qualified the affected sample as tentatively identified and estimated (NJ) as shown in Table 6.

COLUMN DIFFERENCES

The laboratory noted that there were significant differences between the concentrations reported on the two columns for two samples. These results have been qualified as estimated (J). The qualified results are presented in Table 7.

CONTINUING CALIBRATION VERIFICATION EXCEEDENCES

The laboratory reported a drift in the continuing calibration verification (CCV) associated with several analytes for one sample. The affected results are qualified as estimated (UJ). The associated results are presented in Table 8.

OVERALL ASSESSMENT

No data were determined to be unusable. All of the data, including qualified data, can be used for decision-making purposes. The quality of the data generated during this investigation is acceptable for the preparation of technically-defensible documents.

*Table 1
 Samples with Exceeded Holding Times
 PG&E Martin Extension
 San Jose, California*

Lab Package	Sample ID	Method	Holding Time	# of Days Exceeded	ERM Qualifier
282764	SB-5-9	EPA 8015B	14 days to extraction	5	UJ
282764	SB-5-9	EPA 8270C	14 days to extraction	5	UJ

Key:

UJ = Nondetected, estimated report limit

*Table 2
Samples with Headspace
PG&E Martin Extension
San Jose, California*

Lab Package	Sample ID	Analysis Method	# of Affected Containers	Bubble Size	ERM Qualifier
282148	SB-1-GW	EPA 8260B	3 of 6 VOAs	>6mm	--
282148	TRIP BLANK	EPA 8260B	1 of 3 VOAs	>6mm	--
282196	TRIP BLANK	EPA 8260B	1 of 3 VOAs	>6mm	--

Key:
mm = millimeter

Table 3
Blank and Associated Suspect Sample Detections
PG&E Martin Extension
San Jose, California

Lab Package	Blank ID	Associated Samples	Detected Compound	Reported Concentration	Report Limit	Units	ERM Qualifier
282148	BLANK (QC856190)	--	1,3-Dichlorobenzene	0.1	0.5	ug/L	--
282148	BLANK (QC856190)	--	1,4-Dichlorobenzene	0.2	0.5	ug/L	--
282148	BLANK (QC856190)	--	n-Butylbenzene	0.9	0.5	ug/L	--
282148	BLANK (QC856190)	--	1,2-Dichlorobenzene	0.1	0.5	ug/L	--
282148	BLANK (QC856190)	--	1,2,4-Trichlorobenzene	0.2	0.5	ug/L	--
282148	BLANK (QC856190)	--	Naphthalene	0.2	2.0	ug/L	--
282148	BLANK (QC856190)	--	1,2,3-Trichlorobenzene	0.2	0.5	ug/L	--
282196	BLANK (QC856386)	--	Nickel	0.081	0.26	mg/kg	--
282196	BLANK (QC856386)	--	Silver	0.05	0.26	mg/kg	--
282196	BLANK (QC856386)	--	Zinc	1.1	1.0	mg/kg	--

Key:

µg/L = Micrograms per liter

mg/kg = Milligrams per kilogram

Table 4
Spike Recoveries Outside of Acceptable Limits
PG&E Martin Extension
San Jose, California

Lab Package	Spike Sample ID	Associated Sample	Compound	Recovery (%)	Limit (%)	RPD	RPD Limit	Result	ERM Qualifier
MS/MSD									
282148	282150-001 MS/MSD	--	Trichloroethene	142/156	49-145	9	46	--	--
282148	SB-1-1 MS/MSD	--	Mercury	68/108	69-142	14	36	--	--
282148	281918-005 MS/MSD	--	Mercury	246/129	69-142	46	36	--	--
282196	SB-5-1 MS/MSD	--	Antimony	113/47	35-154	56	41	--	--
282196	SB-5-1 MS/MSD	--	Barium	177/51	35-154	18	36	4X	--
282196	SB-5-1 MS/MSD	--	Copper	136/164	54-144	8	38	--	--
282196	SB-5-1 MS/MSD	--	Lead	327/212	53-125	NC	42	4X	--
282196	SB-5-1 MS/MSD	--	Zinc	817/111	45-145	NC	39	4X	--
282196	SB-1-1 MS/MSD	--	Mercury	68/108	69-142	14	36	--	--

Key:

RPD = Relative percent difference

4X = sample concentration was greater than four times the spike concentration

Table 5
Surrogate Recovery Results out of Acceptable Limits
PG&E Martin Extension
San Jose, California

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Note	ERM Qualifier
282148	SB-1-GW	EPA 8270C	Terphenyl-d14	15	21-120	DF = 1	--
282148	SB-1-1	EPA 8270C	2-Fluorophenol	DO	25-120	DF = 100	--
282148	SB-1-1	EPA 8270C	Phenol-d5	DO	36-120	DF = 100	--
282148	SB-1-1	EPA 8270C	2,4,6-Tribromophenol	DO	27-120	DF = 100	--
282148	SB-1-1	EPA 8270C	Nitrobenzene-d5	DO	44-120	DF = 100	--
282148	SB-1-1	EPA 8270C	2-Fluorobiphenyl	DO	47-120	DF = 100	--
282148	SB-1-1	EPA 8270C	Terphenyl-d14	DO	49-120	DF = 100	--
282148	SB-1-5	EPA 8270C	2-Fluorophenol	DO	25-120	DF = 100	--
282148	SB-1-5	EPA 8270C	Phenol-d5	DO	36-120	DF = 100	--
282148	SB-1-5	EPA 8270C	2,4,6-Tribromophenol	DO	27-120	DF = 100	--
282148	SB-1-5	EPA 8270C	Nitrobenzene-d5	DO	44-120	DF = 100	--
282148	SB-1-5	EPA 8270C	2-Fluorobiphenyl	DO	47-120	DF = 100	--
282148	SB-1-5	EPA 8270C	Terphenyl-d14	DO	49-120	DF = 100	--
282148	SB-3-5	EPA 8270C	2-Fluorophenol	DO	25-120	DF = 100	--
282148	SB-3-5	EPA 8270C	Phenol-d5	DO	36-120	DF = 100	--
282148	SB-3-5	EPA 8270C	2,4,6-Tribromophenol	DO	27-120	DF = 100	--
282148	SB-3-5	EPA 8270C	Nitrobenzene-d5	DO	44-120	DF = 100	--
282148	SB-3-5	EPA 8270C	2-Fluorobiphenyl	DO	47-120	DF = 100	--
282148	SB-3-5	EPA 8270C	Terphenyl-d14	DO	49-120	DF = 100	--
282148	SB-4-1	EPA 8270C	2-Fluorophenol	DO	25-120	DF = 100	--
282148	SB-4-1	EPA 8270C	Phenol-d5	DO	36-120	DF = 100	--
282148	SB-4-1	EPA 8270C	2,4,6-Tribromophenol	DO	27-120	DF = 100	--
282148	SB-4-1	EPA 8270C	Nitrobenzene-d5	DO	44-120	DF = 100	--
282148	SB-4-1	EPA 8270C	2-Fluorobiphenyl	DO	47-120	DF = 100	--
282148	SB-4-1	EPA 8270C	Terphenyl-d14	DO	49-120	DF = 100	--

Table 5
Surrogate Recovery Results out of Acceptable Limits
PG&E Martin Extension
San Jose, California

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Note	ERM Qualifier
282148	SB-1-1	EPA 8081A	TCMX	DO	44-125	DF = 20	--
282148	SB-1-1	EPA 8081A	Decachlorobiphenyl	DO	39-121	DF = 20	--
282148	SB-4-1	EPA 8081A	TCMX	DO	44-125	DF = 200	--
282148	SB-4-1	EPA 8081A	Decachlorobiphenyl	DO	39-121	DF = 200	--
282148	SB-4-1	EPA 8082	Decachlorobiphenyl	DO	25-135	DF = 10	--
282196	SB-2-GW	EPA 8015B	o-Terphenyl	DO	67-136	DF = 10	--
282196	SB-5-5	EPA 8015B	o-Terphenyl	DO	67-136	DF = 10	--
282196	SB-2-1	EPA 8015B	o-Terphenyl	DO	67-136	DF = 20	--
282196	SB-5-GW	EPA 8270C	2-Fluorophenol	DO	38-120	DF = 20	--
282196	SB-5-GW	EPA 8270C	Phenol-d5	DO	38-120	DF = 20	--
282196	SB-5-GW	EPA 8270C	2,4,6-Tribromophenol	DO	46-120	DF = 20	--
282196	SB-5-GW	EPA 8270C	Nitrobenzene-d5	DO	51-120	DF = 20	--
282196	SB-5-GW	EPA 8270C	2-Fluorobiphenyl	DO	54-120	DF = 20	--
282196	SB-5-GW	EPA 8270C	Terphenyl-d14	DO	21-120	DF = 20	--
282196	SB-2-GW	EPA 8270C	2-Fluorophenol	DO	38-120	DF = 10	--
282196	SB-2-GW	EPA 8270C	Phenol-d5	DO	38-120	DF = 10	--
282196	SB-2-GW	EPA 8270C	2,4,6-Tribromophenol	DO	46-120	DF = 10	--
282196	SB-2-GW	EPA 8270C	Nitrobenzene-d5	DO	51-120	DF = 10	--
282196	SB-2-GW	EPA 8270C	2-Fluorobiphenyl	DO	54-120	DF = 10	--
282196	SB-2-GW	EPA 8270C	Terphenyl-d14	DO	21-120	DF = 10	--
282196	SB-5-5	EPA 8270C	2-Fluorophenol	DO	25-120	DF = 100	--
282196	SB-5-5	EPA 8270C	Phenol-d5	DO	36-120	DF = 100	--
282196	SB-5-5	EPA 8270C	2,4,6-Tribromophenol	DO	27-120	DF = 100	--
282196	SB-5-5	EPA 8270C	Nitrobenzene-d5	DO	44-120	DF = 100	--

Table 5
Surrogate Recovery Results out of Acceptable Limits
PG&E Martin Extension
San Jose, California

Lab Package	Sample ID	Method	Surrogate	Recovery (%)	Limit (%)	Note	ERM Qualifier
282196	SB-5-5	EPA 8270C	2-Fluorobiphenyl	DO	47-120	DF = 100	--
282196	SB-5-5	EPA 8270C	Terphenyl-d14	DO	49-120	DF = 100	--
282196	SB-5-1	EPA 8081A	TCMX	DO	44-125	DF = 200	--
282196	SB-5-1	EPA 8081A	Decachlorobiphenyl	DO	39-121	DF = 200	--
282196	SB-2-1	EPA 8081A	TCMX	DO	44-125	DF = 100	--
282196	SB-2-1	EPA 8081A	Decachlorobiphenyl	DO	39-121	DF = 100	--
282196	SB-2-3	EPA 8081A	TCMX	DO	44-125	DF = 100	--
282196	SB-2-3	EPA 8081A	Decachlorobiphenyl	DO	39-121	DF = 100	--

Key:

DO = diluted out

DF = Dilution factor

Table 6
Suspect TPH Results
PG&E Martin Extension
San Jose, California

Lab Package	Sample ID	Compound	Reported Concentration	ERM Qualifier	Notes
282148	SB-3-GW	Diesel C10-C24	150 ug/L	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282148	SB-1-1	Diesel C10-C24	15 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282148	SB-1-5	Diesel C10-C24	26 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282148	SB-3-1	Diesel C10-C24	2.1 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282148	SB-3-5	Diesel C10-C24	65 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282148	SB-4-1	Diesel C10-C24	81 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282196	SB-5-GW	Diesel C10-C24	270 ug/L	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282196	SB-2-GW	Diesel C10-C24	16000 ug/L	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282196	SB-5-1	Diesel C10-C24	32 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282196	SB-5-5	Diesel C10-C24	43 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282196	SB-2-1	Diesel C10-C24	100 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.
282196	SB-2-3	Diesel C10-C24	12 mg/kg	NJ	Sample exhibits chromatographic pattern which does not resemble the standard.

Table 6
Suspect TPH Results
PG&E Martin Extension
San Jose, California

Lab Package	Sample ID	Compound	Reported Concentration	ERM Qualifier	Notes

Key:

µg/L = Micrograms per liter

mg/kg = Milligrams per kilogram

NJ = Estimated value - chromatogram did not resemble the standard hydrocarbon pattern

TPH = Total petroleum hydrocarbons

*Table 7
Column Differences Outside of Acceptable Limits
PG&E Martin Extension
San Jose, California*

Lab Package	Sample ID	Method	Compound	Reported Concentration	Units	ERM Qualifier
282148	SB-1-1	EPA 8081A	gamma-Chlordane	12	ug/kg	J
282196	SB-5-1	EPA 8081A	4,4'-DDD	130	ug/kg	J
282196	SB-5-1	EPA 8081A	gamma-Chlordane	26	ug/kg	J

Key:

J = Estimated detected result

ug/kg = micrograms per kilogram

*Table 8
Calibration Verification Recoveries Outside of Acceptable Limits
PG&E Martin Extension
San Jose, California*

Lab Package	Sample ID	Compound	CCV Recovery	Reported Concentration	Units	ERM Qualifier
282148	SB-4-1	beta-BHC	Drift	ND	ug/kg	UJ
282148	SB-4-1	Heptachlor	Drift	ND	ug/kg	UJ
282148	SB-4-1	4,4'-DDE	Drift	ND	ug/kg	UJ
282148	SB-4-1	Endosulfan sulfate	Drift	ND	ug/kg	UJ
282148	SB-4-1	4,4'-DDD	Drift	ND	ug/kg	UJ
282148	SB-4-1	4,4'-DDT	Drift	ND	ug/kg	UJ
282148	SB-4-1	Methoxychlor	Drift	ND	ug/kg	UJ

Key:

UJ = Nondetected, estimated report limit

CCV = Continuing calibration verification

ug/kg = micrograms per kilogram



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Analytical Laboratories, Since 1878



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

Laboratory Job Number 282148
ANALYTICAL REPORT

ERM
1277 Treat Blvd.
Walnut Creek, CA 94597

Project : 0363086
Location : Martin Extension
Level : II

Table with 2 columns: Sample ID and Lab ID. Lists various sample identifiers and their corresponding lab IDs, including SB-1-1 through SB-4-9.5, SB-1-GW through SB-4-GW, and TRIP BLANK.

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.

Handwritten signature of Dina Ali

Signature: _____

Date: 11/01/2016

Dina Ali
Project Manager
dina.ali@ctberk.com

CASE NARRATIVE

Laboratory number: 282148
Client: ERM
Project: 0363086
Location: Martin Extension
Request Date: 10/13/16
Samples Received: 10/13/16

This data package contains sample and QC results for six soil samples and four water samples, requested for the above referenced project on 10/13/16. The samples were received on ice and intact, directly from the field.

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

Gasoline C7-C12 was detected between the MDL and the RL in the method blank for batch 240171; this analyte was not detected in samples at or above the RL. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B) Water:

No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B) Soil:

A number of samples were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

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

N-butylbenzene was detected above the RL in the method blank for batch 240282; this analyte was not detected in the sample at or above the RL. Many analytes were detected between the MDL and the RL in the method blank for batch 240282; these analytes were not detected in the sample at or above the RL. No other analytical problems were encountered.

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

High recovery was observed for trichloroethene in the MSD for batch 240161; the parent sample was not a project sample, the BS/BSD were within limits, the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated samples. No other analytical problems were encountered.

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

Low surrogate recovery was observed for terphenyl-d14 in SB-1-GW (lab # 282148-013). No other analytical problems were encountered.

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

Matrix spikes QC855939, QC855940 (batch 240222) were not reported because the parent sample required a dilution that would have diluted out the spikes. A number of samples were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

CASE NARRATIVE

Laboratory number: **282148**
Client: **ERM**
Project: **0363086**
Location: **Martin Extension**
Request Date: **10/13/16**
Samples Received: **10/13/16**

Pesticides (EPA 8081A):

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. All samples underwent florisol cleanup using EPA Method 3620C. Matrix spikes QC855949, QC855950 (batch 240225) were not reported because the parent sample required a dilution that would have diluted out the spikes. SB-1-1 (lab # 282148-001), SB-3-1 (lab # 282148-005), and SB-4-1 (lab # 282148-009) were diluted due to the color of the sample extracts. No other analytical problems were encountered.

PCBs (EPA 8082):

All samples underwent sulfuric acid cleanup using EPA Method 3665A. All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. SB-4-1 (lab # 282148-009) was diluted due to foaming. No other analytical problems were encountered.

Metals (EPA 6010B and EPA 7471A):

High recovery was observed for mercury in the MS for batch 240776; the parent sample was not a project sample, and the BS/BSD were within limits. High RPD was also observed for mercury in the MS/MSD for batch 240776; the RPD was acceptable in the BS/BSD. Low recovery was observed for mercury in the MS of SB-1-1 (lab # 282148-001); the BS/BSD were within limits, and the associated RPD was within limits. No other analytical problems were encountered.

CHAIN OF CUSTODY



2323 Fifth Street
Berkeley, CA 94710
Phone (510) 486-0900
Fax (510) 486-0532

Project No: 0303080
Project Name: Martin Extension
Project P. O. No.:
Company: CEM
Sampler: S. Martin
Report To: Ch. mi. Yi / John Lucio
Telephone: 925-946-0155
Email: Ch. mi. yi @ ctm.com, John. lucio @ ctm.com

EDD Format: Report Level II III IV
Turnaround Time: RUSH Standard

Page 1 of 2
Chain of Custody # _____

ANALYTICAL REQUEST

Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid	# of Containers	HCl	H2SO4	HNO3	NaOH	None
	SB-1-1	10/13/10	0811	X	X	1					X
	SB-1-5		0900	X	X	1					X
	SB-1-10		0920	X	X	1					X
	SB-1-11.5		0935	X	X	1					X
	SB-3-1		1245	X	X	1					X
	SB-3-5		1316	X	X	1					X
	SB-3-7		1345	X	X	1					X
	SB-3-10		1350	X	X	1					X
	SB-4-1		1048	X	X	1					X
	SB-4-5		1100	X	X	1					X
	SB-4-8		1111	X	X	1					X
	SB-4-9.5		1110	X	X	1					X
	SB-1-G-W		1000	X	X	1	X				X

Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid	# of Containers	HCl	H2SO4	HNO3	NaOH	None
	SB-1-1	10/13/10	0811	X	X	1					X
	SB-1-5		0900	X	X	1					X
	SB-1-10		0920	X	X	1					X
	SB-1-11.5		0935	X	X	1					X
	SB-3-1		1245	X	X	1					X
	SB-3-5		1316	X	X	1					X
	SB-3-7		1345	X	X	1					X
	SB-3-10		1350	X	X	1					X
	SB-4-1		1048	X	X	1					X
	SB-4-5		1100	X	X	1					X
	SB-4-8		1111	X	X	1					X
	SB-4-9.5		1110	X	X	1					X
	SB-1-G-W		1000	X	X	1	X				X

Lab No.	Sample ID.	Date Collected	Time Collected	Water	Solid	# of Containers	HCl	H2SO4	HNO3	NaOH	None
	SB-1-1	10/13/10	0811	X	X	1					X
	SB-1-5		0900	X	X	1					X
	SB-1-10		0920	X	X	1					X
	SB-1-11.5		0935	X	X	1					X
	SB-3-1		1245	X	X	1					X
	SB-3-5		1316	X	X	1					X
	SB-3-7		1345	X	X	1					X
	SB-3-10		1350	X	X	1					X
	SB-4-1		1048	X	X	1					X
	SB-4-5		1100	X	X	1					X
	SB-4-8		1111	X	X	1					X
	SB-4-9.5		1110	X	X	1					X
	SB-1-G-W		1000	X	X	1	X				X

Notes:
 Metals samples NOT field filtered. Please preserve for receipt!
 No SECUR TPA d1-mo

RECEIVED BY: _____ DATE: 10/13/10 TIME: 1450
 RELINQUISHED BY: _____ DATE: 10/13/10 TIME: 1755



Curtis & Tompkins Laboratories
ENVIRONMENTAL ANALYTICAL TESTING LABORATORY
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2323 Fifth Street
Berkeley, CA 94710
Phone (510) 486-0900
Fax (510) 486-0532

Project No: 0363086
Project Name: Marin Extension
Project P. O. No.: _____
Report Level: I II III IV
Turnaround Time: RUSH Standard
Email: _____

Sampler: S. Martin
Report To: Chimi Yi / John Lucio
Company: ERM
Telephone: _____

Chain of Custody # _____

C&T LOGIN # 282148

ANALYTICAL REQUEST

X	TRH-d, TRH-mc 8015M	
X	VOCs, TRH-g 8260	
X	SVOCs 8276C	
X	PCBs 8282	
X	Pesticides 8281	FSM

Lab No.	Sample ID.	SAMPLING		MATRIX	# of Containers	CHEMICAL PRESERVATIVE				
		Date Collected	Time Collected			H2SO4	HNO3	NaOH	None	
	SB-3-GW	10/13/16	1400	Water	11	X				
	SB-4-GW	10/13/16	1130	Water	11	X				
	Trip Blank	10/13/16	1030	Water	3	X				

Notes: _____

SAMPLE RECEIPT <input type="checkbox"/> Intact <input type="checkbox"/> Cold <input type="checkbox"/> On Ice <input type="checkbox"/> Ambient	RELINQUISHED BY: DATE: <u>10/13/16</u> TIME: <u>1450</u> DATE: <u>10/13/16</u> TIME: <u>1753</u>	RECEIVED BY: DATE: <u>10/13/16</u> TIME: <u>1450</u> DATE: <u>10/13/16</u> TIME: <u>1753</u>
--	---	---

COOLER RECEIPT CHECKLIST



Login # 282148 Date Received 10/13/16 Number of coolers 2
 Client ERM Project Martin Extension

Date Opened 10/13 By (print) DTN (sign) [Signature]
 Date Logged in ↓ By (print) ↓ (sign) ↓
 Date Labeled ↓ By (print) CB (sign) [Signature]

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) 5.8, 5.1

Temperature blank(s) included? Thermometer# _____ IR Gun# A

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? (pH strip lot# 80BDH1461) _____ 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

15. Added H₂O₂ (#140712) to pH < 2 on 10/13/16 @ 20:30 for sample 13, 14, 15

20. 3/6 VOAs received w/ bubble > 6mm for sample 13
 1/3 " " 16

Detections Summary for 282148

Results for any subcontracted analyses are not included in this summary.

Client : ERM
 Project : 0363086
 Location : Martin Extension

Client Sample ID : SB-1-1

Laboratory Sample ID :

282148-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.23	J	0.98	0.063	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	15	Y	5.0	1.5	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	190		25	7.5	mg/Kg	As Recd	5.000	EPA 8015B	EPA 3550B
Acetone	4.8	J	19	3.1	ug/Kg	As Recd	0.9398	EPA 8260B	EPA 5030B
4,4'-DDE	370		66	12	ug/Kg	As Recd	20.00	EPA 8081A	EPA 3550B
4,4'-DDT	480		66	9.4	ug/Kg	As Recd	20.00	EPA 8081A	EPA 3550B
gamma-Chlordane	12	C,J	34	4.9	ug/Kg	As Recd	20.00	EPA 8081A	EPA 3550B
Aroclor-1254	54		12	3.1	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Aroclor-1260	60		12	2.0	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Antimony	4.0		2.0	0.16	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	5.3		0.27	0.078	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	240		0.27	0.058	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.39		0.11	0.013	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.61		0.27	0.027	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	51		0.27	0.068	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	12		0.27	0.032	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	42		0.27	0.090	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	99		0.27	0.075	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.43		0.016	0.0029	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.83		0.27	0.053	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	45		0.27	0.071	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	53		0.27	0.061	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	130		1.1	0.22	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-1-5

Laboratory Sample ID :

282148-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.23	J	1.0	0.066	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	26	Y	10	3.1	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550B
Motor Oil C24-C36	510		50	15	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550B
Antimony	3.3		1.8	0.14	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	3.5		0.23	0.066	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	220		0.23	0.049	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.42		0.091	0.011	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.48		0.23	0.023	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	42		0.23	0.057	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	21		0.23	0.027	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	48		0.23	0.076	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	16		0.23	0.063	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.056		0.015	0.0028	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.27		0.23	0.044	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	21		0.23	0.060	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	41		0.23	0.052	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	34		0.91	0.18	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-3-1

Laboratory Sample ID :

282148-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.13	J	1.0	0.065	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	2.1	Y	1.0	0.31	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	28		5.0	1.5	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Benzo(b)fluoranthene	30	J	200	25	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
Benzo(a)pyrene	38	J	200	25	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
Indeno(1,2,3-cd)pyrene	130	J	200	25	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
Benzo(g,h,i)perylene	29	J	200	25	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
4,4'-DDE	59		16	2.9	ug/Kg	As Recd	5.000	EPA 8081A	EPA 3550B
4,4'-DDT	13	J	16	2.4	ug/Kg	As Recd	5.000	EPA 8081A	EPA 3550B
gamma-Chlordane	2.6	J	8.5	1.2	ug/Kg	As Recd	5.000	EPA 8081A	EPA 3550B
Aroclor-1260	150		12	1.9	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Antimony	2.8		1.9	0.14	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	19		0.24	0.069	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	110		0.24	0.051	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.26		0.095	0.012	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.75		0.24	0.024	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	72		0.24	0.060	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	7.7		0.24	0.029	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	9.6		0.24	0.079	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	35		0.24	0.066	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.11		0.017	0.0031	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.37		0.24	0.047	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	21		0.24	0.063	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	52		0.24	0.054	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	66		0.95	0.19	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-3-5

Laboratory Sample ID :

282148-006

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.25	J	1.0	0.065	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	65	Y	20	6.1	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Motor Oil C24-C36	730		99	30	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Antimony	2.7		1.9	0.14	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	3.1		0.24	0.069	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	150		0.24	0.051	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.27		0.094	0.012	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.38		0.24	0.024	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	52		0.24	0.059	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	7.6		0.24	0.028	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	27		0.24	0.079	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	53		0.24	0.066	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.40		0.015	0.0028	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.81		0.24	0.046	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	27		0.24	0.062	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	44		0.24	0.054	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	48		0.94	0.19	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-4-1

Laboratory Sample ID :

282148-009

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.22	J	0.98	0.063	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	81	Y	20	6.1	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Motor Oil C24-C36	1,200		100	30	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Acetone	20		19	3.1	ug/Kg	As Recd	0.9381	EPA 8260B	EPA 5030B
2-Butanone	2.7	J	9.4	1.2	ug/Kg	As Recd	0.9381	EPA 8260B	EPA 5030B
Antimony	2.7		2.0	0.15	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	0.82		0.25	0.071	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	43		0.25	0.053	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.088	J	0.098	0.012	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.42		0.25	0.025	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	6.2		0.25	0.062	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	8.0		0.25	0.029	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	46		0.25	0.082	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	3.3		0.25	0.068	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.074		0.017	0.0031	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.12	J	0.25	0.048	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	13		0.25	0.065	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Thallium	0.42	J	0.49	0.14	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	57		0.25	0.056	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	33		0.98	0.20	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-4-5

Laboratory Sample ID :

282148-010

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.20	J	0.98	0.063	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	0.44	J	1.0	0.31	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	5.9		5.0	1.5	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Antimony	2.7		1.9	0.15	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	2.7		0.24	0.071	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	63		0.24	0.052	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.26		0.097	0.012	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.32		0.24	0.025	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	50		0.24	0.061	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	7.1		0.24	0.029	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	5.8		0.24	0.081	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	9.3		0.24	0.068	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.044		0.017	0.0030	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.27		0.24	0.047	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	25		0.24	0.064	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Thallium	0.35	J	0.49	0.14	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	50		0.24	0.055	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	29		0.97	0.19	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-1-GW

Laboratory Sample ID :

282148-013

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	32	J	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Carbon Disulfide	0.3	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	0.8		0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
cis-1,2-Dichloroethene	0.2	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Trichloroethene	0.2	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Toluene	0.1	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Tetrachloroethene	0.2	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-3-GW

Laboratory Sample ID :

282148-014

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	150	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	400		300	96	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	560		5.0	1.0	ug/L	As Recd	10.00	EPA 8260B	EPA 5030B
1,2-Dichloroethane	0.4	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : SB-4-GW

Laboratory Sample ID :

282148-015

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	39	J	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	710		6.3	1.3	ug/L	As Recd	12.50	EPA 8260B	EPA 5030B
1,2-Dichloroethane	0.3	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : TRIP BLANK

Laboratory Sample ID :

282148-016

No Detections

C = Presence confirmed, but RPD between columns exceeds 40%

J = Estimated value

Y = Sample exhibits chromatographic pattern which does not resemble standard

Total Volatile Hydrocarbons

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240171
Units:	mg/Kg	Sampled:	10/13/16
Basis:	as received	Received:	10/13/16
Diln Fac:	1.000	Analyzed:	10/14/16

Field ID: SB-1-1 Lab ID: 282148-001
Type: SAMPLE

Analyte	Result	RL	MDL
Gasoline C7-C12	0.23 J	0.98	0.063

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	78-138

Field ID: SB-1-5 Lab ID: 282148-002
Type: SAMPLE

Analyte	Result	RL	MDL
Gasoline C7-C12	0.23 J	1.0	0.066

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	78-138

Field ID: SB-3-1 Lab ID: 282148-005
Type: SAMPLE

Analyte	Result	RL	MDL
Gasoline C7-C12	0.13 J	1.0	0.065

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	78-138

Field ID: SB-3-5 Lab ID: 282148-006
Type: SAMPLE

Analyte	Result	RL	MDL
Gasoline C7-C12	0.25 J	1.0	0.065

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	78-138

Field ID: SB-4-1 Lab ID: 282148-009
Type: SAMPLE

Analyte	Result	RL	MDL
Gasoline C7-C12	0.22 J	0.98	0.063

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	78-138

J= Estimated value
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855730	Batch#:	240171
Matrix:	Soil	Analyzed:	10/14/16
Units:	mg/Kg		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.068	107	80-121

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	78-138

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8015B
Field ID:	SB-1-1	Diln Fac:	1.000
MSS Lab ID:	282148-001	Batch#:	240171
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/15/16

Type: MS Lab ID: QC855731

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.2291	10.10	6.845	65	50-120

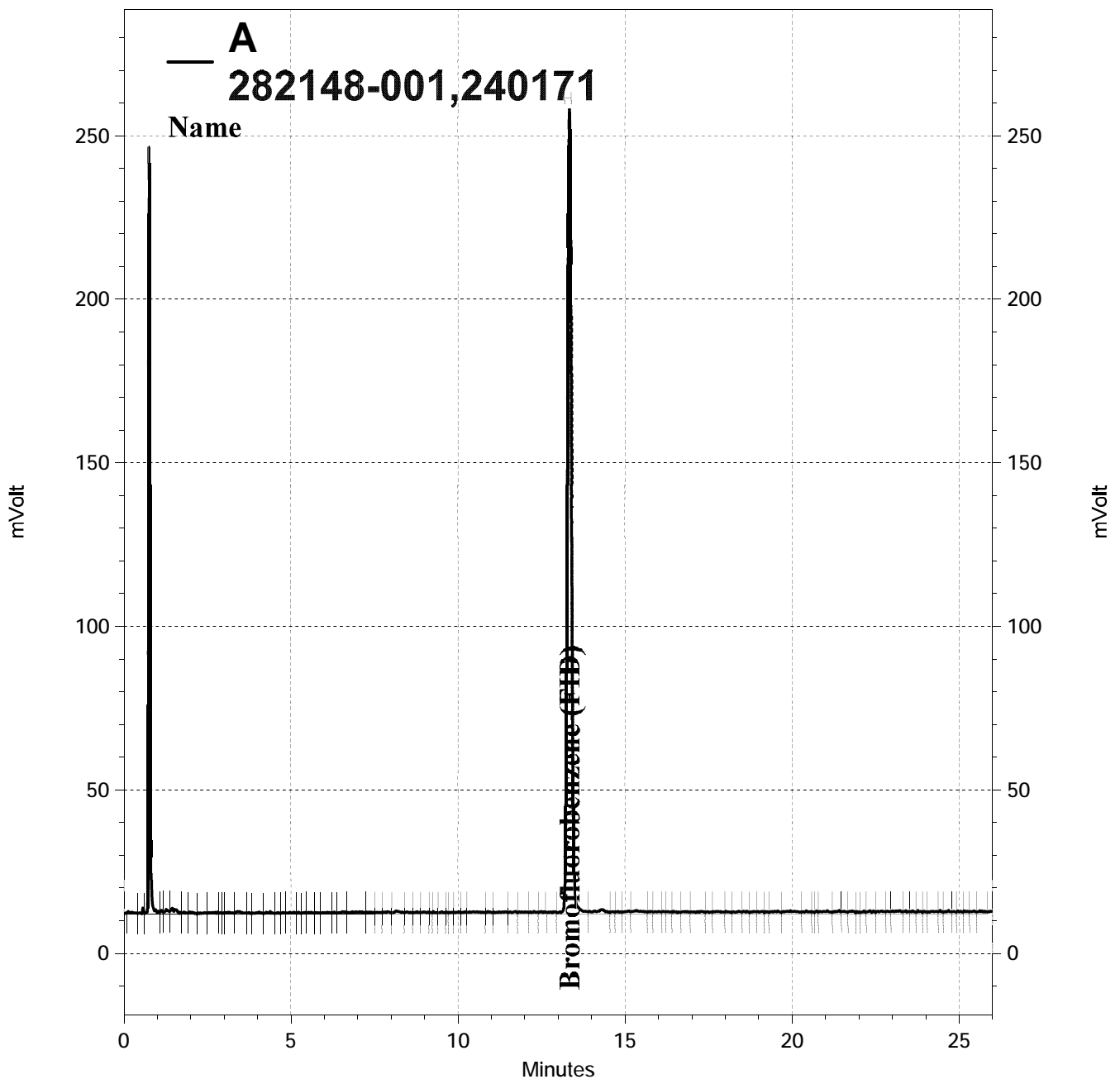
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	78-138

Type: MSD Lab ID: QC855732

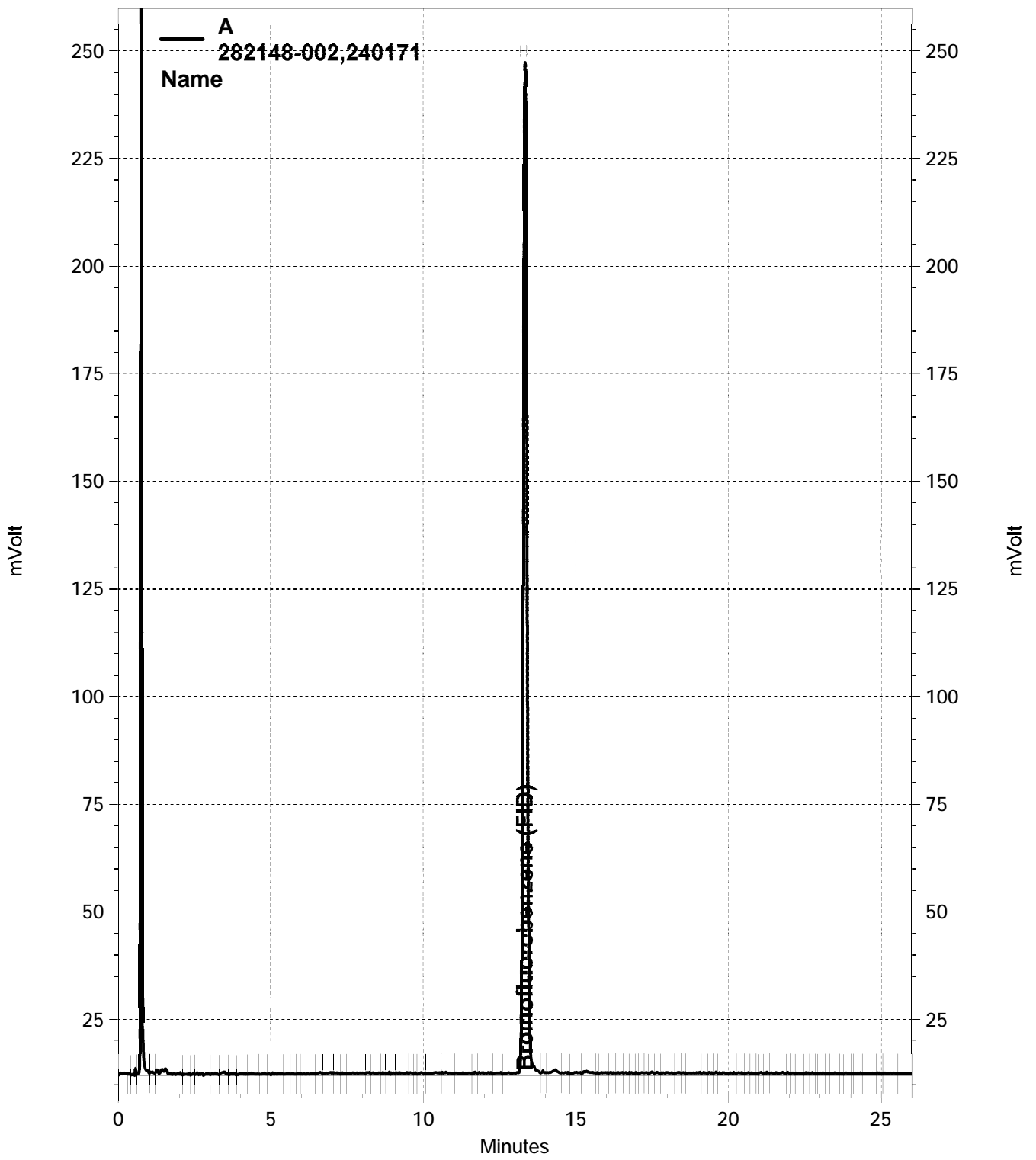
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.00	7.059	68	50-120	4	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	78-138

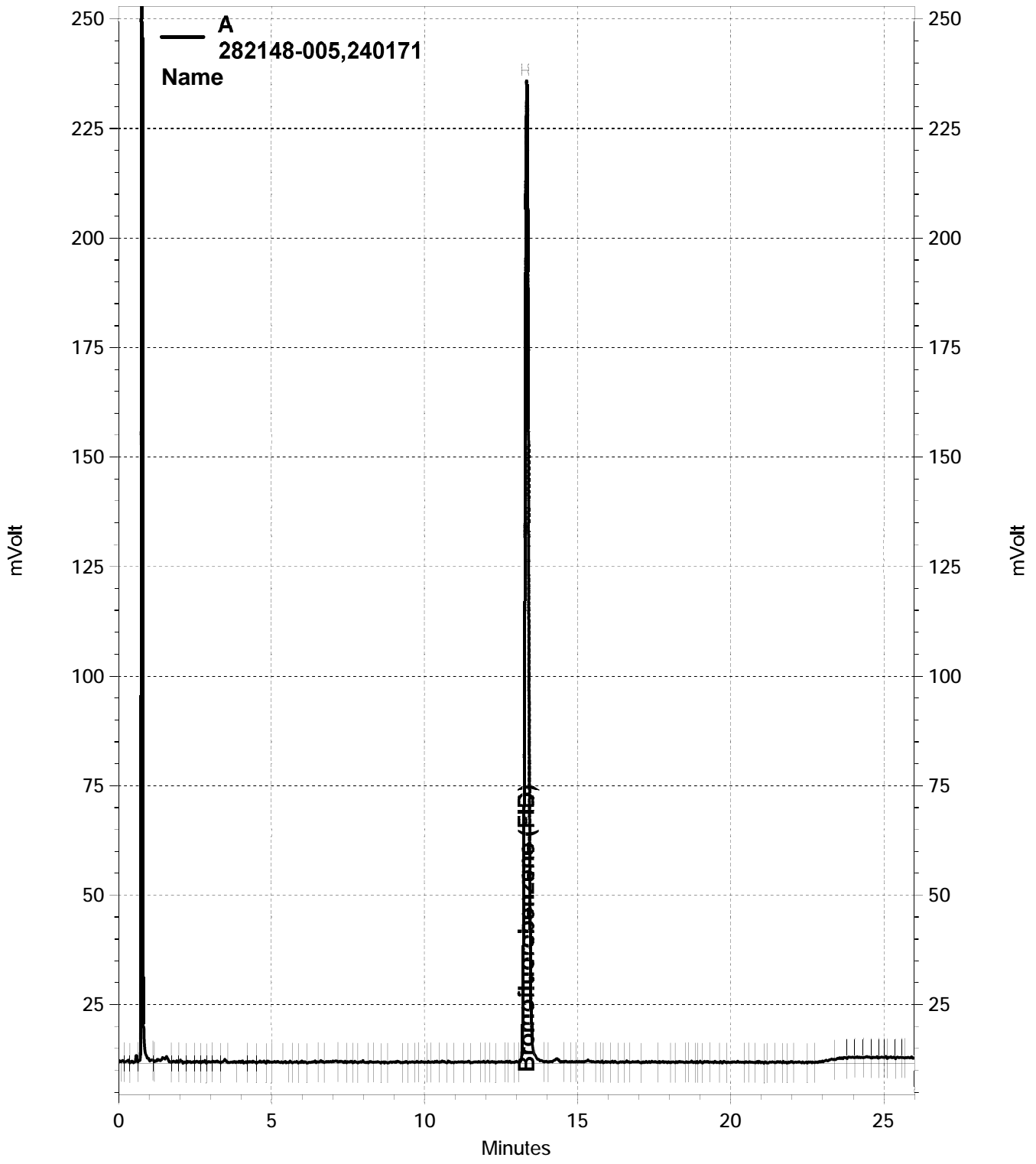
RPD= Relative Percent Difference



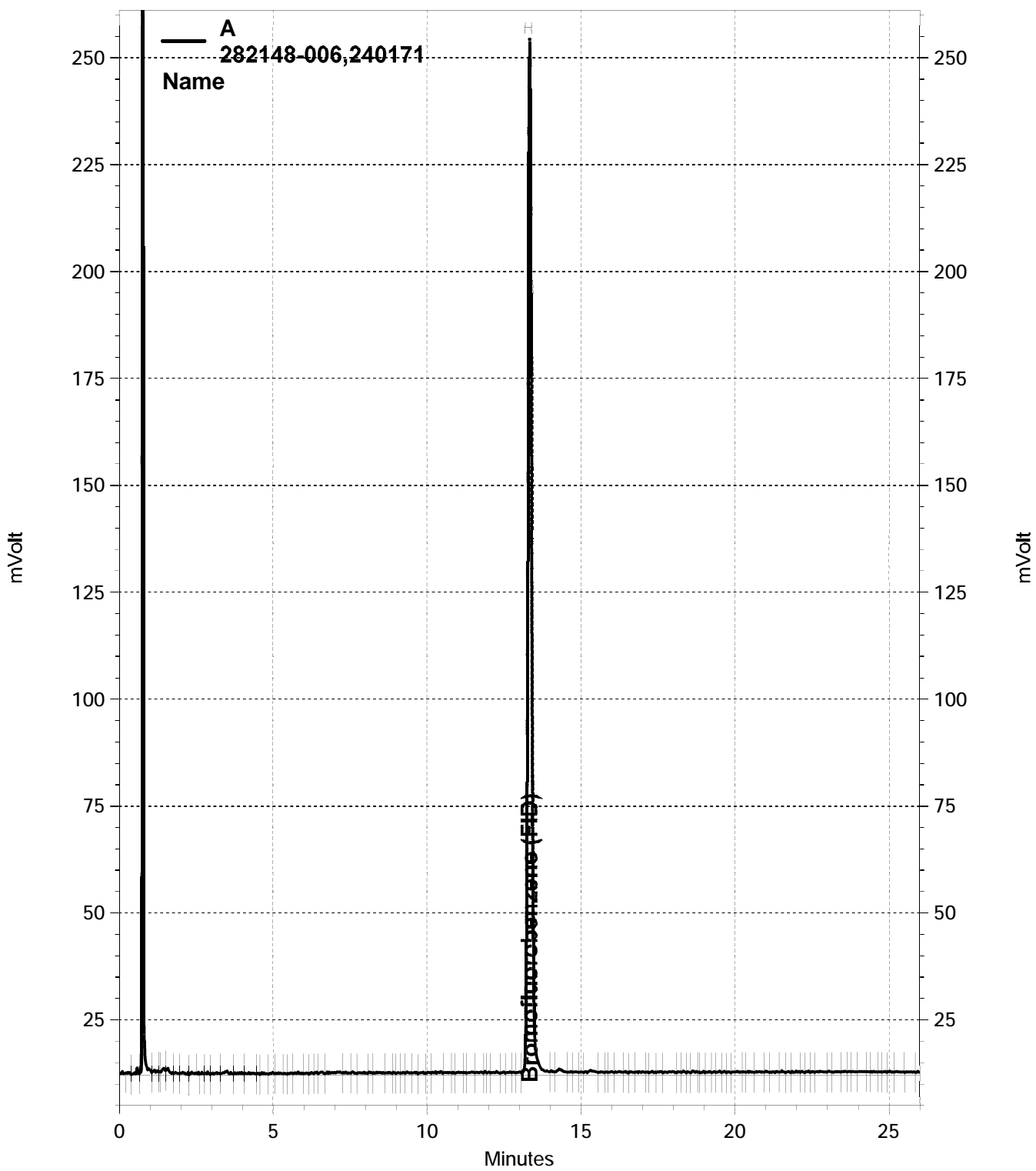
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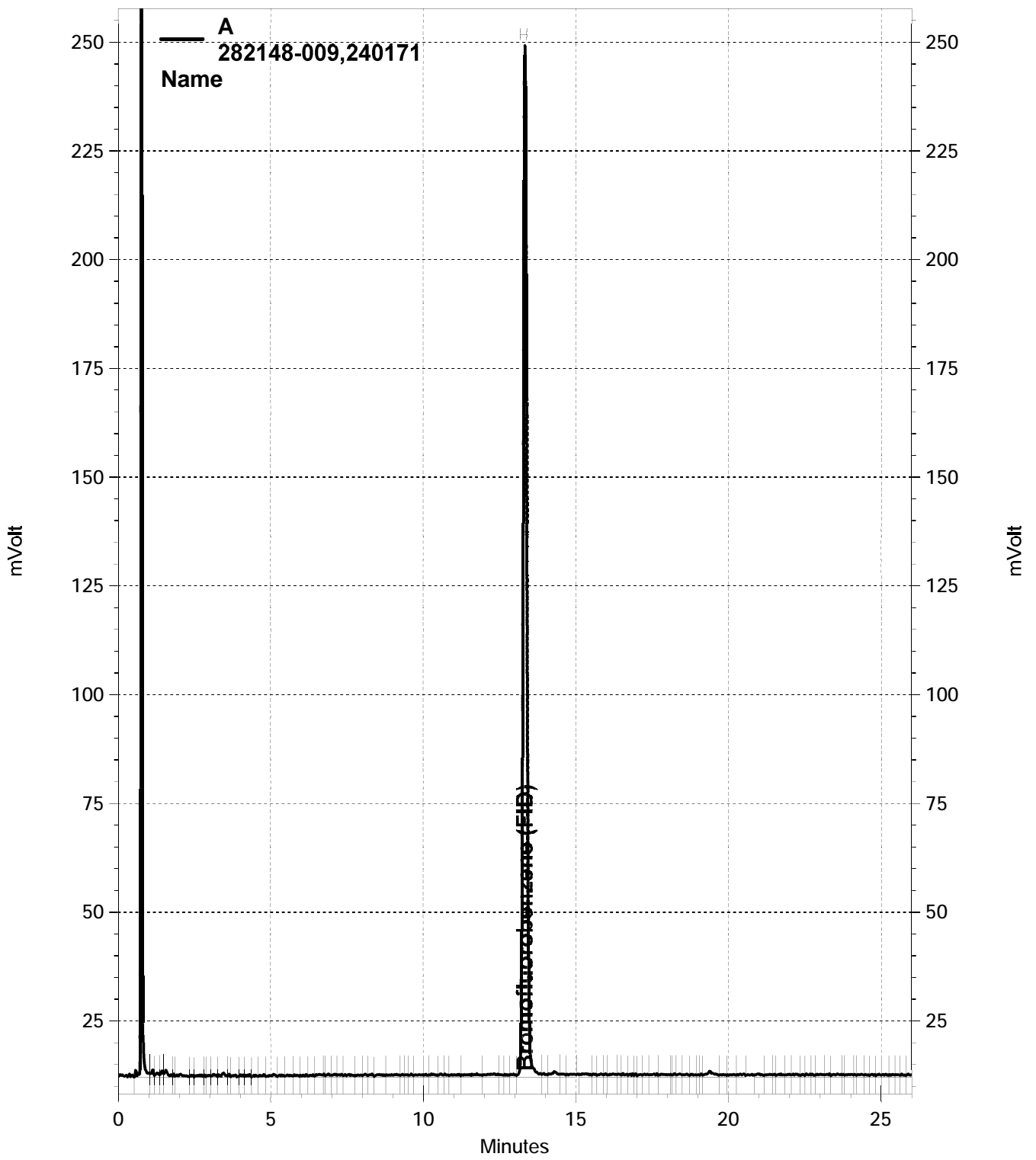
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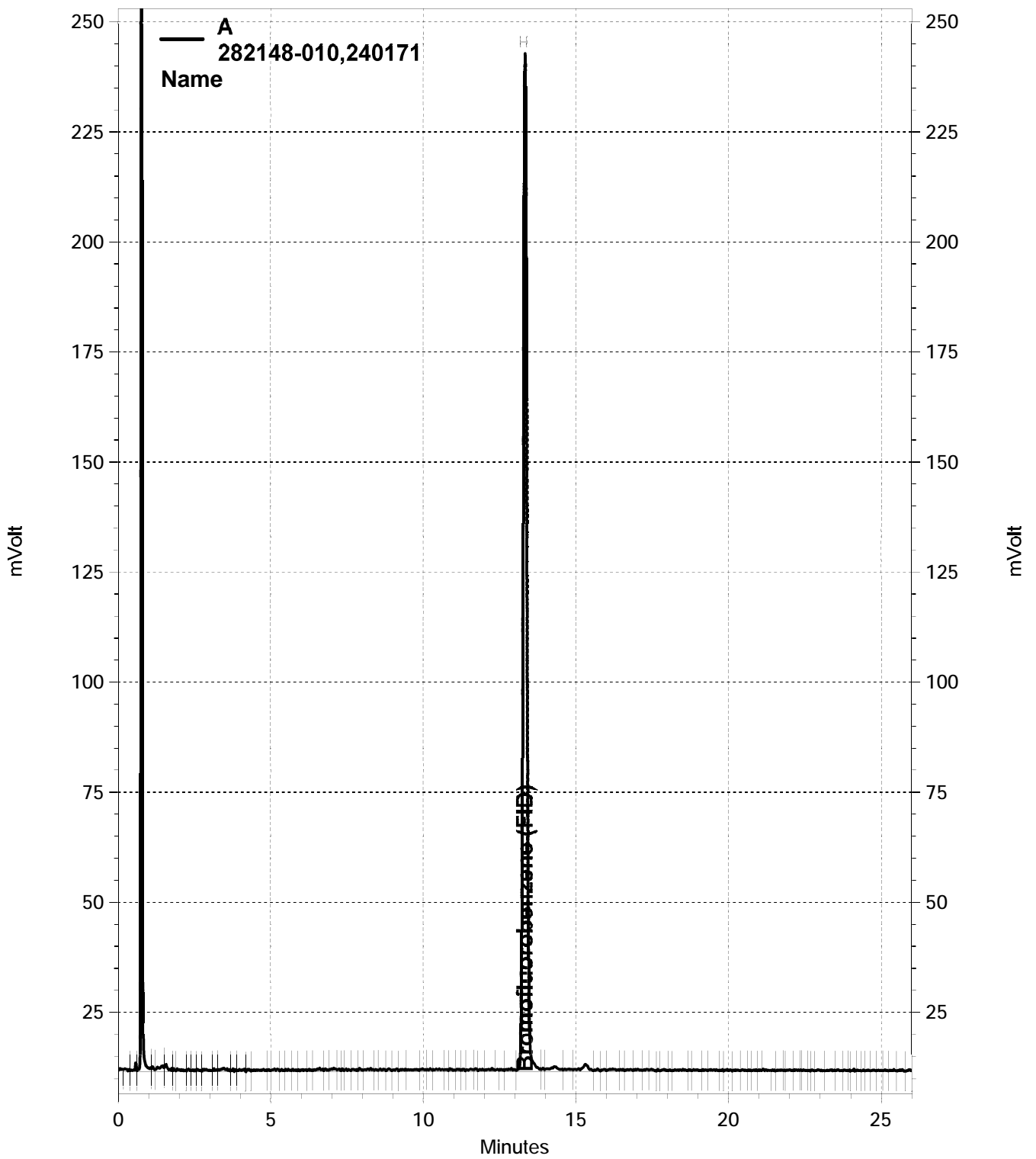
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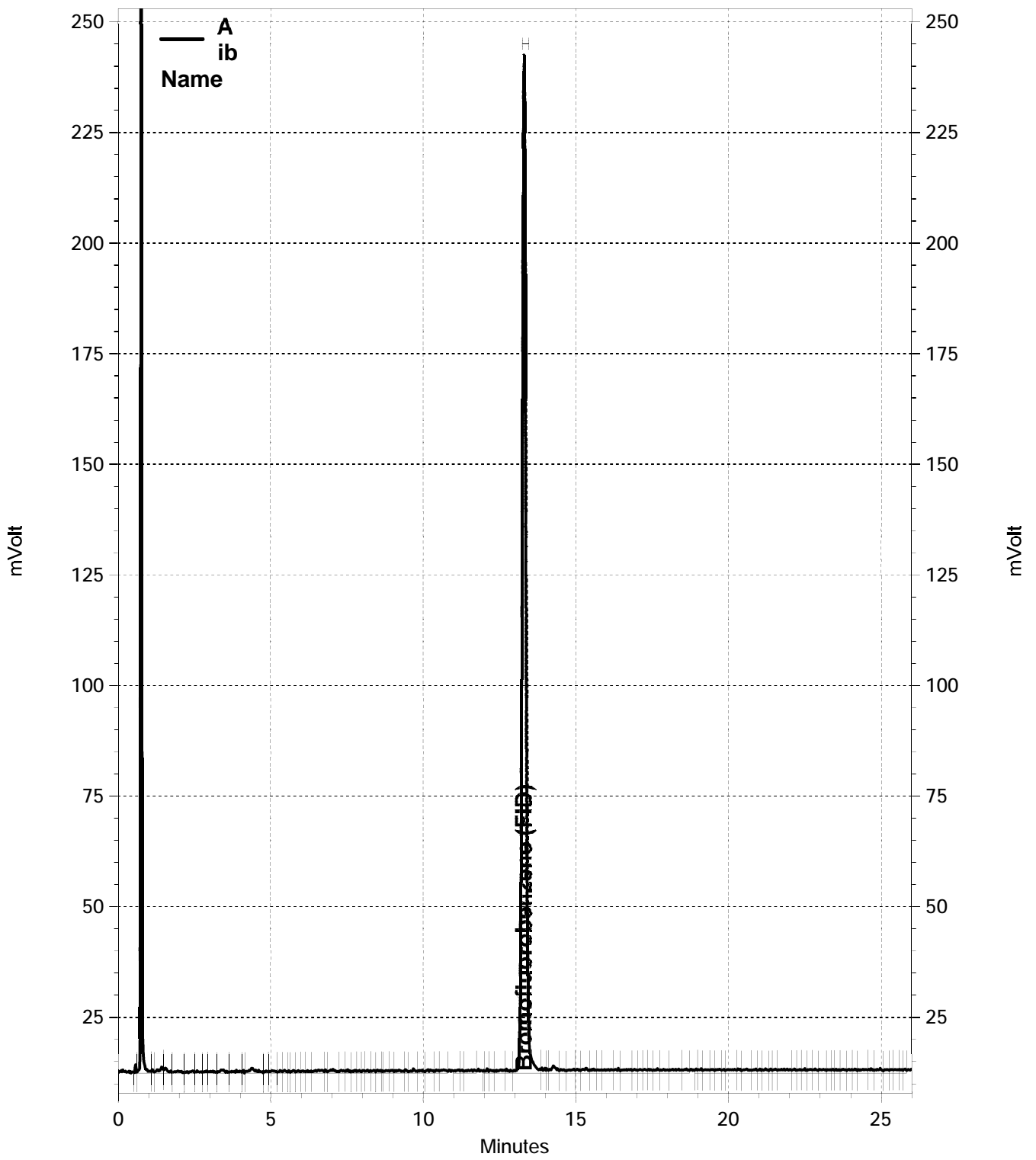


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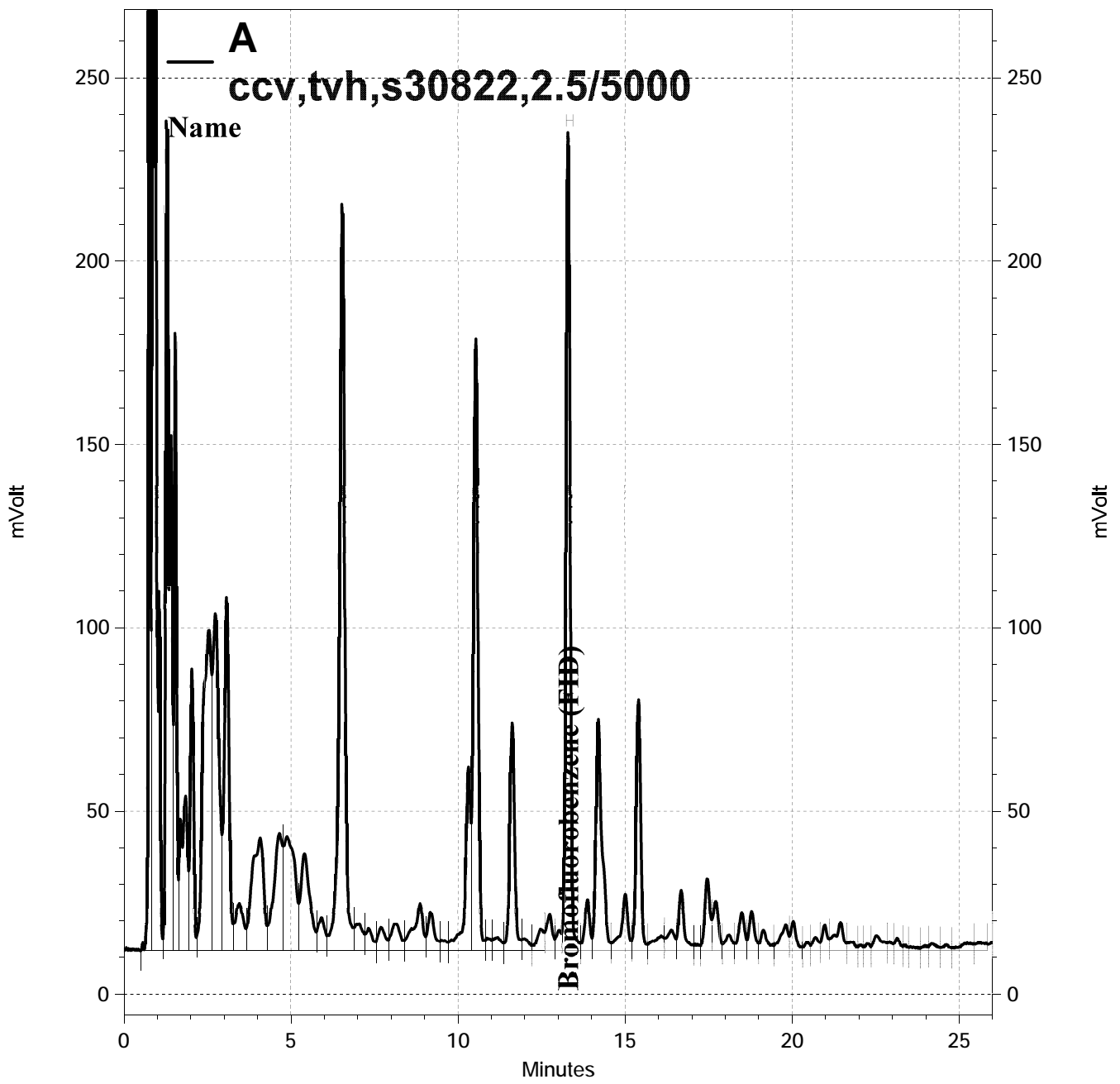


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Total Extractable Hydrocarbons			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	10/13/16
Units:	ug/L	Received:	10/13/16
Diln Fac:	1.000	Analyzed:	10/19/16
Batch#:	240251		

Field ID: SB-1-GW Lab ID: 282148-013
 Type: SAMPLE Prepared: 10/18/16

Analyte	Result	RL	MDL
Diesel C10-C24	32 J	50	16
Motor Oil C24-C36	ND	300	96

Surrogate	%REC	Limits
o-Terphenyl	100	67-136

Field ID: SB-3-GW Lab ID: 282148-014
 Type: SAMPLE Prepared: 10/18/16

Analyte	Result	RL	MDL
Diesel C10-C24	150 Y	50	16
Motor Oil C24-C36	400	300	96

Surrogate	%REC	Limits
o-Terphenyl	97	67-136

Field ID: SB-4-GW Lab ID: 282148-015
 Type: SAMPLE Prepared: 10/18/16

Analyte	Result	RL	MDL
Diesel C10-C24	39 J	50	16
Motor Oil C24-C36	ND	300	96

Surrogate	%REC	Limits
o-Terphenyl	98	67-136

Type: BLANK Prepared: 10/17/16
 Lab ID: QC856058

Analyte	Result	RL	MDL
Diesel C10-C24	ND	50	16
Motor Oil C24-C36	ND	300	96

Surrogate	%REC	Limits
o-Terphenyl	94	67-136

J= Estimated value
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	240251
Units:	ug/L	Prepared:	10/17/16
Diln Fac:	1.000	Analyzed:	10/18/16

Type: BS Cleanup Method: EPA 3630C
 Lab ID: QC856059

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	1,618	65	60-121

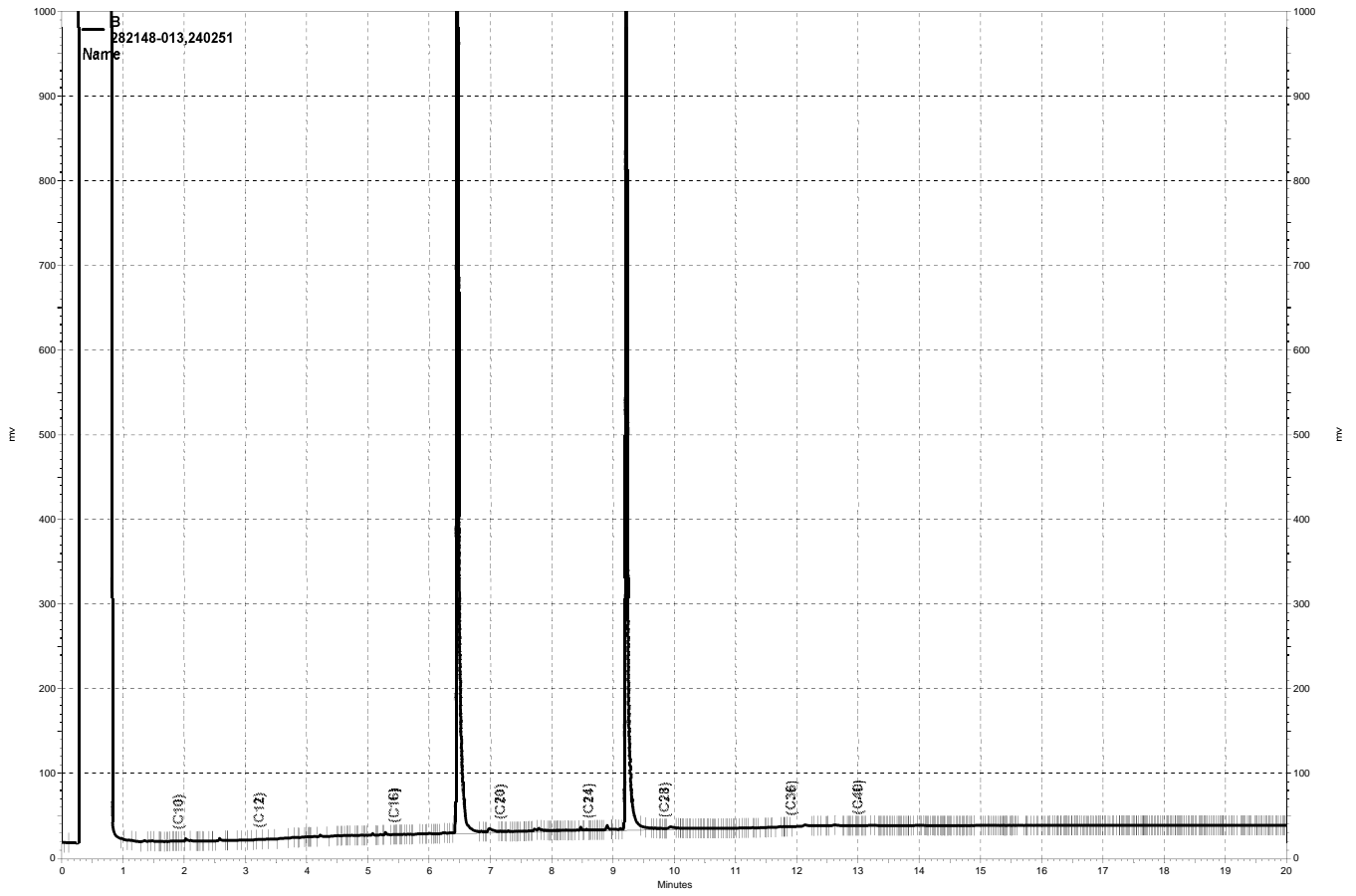
Surrogate	%REC	Limits
o-Terphenyl	76	67-136

Type: BSD Cleanup Method: EPA 3630C
 Lab ID: QC856060

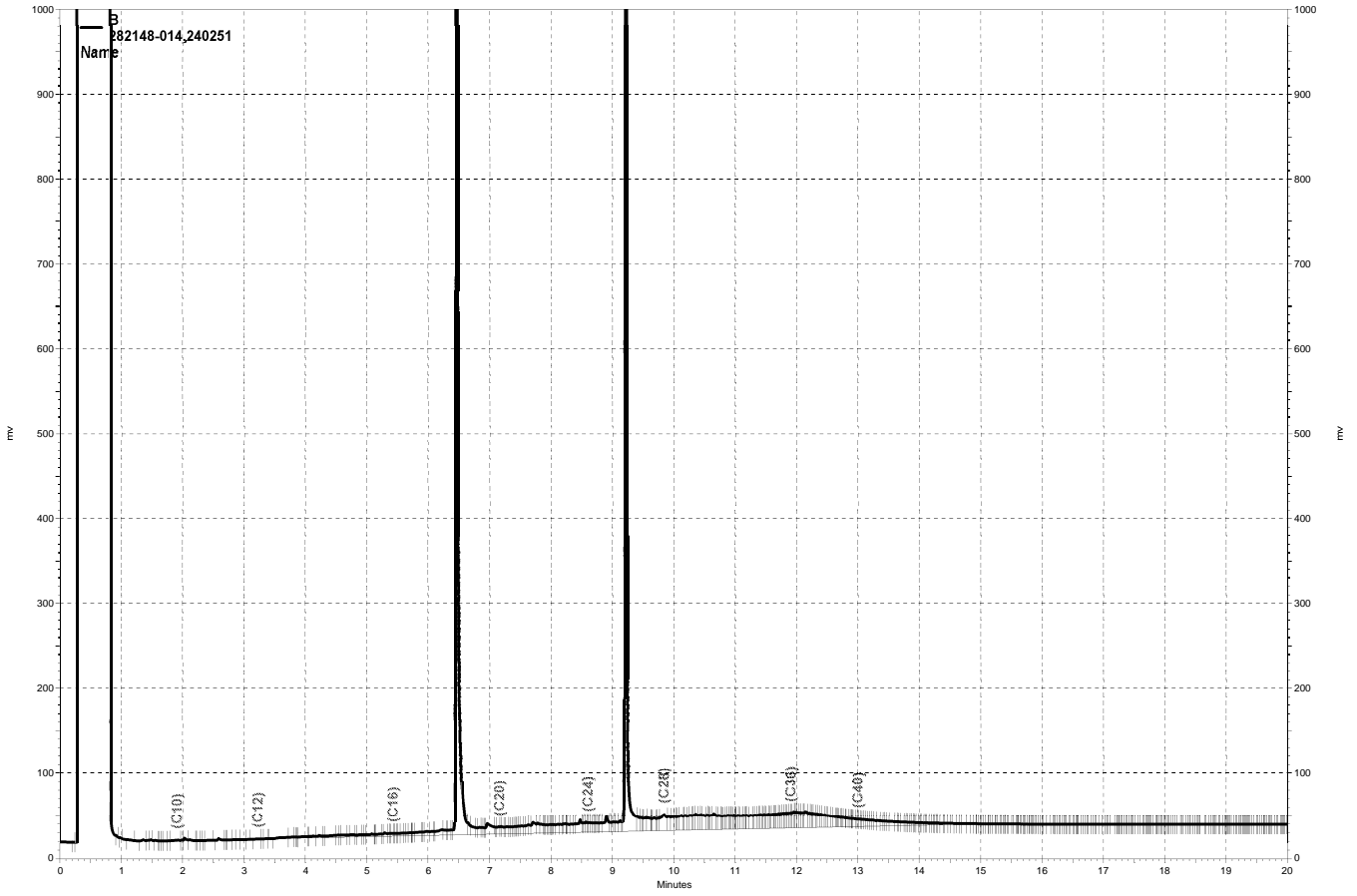
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	1,707	68	60-121	5	32

Surrogate	%REC	Limits
o-Terphenyl	80	67-136

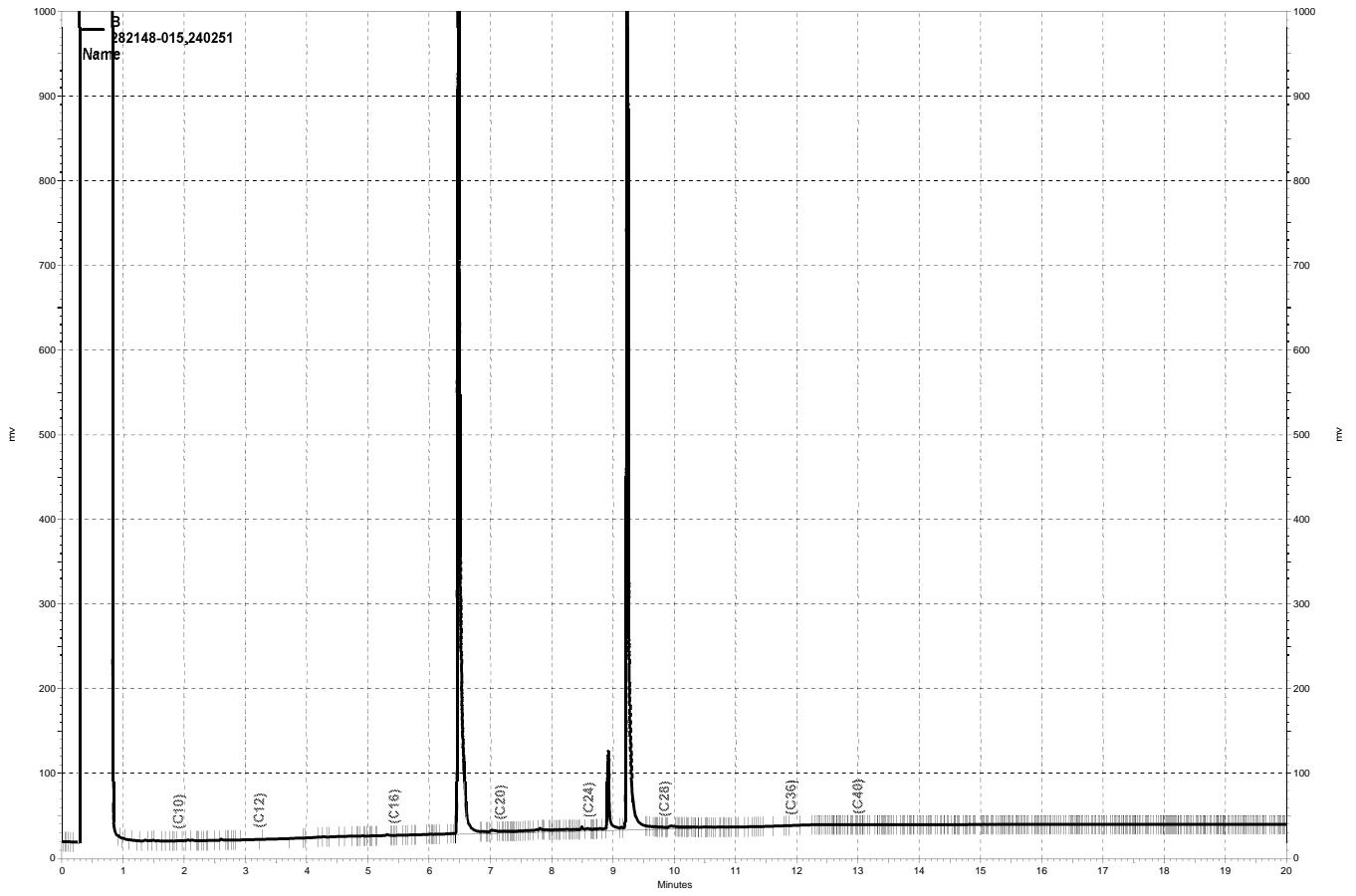
RPD= Relative Percent Difference



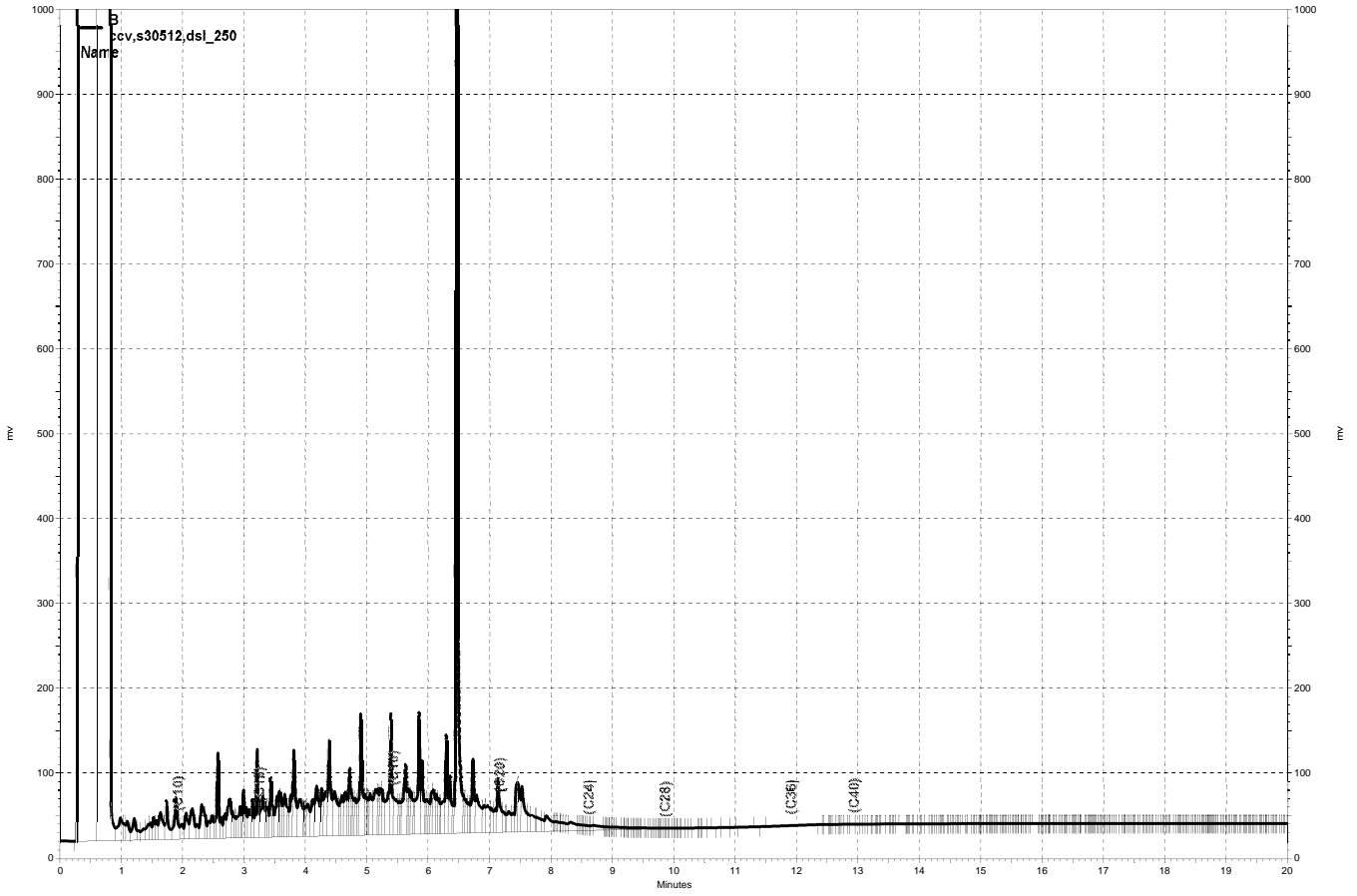
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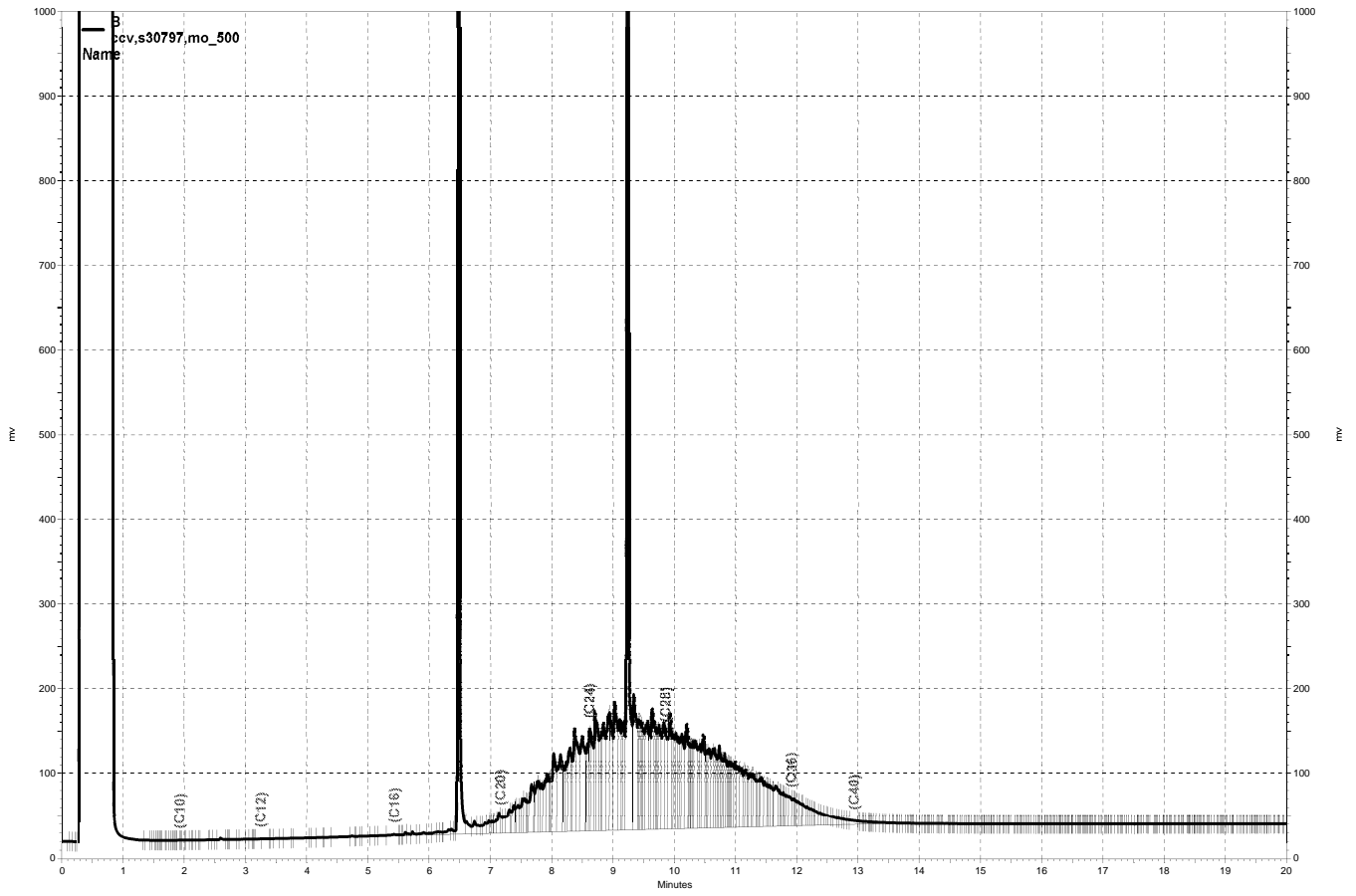
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Total Extractable Hydrocarbons			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16
Basis:	as received	Prepared:	10/14/16
Batch#:	240178	Analyzed:	10/15/16

Field ID: SB-1-1 Lab ID: 282148-001
 Type: SAMPLE Diln Fac: 5.000

Analyte	Result	RL	MDL
Diesel C10-C24	15 Y	5.0	1.5
Motor Oil C24-C36	190	25	7.5

Surrogate	%REC	Limits
o-Terphenyl	87	59-140

Field ID: SB-1-5 Lab ID: 282148-002
 Type: SAMPLE Diln Fac: 10.000

Analyte	Result	RL	MDL
Diesel C10-C24	26 Y	10	3.1
Motor Oil C24-C36	510	50	15

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

Field ID: SB-3-1 Lab ID: 282148-005
 Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	MDL
Diesel C10-C24	2.1 Y	1.0	0.31
Motor Oil C24-C36	28	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	82	59-140

Field ID: SB-3-5 Lab ID: 282148-006
 Type: SAMPLE Diln Fac: 20.000

Analyte	Result	RL	MDL
Diesel C10-C24	65 Y	20	6.1
Motor Oil C24-C36	730	99	30

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

J= Estimated value
 Y= Sample exhibits chromatographic pattern which does not resemble standard
 DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Total Extractable Hydrocarbons			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16
Basis:	as received	Prepared:	10/14/16
Batch#:	240178	Analyzed:	10/15/16

Field ID: SB-4-1 Lab ID: 282148-009
Type: SAMPLE Diln Fac: 20.00

Analyte	Result	RL	MDL
Diesel C10-C24	81 Y	20	6.1
Motor Oil C24-C36	1,200	100	30

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

Field ID: SB-4-5 Lab ID: 282148-010
Type: SAMPLE Diln Fac: 1.000

Analyte	Result	RL	MDL
Diesel C10-C24	0.44 J	1.0	0.31
Motor Oil C24-C36	5.9	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	83	59-140

Type: BLANK Diln Fac: 1.000
Lab ID: QC855764

Analyte	Result	RL	MDL
Diesel C10-C24	ND	1.0	0.31
Motor Oil C24-C36	ND	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	95	59-140

J= Estimated value
Y= Sample exhibits chromatographic pattern which does not resemble standard
DO= Diluted Out
ND= Not Detected at or above MDL
RL= Reporting Limit
MDL= Method Detection Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855765	Batch#:	240178
Matrix:	Soil	Prepared:	10/14/16
Units:	mg/Kg	Analyzed:	10/15/16

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.17	37.97	76	58-137

Surrogate	%REC	Limits
o-Terphenyl	78	59-140

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Field ID:	SB-1-1	Batch#:	240178
MSS Lab ID:	282148-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	mg/Kg	Prepared:	10/14/16
Basis:	as received	Analyzed:	10/15/16
Diln Fac:	5.000		

Type: MS Lab ID: QC855766

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	15.27	49.74	41.45	53	46-154

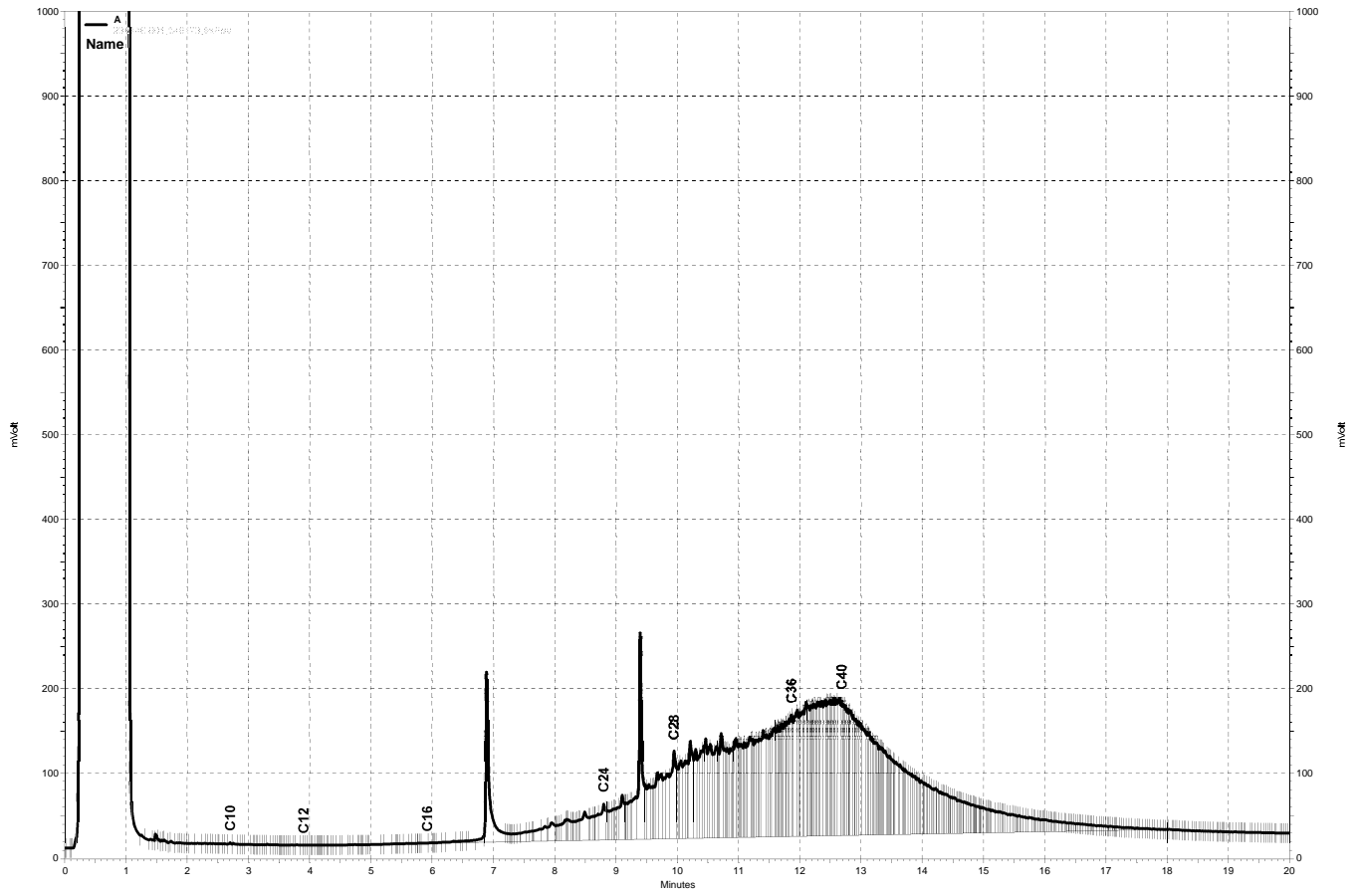
Surrogate	%REC	Limits
o-Terphenyl	74	59-140

Type: MSD Lab ID: QC855767

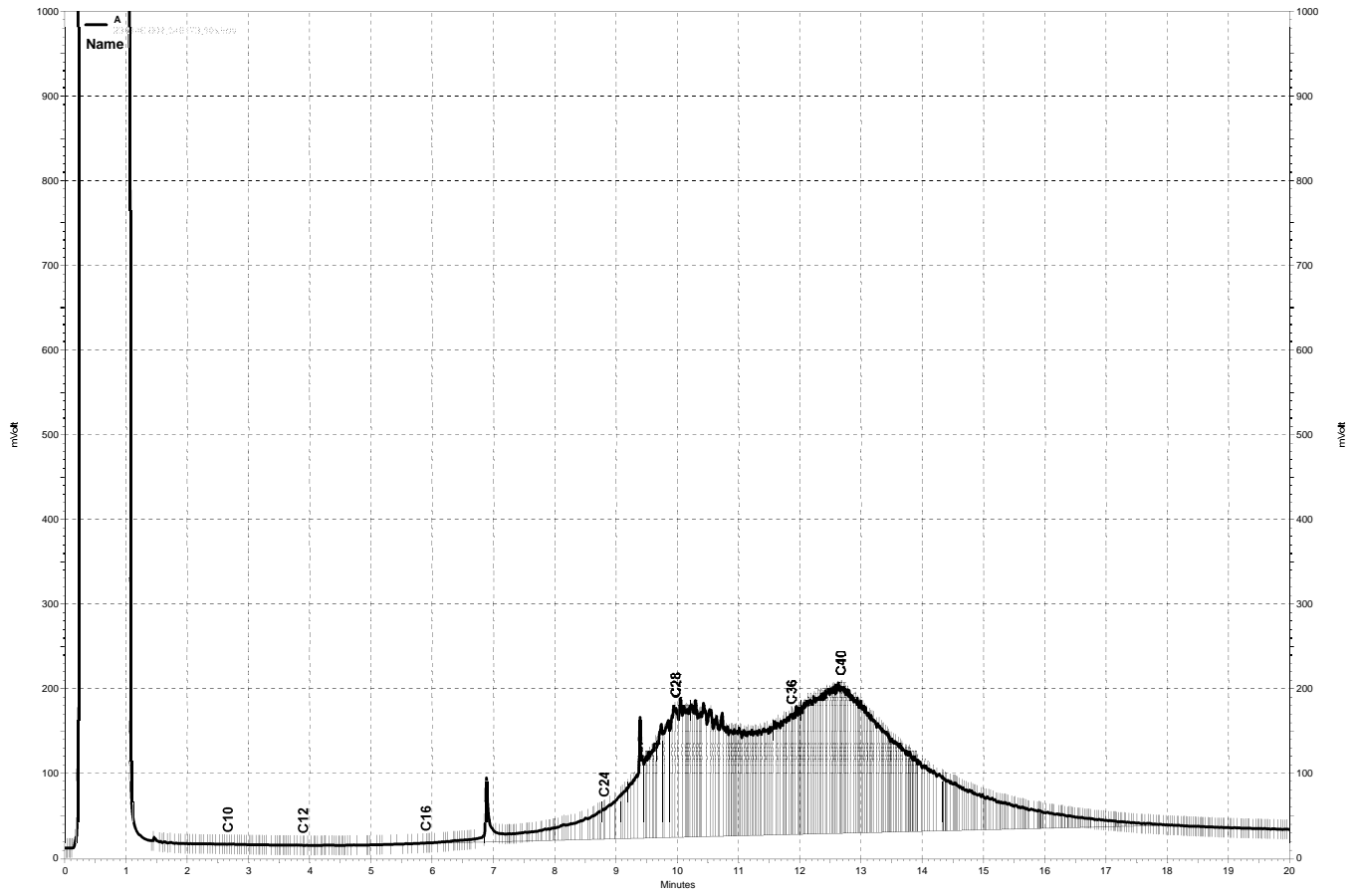
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	50.41	40.12	49	46-154	4	50

Surrogate	%REC	Limits
o-Terphenyl	71	59-140

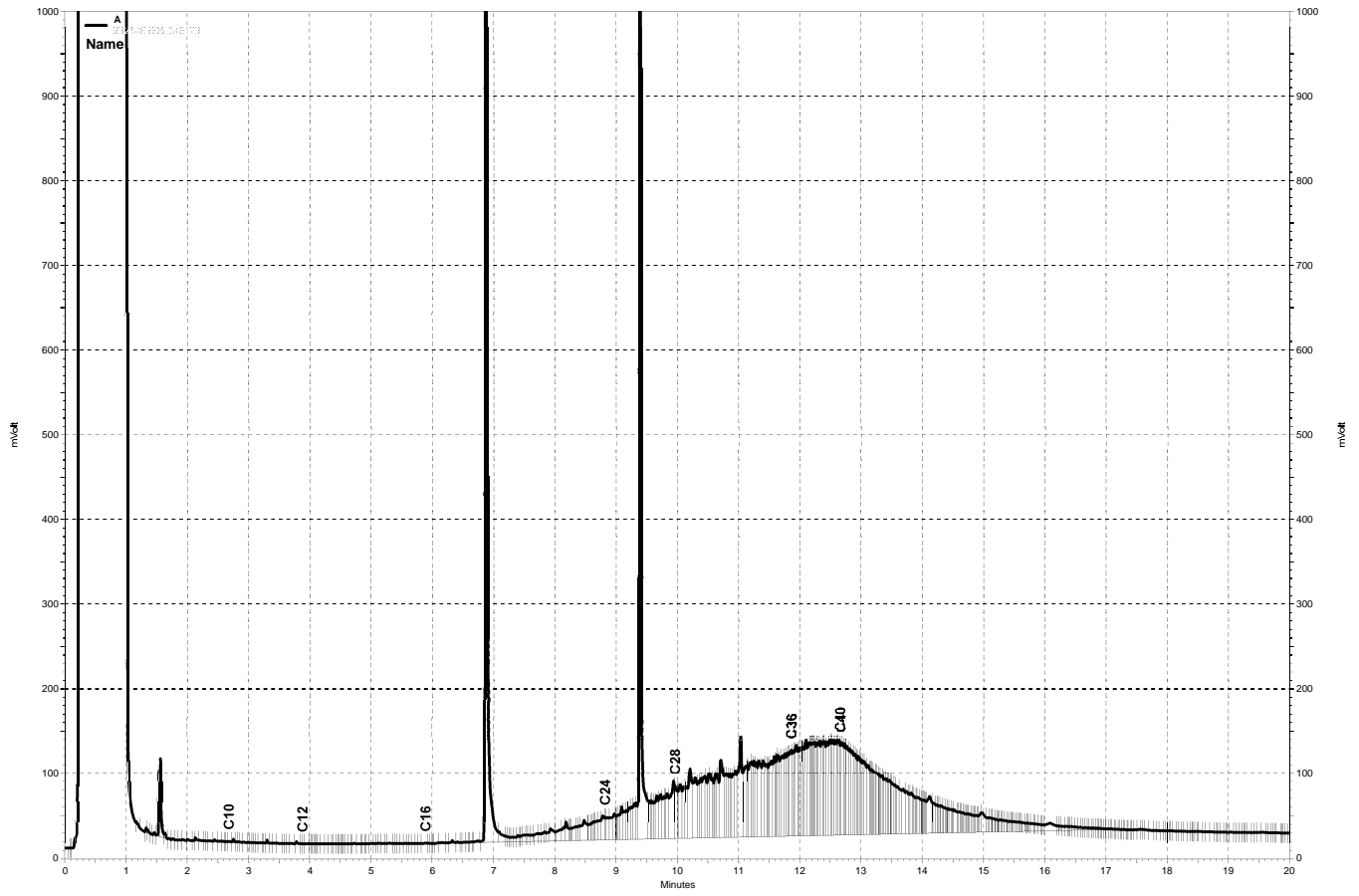
RPD= Relative Percent Difference



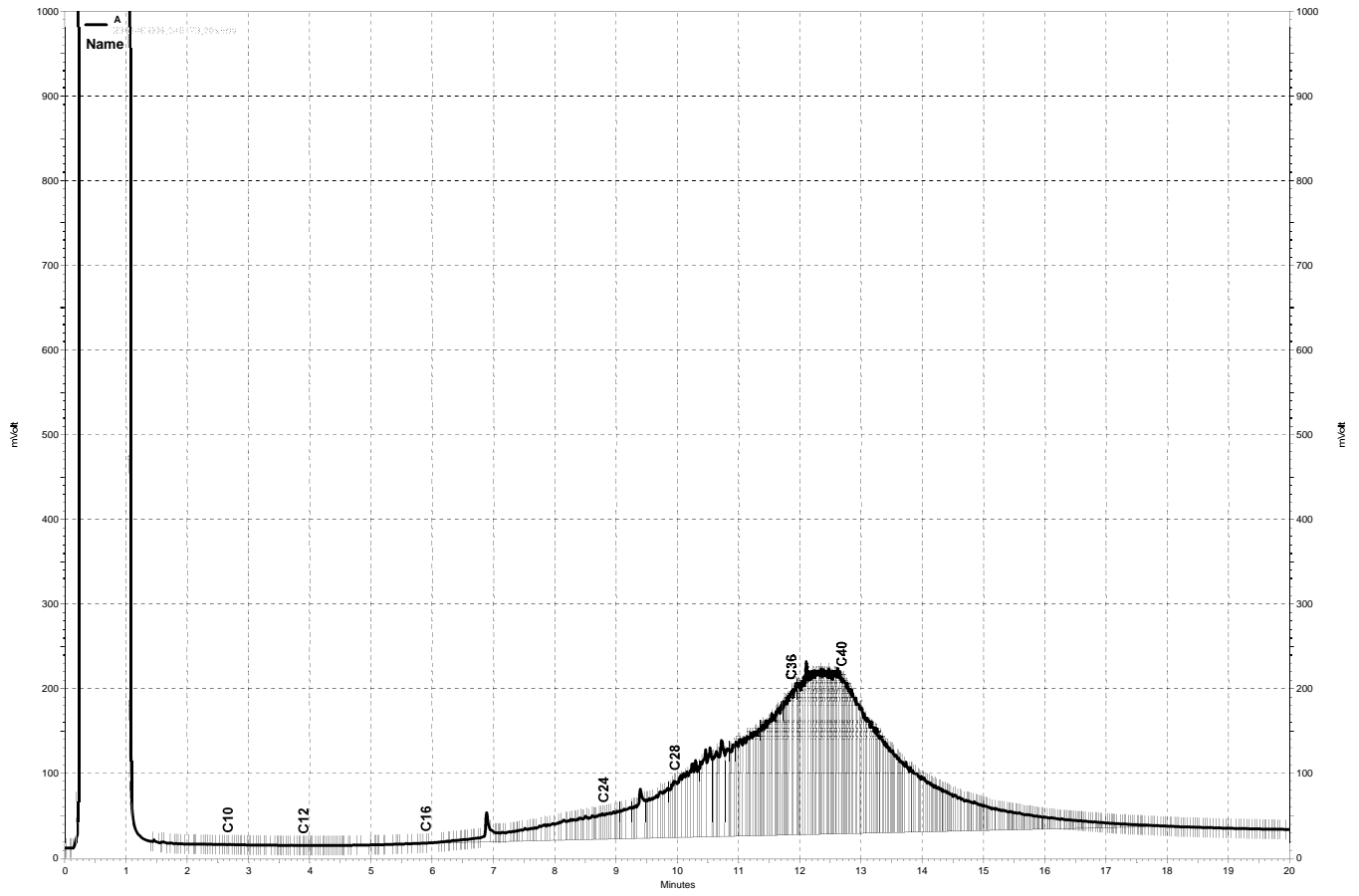
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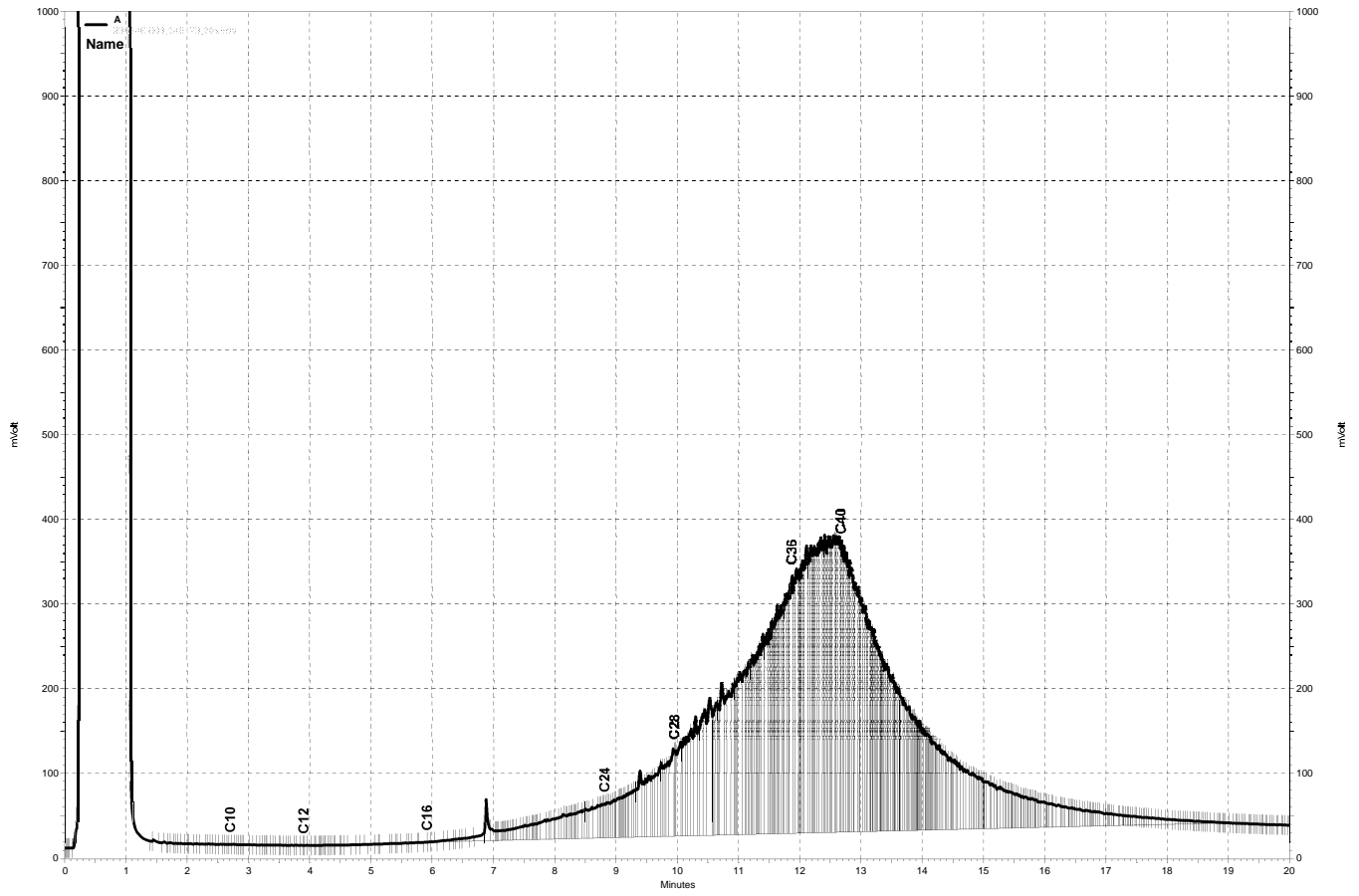
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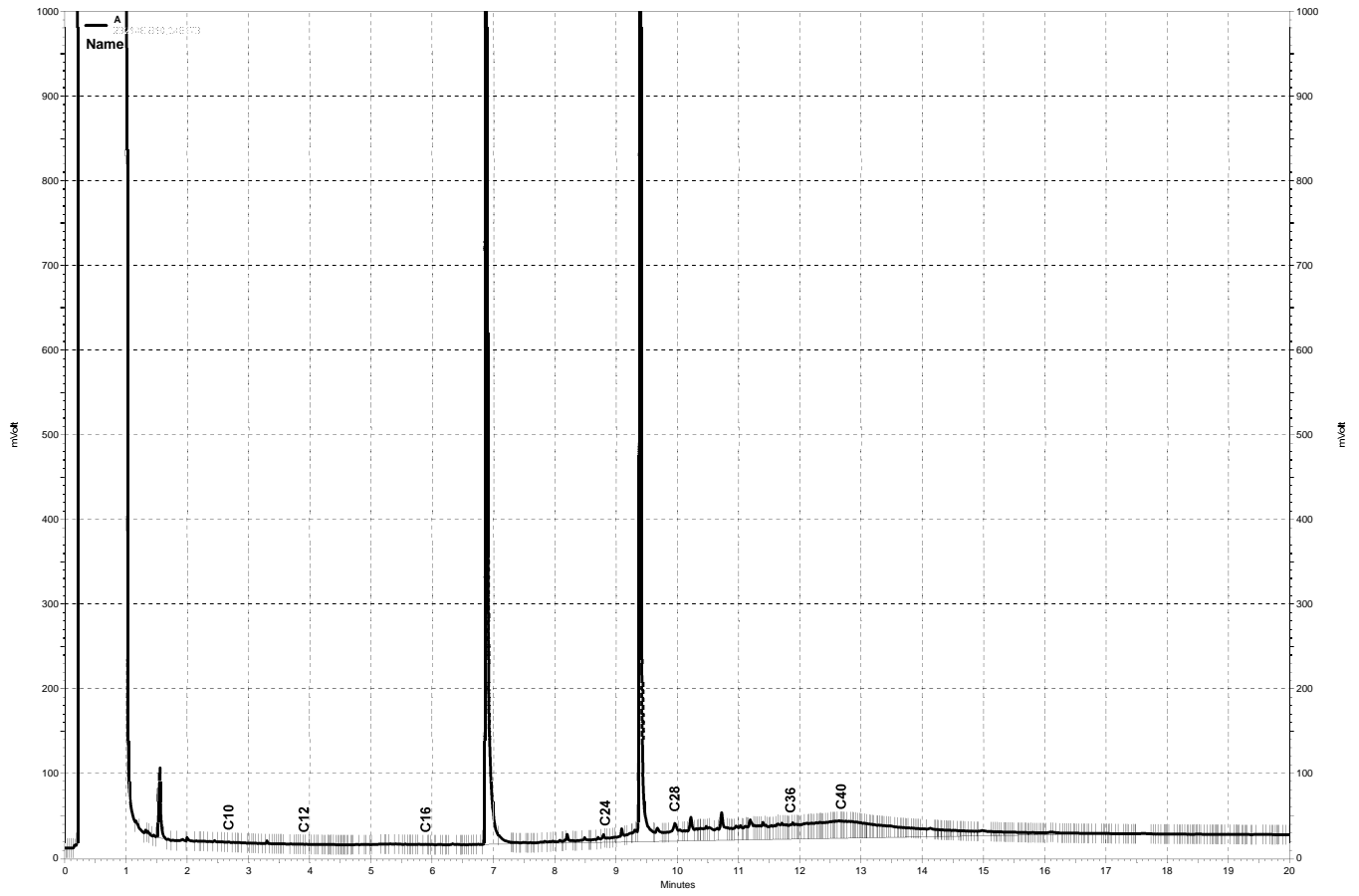
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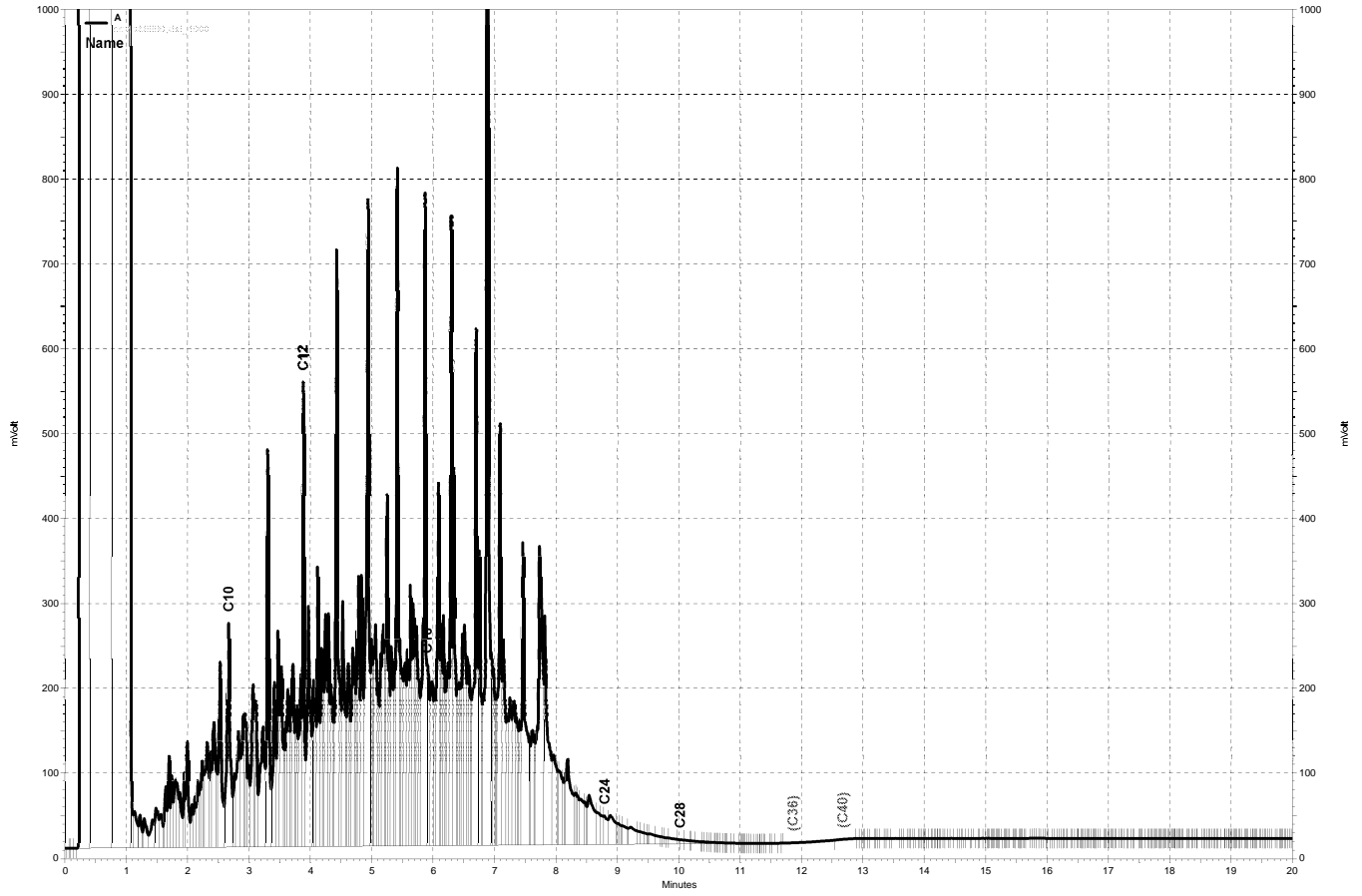
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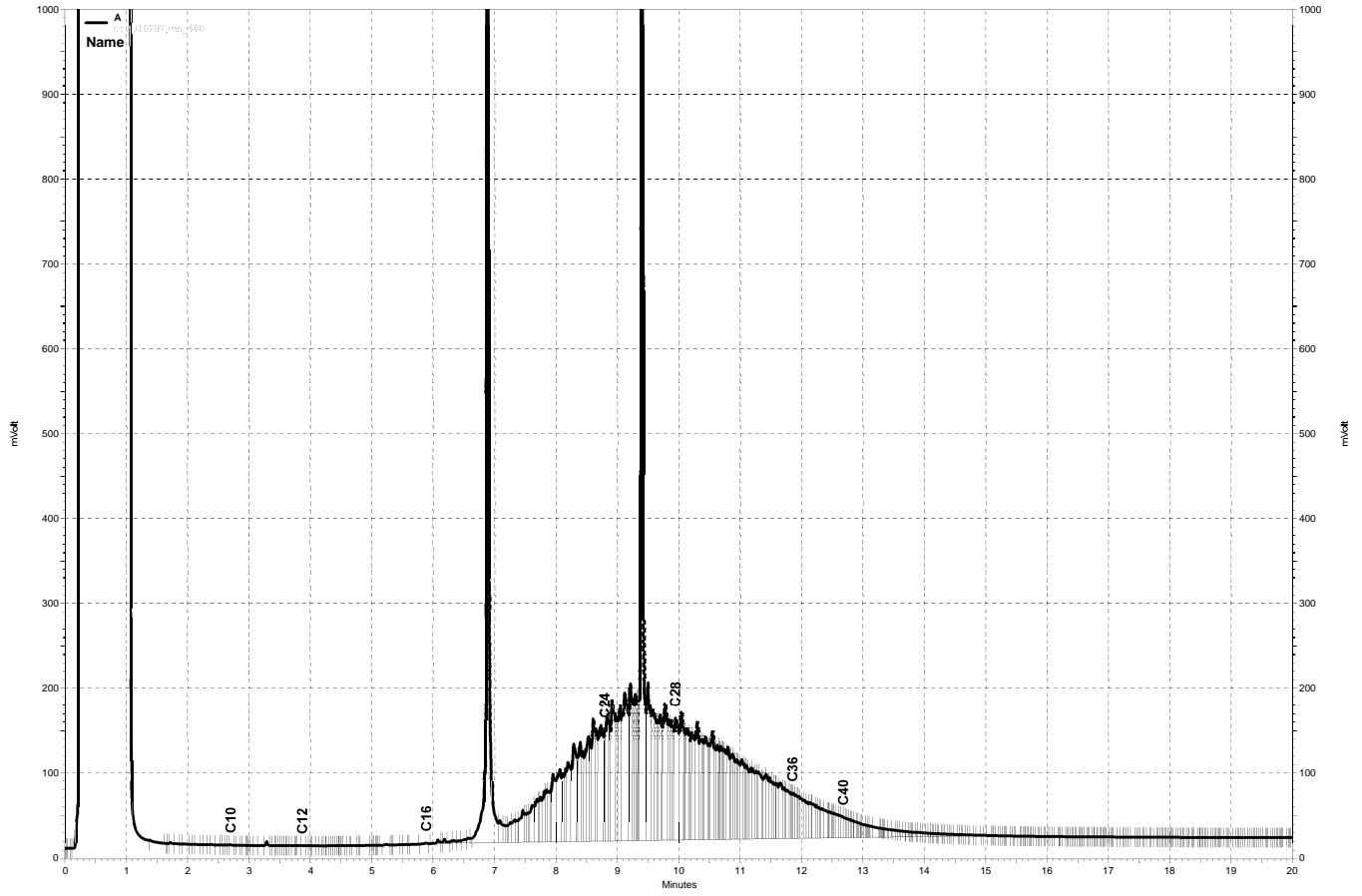
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Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-1-GW	Batch#:	240209
Lab ID:	282148-013	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	50	6.4
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.3
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.2
Methylene Chloride	ND	10	0.2
Carbon Disulfide	0.3 J	0.5	0.1
MTBE	0.8	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.1
1,1-Dichloroethane	ND	0.5	0.2
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	0.2 J	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	0.2 J	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.7
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	0.1 J	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.2
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	0.2 J	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.2
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-1-GW	Batch#:	240209
Lab ID:	282148-013	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.1
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-128
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	89	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-3-GW	Units:	ug/L
Lab ID:	282148-014	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	ND	50	6.4	1.000	240209	10/17/16
Freon 12	ND	1.0	0.1	1.000	240209	10/17/16
Chloromethane	ND	1.0	0.3	1.000	240209	10/17/16
Vinyl Chloride	ND	0.5	0.1	1.000	240209	10/17/16
Bromomethane	ND	1.0	0.2	1.000	240209	10/17/16
Chloroethane	ND	1.0	0.3	1.000	240209	10/17/16
Trichlorofluoromethane	ND	1.0	0.2	1.000	240209	10/17/16
Acetone	ND	10	3.3	1.000	240209	10/17/16
Freon 113	ND	2.0	0.1	1.000	240209	10/17/16
1,1-Dichloroethene	ND	0.5	0.2	1.000	240209	10/17/16
Methylene Chloride	ND	10	0.2	1.000	240209	10/17/16
Carbon Disulfide	ND	0.5	0.1	1.000	240209	10/17/16
MTBE	560	5.0	1.0	10.00	240282	10/18/16
trans-1,2-Dichloroethene	ND	0.5	0.2	1.000	240209	10/17/16
Vinyl Acetate	ND	10	1.1	1.000	240209	10/17/16
1,1-Dichloroethane	ND	0.5	0.2	1.000	240209	10/17/16
2-Butanone	ND	10	0.5	1.000	240209	10/17/16
cis-1,2-Dichloroethene	ND	0.5	0.1	1.000	240209	10/17/16
2,2-Dichloropropane	ND	0.5	0.1	1.000	240209	10/17/16
Chloroform	ND	0.5	0.1	1.000	240209	10/17/16
Bromochloromethane	ND	0.5	0.1	1.000	240209	10/17/16
1,1,1-Trichloroethane	ND	0.5	0.1	1.000	240209	10/17/16
1,1-Dichloropropene	ND	0.5	0.1	1.000	240209	10/17/16
Carbon Tetrachloride	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dichloroethane	0.4 J	0.5	0.1	1.000	240209	10/17/16
Benzene	ND	0.5	0.1	1.000	240209	10/17/16
Trichloroethene	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dichloropropane	ND	0.5	0.1	1.000	240209	10/17/16
Bromodichloromethane	ND	0.5	0.1	1.000	240209	10/17/16
Dibromomethane	ND	0.5	0.1	1.000	240209	10/17/16
4-Methyl-2-Pentanone	ND	10	0.7	1.000	240209	10/17/16
cis-1,3-Dichloropropene	ND	0.5	0.1	1.000	240209	10/17/16
Toluene	ND	0.5	0.1	1.000	240209	10/17/16
trans-1,3-Dichloropropene	ND	0.5	0.1	1.000	240209	10/17/16
1,1,2-Trichloroethane	ND	0.5	0.2	1.000	240209	10/17/16
2-Hexanone	ND	10	0.5	1.000	240209	10/17/16
1,3-Dichloropropane	ND	0.5	0.1	1.000	240209	10/17/16

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-3-GW	Units:	ug/L
Lab ID:	282148-014	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
Tetrachloroethene	ND	0.5	0.1	1.000	240209	10/17/16
Dibromochloromethane	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dibromoethane	ND	0.5	0.1	1.000	240209	10/17/16
Chlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	1.000	240209	10/17/16
Ethylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
m,p-Xylenes	ND	0.5	0.1	1.000	240209	10/17/16
o-Xylene	ND	0.5	0.1	1.000	240209	10/17/16
Styrene	ND	0.5	0.1	1.000	240209	10/17/16
Bromoform	ND	1.0	0.1	1.000	240209	10/17/16
Isopropylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	1.000	240209	10/17/16
1,2,3-Trichloropropane	ND	0.5	0.2	1.000	240209	10/17/16
Propylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
Bromobenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,3,5-Trimethylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
2-Chlorotoluene	ND	0.5	0.1	1.000	240209	10/17/16
4-Chlorotoluene	ND	0.5	0.1	1.000	240209	10/17/16
tert-Butylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,2,4-Trimethylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
sec-Butylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
para-Isopropyl Toluene	ND	0.5	0.1	1.000	240209	10/17/16
1,3-Dichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,4-Dichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
n-Butylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3	1.000	240209	10/17/16
1,2,4-Trichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
Hexachlorobutadiene	ND	2.0	0.1	1.000	240209	10/17/16
Naphthalene	ND	2.0	0.1	1.000	240209	10/17/16
1,2,3-Trichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	91	80-128	1.000	240209	10/17/16
1,2-Dichloroethane-d4	102	75-139	1.000	240209	10/17/16
Toluene-d8	93	80-120	1.000	240209	10/17/16
Bromofluorobenzene	88	80-120	1.000	240209	10/17/16

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-4-GW	Units:	ug/L
Lab ID:	282148-015	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	ND	50	6.4	1.000	240209	10/17/16
Freon 12	ND	1.0	0.1	1.000	240209	10/17/16
Chloromethane	ND	1.0	0.3	1.000	240209	10/17/16
Vinyl Chloride	ND	0.5	0.1	1.000	240209	10/17/16
Bromomethane	ND	1.0	0.2	1.000	240209	10/17/16
Chloroethane	ND	1.0	0.3	1.000	240209	10/17/16
Trichlorofluoromethane	ND	1.0	0.2	1.000	240209	10/17/16
Acetone	ND	10	3.3	1.000	240209	10/17/16
Freon 113	ND	2.0	0.1	1.000	240209	10/17/16
1,1-Dichloroethene	ND	0.5	0.2	1.000	240209	10/17/16
Methylene Chloride	ND	10	0.2	1.000	240209	10/17/16
Carbon Disulfide	ND	0.5	0.1	1.000	240209	10/17/16
MTBE	710	6.3	1.3	12.50	240282	10/18/16
trans-1,2-Dichloroethene	ND	0.5	0.2	1.000	240209	10/17/16
Vinyl Acetate	ND	10	1.1	1.000	240209	10/17/16
1,1-Dichloroethane	ND	0.5	0.2	1.000	240209	10/17/16
2-Butanone	ND	10	0.5	1.000	240209	10/17/16
cis-1,2-Dichloroethene	ND	0.5	0.1	1.000	240209	10/17/16
2,2-Dichloropropane	ND	0.5	0.1	1.000	240209	10/17/16
Chloroform	ND	0.5	0.1	1.000	240209	10/17/16
Bromochloromethane	ND	0.5	0.1	1.000	240209	10/17/16
1,1,1-Trichloroethane	ND	0.5	0.1	1.000	240209	10/17/16
1,1-Dichloropropene	ND	0.5	0.1	1.000	240209	10/17/16
Carbon Tetrachloride	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dichloroethane	0.3 J	0.5	0.1	1.000	240209	10/17/16
Benzene	ND	0.5	0.1	1.000	240209	10/17/16
Trichloroethene	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dichloropropane	ND	0.5	0.1	1.000	240209	10/17/16
Bromodichloromethane	ND	0.5	0.1	1.000	240209	10/17/16
Dibromomethane	ND	0.5	0.1	1.000	240209	10/17/16
4-Methyl-2-Pentanone	ND	10	0.7	1.000	240209	10/17/16
cis-1,3-Dichloropropene	ND	0.5	0.1	1.000	240209	10/17/16
Toluene	ND	0.5	0.1	1.000	240209	10/17/16
trans-1,3-Dichloropropene	ND	0.5	0.1	1.000	240209	10/17/16
1,1,2-Trichloroethane	ND	0.5	0.2	1.000	240209	10/17/16
2-Hexanone	ND	10	0.5	1.000	240209	10/17/16
1,3-Dichloropropane	ND	0.5	0.1	1.000	240209	10/17/16

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-4-GW	Units:	ug/L
Lab ID:	282148-015	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16

Analyte	Result	RL	MDL	Diln Fac	Batch#	Analyzed
Tetrachloroethene	ND	0.5	0.1	1.000	240209	10/17/16
Dibromochloromethane	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dibromoethane	ND	0.5	0.1	1.000	240209	10/17/16
Chlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,1,1,2-Tetrachloroethane	ND	0.5	0.1	1.000	240209	10/17/16
Ethylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
m,p-Xylenes	ND	0.5	0.1	1.000	240209	10/17/16
o-Xylene	ND	0.5	0.1	1.000	240209	10/17/16
Styrene	ND	0.5	0.1	1.000	240209	10/17/16
Bromoform	ND	1.0	0.1	1.000	240209	10/17/16
Isopropylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,1,2,2-Tetrachloroethane	ND	0.5	0.1	1.000	240209	10/17/16
1,2,3-Trichloropropane	ND	0.5	0.2	1.000	240209	10/17/16
Propylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
Bromobenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,3,5-Trimethylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
2-Chlorotoluene	ND	0.5	0.1	1.000	240209	10/17/16
4-Chlorotoluene	ND	0.5	0.1	1.000	240209	10/17/16
tert-Butylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,2,4-Trimethylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
sec-Butylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
para-Isopropyl Toluene	ND	0.5	0.1	1.000	240209	10/17/16
1,3-Dichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,4-Dichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
n-Butylbenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3	1.000	240209	10/17/16
1,2,4-Trichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16
Hexachlorobutadiene	ND	2.0	0.1	1.000	240209	10/17/16
Naphthalene	ND	2.0	0.1	1.000	240209	10/17/16
1,2,3-Trichlorobenzene	ND	0.5	0.1	1.000	240209	10/17/16

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	91	80-128	1.000	240209	10/17/16
1,2-Dichloroethane-d4	100	75-139	1.000	240209	10/17/16
Toluene-d8	92	80-120	1.000	240209	10/17/16
Bromofluorobenzene	89	80-120	1.000	240209	10/17/16

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	TRIP BLANK	Batch#:	240209
Lab ID:	282148-016	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	50	6.4
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.3
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.2
Methylene Chloride	ND	10	0.2
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.1
1,1-Dichloroethane	ND	0.5	0.2
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.7
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.2
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.2
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	TRIP BLANK	Batch#:	240209
Lab ID:	282148-016	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.1
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	89	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report
Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855879	Batch#:	240209
Matrix:	Water	Analyzed:	10/17/16
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	50	6.4
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.3
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.2
Methylene Chloride	ND	10	0.2
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.1
1,1-Dichloroethane	ND	0.5	0.2
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.7
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.2
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.2
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855879	Batch#:	240209
Matrix:	Water	Analyzed:	10/17/16
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.1
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	89	80-120

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	240209
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Type: BS Lab ID: QC855890

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,114	111	70-130

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	90	80-120

Type: BSD Lab ID: QC855891

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,074	107	70-130	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	90	80-120

RPD= Relative Percent Difference

Batch QC Report
Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	240282
Units:	ug/L	Analyzed:	10/18/16
Diln Fac:	1.000		

Type: BS Lab ID: QC856188

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	12.20	98	66-135
Benzene	12.50	11.82	95	80-123
Trichloroethene	12.50	11.99	96	80-123
Toluene	12.50	12.83	103	80-121
Chlorobenzene	12.50	12.58	101	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-128
1,2-Dichloroethane-d4	87	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	105	80-120

Type: BSD Lab ID: QC856189

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	11.79	94	66-135	3	24
Benzene	12.50	11.74	94	80-123	1	20
Trichloroethene	12.50	11.63	93	80-123	3	20
Toluene	12.50	12.00	96	80-121	7	20
Chlorobenzene	12.50	12.01	96	80-123	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-128
1,2-Dichloroethane-d4	89	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	104	80-120

RPD= Relative Percent Difference

Batch QC Report
Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856190	Batch#:	240282
Matrix:	Water	Analyzed:	10/18/16
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	NA		
Freon 12	ND	1.0	0.2
Chloromethane	ND	1.0	0.2
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.2
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.3
1,1-Dichloroethene	ND	0.5	0.1
Methylene Chloride	ND	10	0.1
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.1
Vinyl Acetate	ND	10	0.5
1,1-Dichloroethane	ND	0.5	0.1
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.2
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.2
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.2
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.2
2-Hexanone	ND	10	0.2
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.2
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.1

J= Estimated value
 b= See narrative
 NA= Not Analyzed
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report
Curtis & Tompkins Laboratories Analytical Report

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856190	Batch#:	240282
Matrix:	Water	Analyzed:	10/18/16
Units:	ug/L		

Analyte	Result	RL	MDL
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.2
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.2
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	0.1 J	0.5	0.1
1,4-Dichlorobenzene	0.2 J	0.5	0.1
n-Butylbenzene	0.9 b	0.5	0.1
1,2-Dichlorobenzene	0.1 J	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.2
1,2,4-Trichlorobenzene	0.2 J	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.3
Naphthalene	0.2 J	2.0	0.1
1,2,3-Trichlorobenzene	0.2 J	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-128
1,2-Dichloroethane-d4	88	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-120

J= Estimated value
 b= See narrative
 NA= Not Analyzed
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-1-1	Diln Fac:	0.9398
Lab ID:	282148-001	Batch#:	240202
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/16/16

Analyte	Result	RL	MDL
Freon 12	ND	9.4	0.6
Chloromethane	ND	9.4	0.5
Vinyl Chloride	ND	9.4	0.4
Bromomethane	ND	9.4	0.3
Chloroethane	ND	9.4	0.4
Trichlorofluoromethane	ND	4.7	0.3
Acetone	4.8 J	19	3.1
Freon 113	ND	4.7	0.5
1,1-Dichloroethene	ND	4.7	0.6
Methylene Chloride	ND	19	1.0
Carbon Disulfide	ND	4.7	0.6
MTBE	ND	4.7	0.5
trans-1,2-Dichloroethene	ND	4.7	0.6
Vinyl Acetate	ND	47	0.5
1,1-Dichloroethane	ND	4.7	0.7
2-Butanone	ND	9.4	1.2
cis-1,2-Dichloroethene	ND	4.7	0.5
2,2-Dichloropropane	ND	4.7	0.6
Chloroform	ND	4.7	0.7
Bromochloromethane	ND	4.7	0.2
1,1,1-Trichloroethane	ND	4.7	0.6
1,1-Dichloropropene	ND	4.7	0.6
Carbon Tetrachloride	ND	4.7	0.6
1,2-Dichloroethane	ND	4.7	0.6
Benzene	ND	4.7	0.7
Trichloroethene	ND	4.7	0.7
1,2-Dichloropropane	ND	4.7	0.6
Bromodichloromethane	ND	4.7	0.5
Dibromomethane	ND	4.7	0.2
4-Methyl-2-Pentanone	ND	9.4	0.6
cis-1,3-Dichloropropene	ND	4.7	0.4
Toluene	ND	4.7	0.7
trans-1,3-Dichloropropene	ND	4.7	0.4
1,1,2-Trichloroethane	ND	4.7	0.5
2-Hexanone	ND	9.4	0.6
1,3-Dichloropropane	ND	4.7	0.5
Tetrachloroethene	ND	4.7	0.6
Dibromochloromethane	ND	4.7	0.5
1,2-Dibromoethane	ND	4.7	0.5
Chlorobenzene	ND	4.7	0.6
1,1,1,2-Tetrachloroethane	ND	4.7	0.5
Ethylbenzene	ND	4.7	0.7
m,p-Xylenes	ND	4.7	1.3
o-Xylene	ND	4.7	0.6
Styrene	ND	4.7	0.5
Bromoform	ND	4.7	0.5
Isopropylbenzene	ND	4.7	0.6
1,1,2,2-Tetrachloroethane	ND	4.7	0.5
1,2,3-Trichloropropane	ND	4.7	0.6
Propylbenzene	ND	4.7	0.6
Bromobenzene	ND	4.7	0.2
1,3,5-Trimethylbenzene	ND	4.7	0.6

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-1-1	Diln Fac:	0.9398
Lab ID:	282148-001	Batch#:	240202
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/16/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.7	0.6
4-Chlorotoluene	ND	4.7	0.6
tert-Butylbenzene	ND	4.7	0.7
1,2,4-Trimethylbenzene	ND	4.7	0.6
sec-Butylbenzene	ND	4.7	0.6
para-Isopropyl Toluene	ND	4.7	0.6
1,3-Dichlorobenzene	ND	4.7	0.5
1,4-Dichlorobenzene	ND	4.7	0.4
n-Butylbenzene	ND	4.7	0.6
1,2-Dichlorobenzene	ND	4.7	0.4
1,2-Dibromo-3-Chloropropane	ND	4.7	0.7
1,2,4-Trichlorobenzene	ND	4.7	0.2
Hexachlorobutadiene	ND	4.7	0.6
Naphthalene	ND	4.7	0.9
1,2,3-Trichlorobenzene	ND	4.7	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	119	80-138
Toluene-d8	103	80-120
Bromofluorobenzene	114	78-123

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-1-5	Diln Fac:	0.9398
Lab ID:	282148-002	Batch#:	240202
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/16/16

Analyte	Result	RL	MDL
Freon 12	ND	9.4	0.6
Chloromethane	ND	9.4	0.5
Vinyl Chloride	ND	9.4	0.4
Bromomethane	ND	9.4	0.3
Chloroethane	ND	9.4	0.4
Trichlorofluoromethane	ND	4.7	0.3
Acetone	ND	19	3.1
Freon 113	ND	4.7	0.5
1,1-Dichloroethene	ND	4.7	0.6
Methylene Chloride	ND	19	1.0
Carbon Disulfide	ND	4.7	0.6
MTBE	ND	4.7	0.5
trans-1,2-Dichloroethene	ND	4.7	0.6
Vinyl Acetate	ND	47	0.5
1,1-Dichloroethane	ND	4.7	0.7
2-Butanone	ND	9.4	1.2
cis-1,2-Dichloroethene	ND	4.7	0.5
2,2-Dichloropropane	ND	4.7	0.6
Chloroform	ND	4.7	0.7
Bromochloromethane	ND	4.7	0.2
1,1,1-Trichloroethane	ND	4.7	0.6
1,1-Dichloropropene	ND	4.7	0.6
Carbon Tetrachloride	ND	4.7	0.6
1,2-Dichloroethane	ND	4.7	0.6
Benzene	ND	4.7	0.7
Trichloroethene	ND	4.7	0.7
1,2-Dichloropropane	ND	4.7	0.6
Bromodichloromethane	ND	4.7	0.5
Dibromomethane	ND	4.7	0.2
4-Methyl-2-Pentanone	ND	9.4	0.6
cis-1,3-Dichloropropene	ND	4.7	0.4
Toluene	ND	4.7	0.7
trans-1,3-Dichloropropene	ND	4.7	0.4
1,1,2-Trichloroethane	ND	4.7	0.5
2-Hexanone	ND	9.4	0.6
1,3-Dichloropropane	ND	4.7	0.5
Tetrachloroethene	ND	4.7	0.6
Dibromochloromethane	ND	4.7	0.5
1,2-Dibromoethane	ND	4.7	0.5
Chlorobenzene	ND	4.7	0.6
1,1,1,2-Tetrachloroethane	ND	4.7	0.5
Ethylbenzene	ND	4.7	0.7
m,p-Xylenes	ND	4.7	1.3
o-Xylene	ND	4.7	0.6
Styrene	ND	4.7	0.5
Bromoform	ND	4.7	0.5
Isopropylbenzene	ND	4.7	0.6
1,1,2,2-Tetrachloroethane	ND	4.7	0.5
1,2,3-Trichloropropane	ND	4.7	0.6
Propylbenzene	ND	4.7	0.6
Bromobenzene	ND	4.7	0.2
1,3,5-Trimethylbenzene	ND	4.7	0.6
2-Chlorotoluene	ND	4.7	0.6

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-1-5	Diln Fac:	0.9398
Lab ID:	282148-002	Batch#:	240202
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/16/16

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	4.7	0.6
tert-Butylbenzene	ND	4.7	0.7
1,2,4-Trimethylbenzene	ND	4.7	0.6
sec-Butylbenzene	ND	4.7	0.6
para-Isopropyl Toluene	ND	4.7	0.6
1,3-Dichlorobenzene	ND	4.7	0.5
1,4-Dichlorobenzene	ND	4.7	0.4
n-Butylbenzene	ND	4.7	0.6
1,2-Dichlorobenzene	ND	4.7	0.4
1,2-Dibromo-3-Chloropropane	ND	4.7	0.7
1,2,4-Trichlorobenzene	ND	4.7	0.2
Hexachlorobutadiene	ND	4.7	0.6
Naphthalene	ND	4.7	0.9
1,2,3-Trichlorobenzene	ND	4.7	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	118	80-138
Toluene-d8	103	80-120
Bromofluorobenzene	112	78-123

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-3-1	Diln Fac:	0.9091
Lab ID:	282148-005	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/14/16

Analyte	Result	RL	MDL
Freon 12	ND	9.1	0.6
Chloromethane	ND	9.1	0.4
Vinyl Chloride	ND	9.1	0.4
Bromomethane	ND	9.1	0.3
Chloroethane	ND	9.1	0.4
Trichlorofluoromethane	ND	4.5	0.3
Acetone	ND	18	3.0
Freon 113	ND	4.5	0.5
1,1-Dichloroethene	ND	4.5	0.5
Methylene Chloride	ND	18	1.0
Carbon Disulfide	ND	4.5	0.6
MTBE	ND	4.5	0.4
trans-1,2-Dichloroethene	ND	4.5	0.6
Vinyl Acetate	ND	45	0.5
1,1-Dichloroethane	ND	4.5	0.7
2-Butanone	ND	9.1	1.2
cis-1,2-Dichloroethene	ND	4.5	0.5
2,2-Dichloropropane	ND	4.5	0.5
Chloroform	ND	4.5	0.6
Bromochloromethane	ND	4.5	0.2
1,1,1-Trichloroethane	ND	4.5	0.6
1,1-Dichloropropene	ND	4.5	0.6
Carbon Tetrachloride	ND	4.5	0.5
1,2-Dichloroethane	ND	4.5	0.6
Benzene	ND	4.5	0.6
Trichloroethene	ND	4.5	0.7
1,2-Dichloropropane	ND	4.5	0.5
Bromodichloromethane	ND	4.5	0.5
Dibromomethane	ND	4.5	0.2
4-Methyl-2-Pentanone	ND	9.1	0.5
cis-1,3-Dichloropropene	ND	4.5	0.4
Toluene	ND	4.5	0.7
trans-1,3-Dichloropropene	ND	4.5	0.4
1,1,2-Trichloroethane	ND	4.5	0.4
2-Hexanone	ND	9.1	0.6
1,3-Dichloropropane	ND	4.5	0.5
Tetrachloroethene	ND	4.5	0.6
Dibromochloromethane	ND	4.5	0.4
1,2-Dibromoethane	ND	4.5	0.5
Chlorobenzene	ND	4.5	0.6
1,1,1,2-Tetrachloroethane	ND	4.5	0.5
Ethylbenzene	ND	4.5	0.6
m,p-Xylenes	ND	4.5	1.3
o-Xylene	ND	4.5	0.5
Styrene	ND	4.5	0.5
Bromoform	ND	4.5	0.5
Isopropylbenzene	ND	4.5	0.6
1,1,2,2-Tetrachloroethane	ND	4.5	0.5
1,2,3-Trichloropropane	ND	4.5	0.6
Propylbenzene	ND	4.5	0.6
Bromobenzene	ND	4.5	0.2
1,3,5-Trimethylbenzene	ND	4.5	0.6
2-Chlorotoluene	ND	4.5	0.6

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-3-1	Diln Fac:	0.9091
Lab ID:	282148-005	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/14/16

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	4.5	0.6
tert-Butylbenzene	ND	4.5	0.6
1,2,4-Trimethylbenzene	ND	4.5	0.6
sec-Butylbenzene	ND	4.5	0.6
para-Isopropyl Toluene	ND	4.5	0.6
1,3-Dichlorobenzene	ND	4.5	0.5
1,4-Dichlorobenzene	ND	4.5	0.4
n-Butylbenzene	ND	4.5	0.5
1,2-Dichlorobenzene	ND	4.5	0.4
1,2-Dibromo-3-Chloropropane	ND	4.5	0.7
1,2,4-Trichlorobenzene	ND	4.5	0.2
Hexachlorobutadiene	ND	4.5	0.6
Naphthalene	ND	4.5	0.9
1,2,3-Trichlorobenzene	ND	4.5	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	121	80-138
Toluene-d8	104	80-120
Bromofluorobenzene	112	78-123

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-3-5	Diln Fac:	0.9747
Lab ID:	282148-006	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/14/16

Analyte	Result	RL	MDL
Freon 12	ND	9.7	0.6
Chloromethane	ND	9.7	0.5
Vinyl Chloride	ND	9.7	0.4
Bromomethane	ND	9.7	0.4
Chloroethane	ND	9.7	0.4
Trichlorofluoromethane	ND	4.9	0.3
Acetone	ND	19	3.2
Freon 113	ND	4.9	0.5
1,1-Dichloroethene	ND	4.9	0.6
Methylene Chloride	ND	19	1.0
Carbon Disulfide	ND	4.9	0.6
MTBE	ND	4.9	0.5
trans-1,2-Dichloroethene	ND	4.9	0.7
Vinyl Acetate	ND	49	0.5
1,1-Dichloroethane	ND	4.9	0.7
2-Butanone	ND	9.7	1.3
cis-1,2-Dichloroethene	ND	4.9	0.6
2,2-Dichloropropane	ND	4.9	0.6
Chloroform	ND	4.9	0.7
Bromochloromethane	ND	4.9	0.2
1,1,1-Trichloroethane	ND	4.9	0.6
1,1-Dichloropropene	ND	4.9	0.6
Carbon Tetrachloride	ND	4.9	0.6
1,2-Dichloroethane	ND	4.9	0.6
Benzene	ND	4.9	0.7
Trichloroethene	ND	4.9	0.7
1,2-Dichloropropane	ND	4.9	0.6
Bromodichloromethane	ND	4.9	0.5
Dibromomethane	ND	4.9	0.2
4-Methyl-2-Pentanone	ND	9.7	0.6
cis-1,3-Dichloropropene	ND	4.9	0.4
Toluene	ND	4.9	0.7
trans-1,3-Dichloropropene	ND	4.9	0.4
1,1,2-Trichloroethane	ND	4.9	0.5
2-Hexanone	ND	9.7	0.6
1,3-Dichloropropane	ND	4.9	0.5
Tetrachloroethene	ND	4.9	0.6
Dibromochloromethane	ND	4.9	0.5
1,2-Dibromoethane	ND	4.9	0.5
Chlorobenzene	ND	4.9	0.6
1,1,1,2-Tetrachloroethane	ND	4.9	0.5
Ethylbenzene	ND	4.9	0.7
m,p-Xylenes	ND	4.9	1.3
o-Xylene	ND	4.9	0.6
Styrene	ND	4.9	0.5
Bromoform	ND	4.9	0.5
Isopropylbenzene	ND	4.9	0.6
1,1,2,2-Tetrachloroethane	ND	4.9	0.5
1,2,3-Trichloropropane	ND	4.9	0.6
Propylbenzene	ND	4.9	0.6
Bromobenzene	ND	4.9	0.2
1,3,5-Trimethylbenzene	ND	4.9	0.6
2-Chlorotoluene	ND	4.9	0.7

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-3-5	Diln Fac:	0.9747
Lab ID:	282148-006	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/14/16

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	4.9	0.6
tert-Butylbenzene	ND	4.9	0.7
1,2,4-Trimethylbenzene	ND	4.9	0.6
sec-Butylbenzene	ND	4.9	0.6
para-Isopropyl Toluene	ND	4.9	0.6
1,3-Dichlorobenzene	ND	4.9	0.5
1,4-Dichlorobenzene	ND	4.9	0.5
n-Butylbenzene	ND	4.9	0.6
1,2-Dichlorobenzene	ND	4.9	0.5
1,2-Dibromo-3-Chloropropane	ND	4.9	0.8
1,2,4-Trichlorobenzene	ND	4.9	0.2
Hexachlorobutadiene	ND	4.9	0.6
Naphthalene	ND	4.9	1.0
1,2,3-Trichlorobenzene	ND	4.9	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	105	78-134
1,2-Dichloroethane-d4	121	80-138
Toluene-d8	106	80-120
Bromofluorobenzene	112	78-123

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-4-1	Diln Fac:	0.9381
Lab ID:	282148-009	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/14/16

Analyte	Result	RL	MDL
Freon 12	ND	9.4	0.6
Chloromethane	ND	9.4	0.5
Vinyl Chloride	ND	9.4	0.4
Bromomethane	ND	9.4	0.3
Chloroethane	ND	9.4	0.4
Trichlorofluoromethane	ND	4.7	0.3
Acetone	20	19	3.1
Freon 113	ND	4.7	0.5
1,1-Dichloroethene	ND	4.7	0.6
Methylene Chloride	ND	19	1.0
Carbon Disulfide	ND	4.7	0.6
MTBE	ND	4.7	0.5
trans-1,2-Dichloroethene	ND	4.7	0.6
Vinyl Acetate	ND	47	0.5
1,1-Dichloroethane	ND	4.7	0.7
2-Butanone	2.7 J	9.4	1.2
cis-1,2-Dichloroethene	ND	4.7	0.5
2,2-Dichloropropane	ND	4.7	0.6
Chloroform	ND	4.7	0.6
Bromochloromethane	ND	4.7	0.2
1,1,1-Trichloroethane	ND	4.7	0.6
1,1-Dichloropropene	ND	4.7	0.6
Carbon Tetrachloride	ND	4.7	0.6
1,2-Dichloroethane	ND	4.7	0.6
Benzene	ND	4.7	0.7
Trichloroethene	ND	4.7	0.7
1,2-Dichloropropane	ND	4.7	0.5
Bromodichloromethane	ND	4.7	0.5
Dibromomethane	ND	4.7	0.2
4-Methyl-2-Pentanone	ND	9.4	0.6
cis-1,3-Dichloropropene	ND	4.7	0.4
Toluene	ND	4.7	0.7
trans-1,3-Dichloropropene	ND	4.7	0.4
1,1,2-Trichloroethane	ND	4.7	0.5
2-Hexanone	ND	9.4	0.6
1,3-Dichloropropane	ND	4.7	0.5
Tetrachloroethene	ND	4.7	0.6
Dibromochloromethane	ND	4.7	0.5
1,2-Dibromoethane	ND	4.7	0.5
Chlorobenzene	ND	4.7	0.6
1,1,1,2-Tetrachloroethane	ND	4.7	0.5
Ethylbenzene	ND	4.7	0.7
m,p-Xylenes	ND	4.7	1.3
o-Xylene	ND	4.7	0.6
Styrene	ND	4.7	0.5
Bromoform	ND	4.7	0.5
Isopropylbenzene	ND	4.7	0.6
1,1,2,2-Tetrachloroethane	ND	4.7	0.5
1,2,3-Trichloropropane	ND	4.7	0.6
Propylbenzene	ND	4.7	0.6
Bromobenzene	ND	4.7	0.2
1,3,5-Trimethylbenzene	ND	4.7	0.6

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-4-1	Diln Fac:	0.9381
Lab ID:	282148-009	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/14/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.7	0.6
4-Chlorotoluene	ND	4.7	0.6
tert-Butylbenzene	ND	4.7	0.7
1,2,4-Trimethylbenzene	ND	4.7	0.6
sec-Butylbenzene	ND	4.7	0.6
para-Isopropyl Toluene	ND	4.7	0.6
1,3-Dichlorobenzene	ND	4.7	0.5
1,4-Dichlorobenzene	ND	4.7	0.4
n-Butylbenzene	ND	4.7	0.6
1,2-Dichlorobenzene	ND	4.7	0.4
1,2-Dibromo-3-Chloropropane	ND	4.7	0.7
1,2,4-Trichlorobenzene	ND	4.7	0.2
Hexachlorobutadiene	ND	4.7	0.6
Naphthalene	ND	4.7	0.9
1,2,3-Trichlorobenzene	ND	4.7	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	108	78-134
1,2-Dichloroethane-d4	122	80-138
Toluene-d8	105	80-120
Bromofluorobenzene	115	78-123

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-4-5	Diln Fac:	0.9671
Lab ID:	282148-010	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/14/16

Analyte	Result	RL	MDL
Freon 12	ND	9.7	0.6
Chloromethane	ND	9.7	0.5
Vinyl Chloride	ND	9.7	0.4
Bromomethane	ND	9.7	0.3
Chloroethane	ND	9.7	0.4
Trichlorofluoromethane	ND	4.8	0.3
Acetone	ND	19	3.2
Freon 113	ND	4.8	0.5
1,1-Dichloroethene	ND	4.8	0.6
Methylene Chloride	ND	19	1.0
Carbon Disulfide	ND	4.8	0.6
MTBE	ND	4.8	0.5
trans-1,2-Dichloroethene	ND	4.8	0.7
Vinyl Acetate	ND	48	0.5
1,1-Dichloroethane	ND	4.8	0.7
2-Butanone	ND	9.7	1.3
cis-1,2-Dichloroethene	ND	4.8	0.5
2,2-Dichloropropane	ND	4.8	0.6
Chloroform	ND	4.8	0.7
Bromochloromethane	ND	4.8	0.2
1,1,1-Trichloroethane	ND	4.8	0.6
1,1-Dichloropropene	ND	4.8	0.6
Carbon Tetrachloride	ND	4.8	0.6
1,2-Dichloroethane	ND	4.8	0.6
Benzene	ND	4.8	0.7
Trichloroethene	ND	4.8	0.7
1,2-Dichloropropane	ND	4.8	0.6
Bromodichloromethane	ND	4.8	0.5
Dibromomethane	ND	4.8	0.2
4-Methyl-2-Pentanone	ND	9.7	0.6
cis-1,3-Dichloropropene	ND	4.8	0.4
Toluene	ND	4.8	0.7
trans-1,3-Dichloropropene	ND	4.8	0.4
1,1,2-Trichloroethane	ND	4.8	0.5
2-Hexanone	ND	9.7	0.6
1,3-Dichloropropane	ND	4.8	0.5
Tetrachloroethene	ND	4.8	0.6
Dibromochloromethane	ND	4.8	0.5
1,2-Dibromoethane	ND	4.8	0.5
Chlorobenzene	ND	4.8	0.6
1,1,1,2-Tetrachloroethane	ND	4.8	0.5
Ethylbenzene	ND	4.8	0.7
m,p-Xylenes	ND	4.8	1.3
o-Xylene	ND	4.8	0.6
Styrene	ND	4.8	0.5
Bromoform	ND	4.8	0.5
Isopropylbenzene	ND	4.8	0.6
1,1,2,2-Tetrachloroethane	ND	4.8	0.5
1,2,3-Trichloropropane	ND	4.8	0.6
Propylbenzene	ND	4.8	0.6
Bromobenzene	ND	4.8	0.2
1,3,5-Trimethylbenzene	ND	4.8	0.6
2-Chlorotoluene	ND	4.8	0.7

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-4-5	Diln Fac:	0.9671
Lab ID:	282148-010	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/14/16

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	4.8	0.6
tert-Butylbenzene	ND	4.8	0.7
1,2,4-Trimethylbenzene	ND	4.8	0.6
sec-Butylbenzene	ND	4.8	0.6
para-Isopropyl Toluene	ND	4.8	0.6
1,3-Dichlorobenzene	ND	4.8	0.5
1,4-Dichlorobenzene	ND	4.8	0.5
n-Butylbenzene	ND	4.8	0.6
1,2-Dichlorobenzene	ND	4.8	0.5
1,2-Dibromo-3-Chloropropane	ND	4.8	0.7
1,2,4-Trichlorobenzene	ND	4.8	0.2
Hexachlorobutadiene	ND	4.8	0.6
Naphthalene	ND	4.8	1.0
1,2,3-Trichlorobenzene	ND	4.8	0.2

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	122	80-138
Toluene-d8	105	80-120
Bromofluorobenzene	113	78-123

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	240161
Units:	ug/Kg	Analyzed:	10/14/16
Diln Fac:	1.000		

Type: BS Lab ID: QC855691

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	20.97	84	70-134
Benzene	25.00	24.33	97	80-123
Trichloroethene	25.00	24.46	98	80-128
Toluene	25.00	24.16	97	80-120
Chlorobenzene	25.00	24.11	96	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-134
1,2-Dichloroethane-d4	105	80-138
Toluene-d8	100	80-120
Bromofluorobenzene	99	78-123

Type: BSD Lab ID: QC855692

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	19.83	79	70-134	6	22
Benzene	25.00	23.56	94	80-123	3	21
Trichloroethene	25.00	23.18	93	80-128	5	23
Toluene	25.00	23.17	93	80-120	4	20
Chlorobenzene	25.00	23.23	93	80-123	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	105	80-138
Toluene-d8	101	80-120
Bromofluorobenzene	98	78-123

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Basis:	as received
MSS Lab ID:	282150-001	Batch#:	240161
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16

Type: MS Diln Fac: 0.9881
 Lab ID: QC855755 Analyzed: 10/14/16

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5756	49.41	38.97	79	56-133
Benzene	<0.6707	49.41	42.45	86	57-120
Trichloroethene	4.188	49.41	74.46	142	49-145
Toluene	<0.7346	49.41	38.61	78	51-120
Chlorobenzene	<0.6022	49.41	31.58	64	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	124	80-138
Toluene-d8	105	80-120
Bromofluorobenzene	106	78-123

Type: MSD Diln Fac: 0.9843
 Lab ID: QC855756 Analyzed: 10/15/16

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	49.21	42.27	86	56-133	9	46
Benzene	49.21	45.79	93	57-120	8	44
Trichloroethene	49.21	80.87	156 *	49-145	9	46
Toluene	49.21	41.56	84	51-120	8	47
Chlorobenzene	49.21	35.86	73	47-120	13	50

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	125	80-138
Toluene-d8	102	80-120
Bromofluorobenzene	101	78-123

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

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855794	Batch#:	240161
Matrix:	Soil	Analyzed:	10/14/16
Units:	ug/Kg		

Analyte	Result	RL	MDL
Freon 12	ND	10	0.6
Chloromethane	ND	10	0.5
Vinyl Chloride	ND	10	0.4
Bromomethane	ND	10	0.4
Chloroethane	ND	10	0.4
Trichlorofluoromethane	ND	5.0	0.3
Acetone	ND	20	3.3
Freon 113	ND	5.0	0.5
1,1-Dichloroethene	ND	5.0	0.6
Methylene Chloride	ND	20	1.1
Carbon Disulfide	ND	5.0	0.7
MTBE	ND	5.0	0.5
trans-1,2-Dichloroethene	ND	5.0	0.7
Vinyl Acetate	ND	50	0.5
1,1-Dichloroethane	ND	5.0	0.8
2-Butanone	ND	10	1.3
cis-1,2-Dichloroethene	ND	5.0	0.6
2,2-Dichloropropane	ND	5.0	0.6
Chloroform	ND	5.0	0.7
Bromochloromethane	ND	5.0	0.3
1,1,1-Trichloroethane	ND	5.0	0.7
1,1-Dichloropropene	ND	5.0	0.7
Carbon Tetrachloride	ND	5.0	0.6
1,2-Dichloroethane	ND	5.0	0.6
Benzene	ND	5.0	0.7
Trichloroethene	ND	5.0	0.7
1,2-Dichloropropane	ND	5.0	0.6
Bromodichloromethane	ND	5.0	0.5
Dibromomethane	ND	5.0	0.3
4-Methyl-2-Pentanone	ND	10	0.6
cis-1,3-Dichloropropene	ND	5.0	0.4
Toluene	ND	5.0	0.8
trans-1,3-Dichloropropene	ND	5.0	0.4
1,1,2-Trichloroethane	ND	5.0	0.5
2-Hexanone	ND	10	0.6
1,3-Dichloropropane	ND	5.0	0.5
Tetrachloroethene	ND	5.0	0.6
Dibromochloromethane	ND	5.0	0.5
1,2-Dibromoethane	ND	5.0	0.5
Chlorobenzene	ND	5.0	0.6
1,1,1,2-Tetrachloroethane	ND	5.0	0.5
Ethylbenzene	ND	5.0	0.7
m,p-Xylenes	ND	5.0	1.4
o-Xylene	ND	5.0	0.6
Styrene	ND	5.0	0.5
Bromoform	ND	5.0	0.5
Isopropylbenzene	ND	5.0	0.6
1,1,2,2-Tetrachloroethane	ND	5.0	0.5
1,2,3-Trichloropropane	ND	5.0	0.6
Propylbenzene	ND	5.0	0.7
Bromobenzene	ND	5.0	0.2
1,3,5-Trimethylbenzene	ND	5.0	0.6
2-Chlorotoluene	ND	5.0	0.7

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855794	Batch#:	240161
Matrix:	Soil	Analyzed:	10/14/16
Units:	ug/Kg		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	5.0	0.6
tert-Butylbenzene	ND	5.0	0.7
1,2,4-Trimethylbenzene	ND	5.0	0.6
sec-Butylbenzene	ND	5.0	0.6
para-Isopropyl Toluene	ND	5.0	0.6
1,3-Dichlorobenzene	ND	5.0	0.5
1,4-Dichlorobenzene	ND	5.0	0.5
n-Butylbenzene	ND	5.0	0.6
1,2-Dichlorobenzene	ND	5.0	0.5
1,2-Dibromo-3-Chloropropane	ND	5.0	0.8
1,2,4-Trichlorobenzene	ND	5.0	0.3
Hexachlorobutadiene	ND	5.0	0.6
Naphthalene	ND	5.0	1.0
1,2,3-Trichlorobenzene	ND	5.0	0.3

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-134
1,2-Dichloroethane-d4	115	80-138
Toluene-d8	105	80-120
Bromofluorobenzene	110	78-123

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Matrix:	Soil	Batch#:	240202
Units:	ug/Kg	Analyzed:	10/16/16
Diln Fac:	1.000		

Type: BS Lab ID: QC855847

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	25.03	100	70-134
Benzene	25.00	25.88	104	80-123
Trichloroethene	25.00	25.04	100	80-128
Toluene	25.00	25.79	103	80-120
Chlorobenzene	25.00	24.23	97	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	100	78-134
1,2-Dichloroethane-d4	111	80-138
Toluene-d8	103	80-120
Bromofluorobenzene	102	78-123

Type: BSD Lab ID: QC855848

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	24.52	98	70-134	2	22
Benzene	25.00	26.09	104	80-123	1	21
Trichloroethene	25.00	24.97	100	80-128	0	23
Toluene	25.00	25.59	102	80-120	1	20
Chlorobenzene	25.00	24.17	97	80-123	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	98	78-134
1,2-Dichloroethane-d4	111	80-138
Toluene-d8	103	80-120
Bromofluorobenzene	104	78-123

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855849	Batch#:	240202
Matrix:	Soil	Analyzed:	10/16/16
Units:	ug/Kg		

Analyte	Result	RL	MDL
Freon 12	ND	10	0.6
Chloromethane	ND	10	0.5
Vinyl Chloride	ND	10	0.4
Bromomethane	ND	10	0.4
Chloroethane	ND	10	0.4
Trichlorofluoromethane	ND	5.0	0.3
Acetone	ND	20	3.3
Freon 113	ND	5.0	0.5
1,1-Dichloroethene	ND	5.0	0.6
Methylene Chloride	ND	20	1.1
Carbon Disulfide	ND	5.0	0.7
MTBE	ND	5.0	0.5
trans-1,2-Dichloroethene	ND	5.0	0.7
Vinyl Acetate	ND	50	0.5
1,1-Dichloroethane	ND	5.0	0.8
2-Butanone	ND	10	1.3
cis-1,2-Dichloroethene	ND	5.0	0.6
2,2-Dichloropropane	ND	5.0	0.6
Chloroform	ND	5.0	0.7
Bromochloromethane	ND	5.0	0.3
1,1,1-Trichloroethane	ND	5.0	0.7
1,1-Dichloropropene	ND	5.0	0.7
Carbon Tetrachloride	ND	5.0	0.6
1,2-Dichloroethane	ND	5.0	0.6
Benzene	ND	5.0	0.7
Trichloroethene	ND	5.0	0.7
1,2-Dichloropropane	ND	5.0	0.6
Bromodichloromethane	ND	5.0	0.5
Dibromomethane	ND	5.0	0.3
4-Methyl-2-Pentanone	ND	10	0.6
cis-1,3-Dichloropropene	ND	5.0	0.4
Toluene	ND	5.0	0.8
trans-1,3-Dichloropropene	ND	5.0	0.4
1,1,2-Trichloroethane	ND	5.0	0.5
2-Hexanone	ND	10	0.6
1,3-Dichloropropane	ND	5.0	0.5
Tetrachloroethene	ND	5.0	0.6
Dibromochloromethane	ND	5.0	0.5
1,2-Dibromoethane	ND	5.0	0.5
Chlorobenzene	ND	5.0	0.6
1,1,1,2-Tetrachloroethane	ND	5.0	0.5
Ethylbenzene	ND	5.0	0.7
m,p-Xylenes	ND	5.0	1.4
o-Xylene	ND	5.0	0.6
Styrene	ND	5.0	0.5
Bromoform	ND	5.0	0.5
Isopropylbenzene	ND	5.0	0.6
1,1,2,2-Tetrachloroethane	ND	5.0	0.5
1,2,3-Trichloropropane	ND	5.0	0.6
Propylbenzene	ND	5.0	0.7
Bromobenzene	ND	5.0	0.2
1,3,5-Trimethylbenzene	ND	5.0	0.6
2-Chlorotoluene	ND	5.0	0.7

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855849	Batch#:	240202
Matrix:	Soil	Analyzed:	10/16/16
Units:	ug/Kg		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	5.0	0.6
tert-Butylbenzene	ND	5.0	0.7
1,2,4-Trimethylbenzene	ND	5.0	0.6
sec-Butylbenzene	ND	5.0	0.6
para-Isopropyl Toluene	ND	5.0	0.6
1,3-Dichlorobenzene	ND	5.0	0.5
1,4-Dichlorobenzene	ND	5.0	0.5
n-Butylbenzene	ND	5.0	0.6
1,2-Dichlorobenzene	ND	5.0	0.5
1,2-Dibromo-3-Chloropropane	ND	5.0	0.8
1,2,4-Trichlorobenzene	ND	5.0	0.3
Hexachlorobutadiene	ND	5.0	0.6
Naphthalene	ND	5.0	1.0
1,2,3-Trichlorobenzene	ND	5.0	0.3

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-134
1,2-Dichloroethane-d4	111	80-138
Toluene-d8	103	80-120
Bromofluorobenzene	110	78-123

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	240202
MSS Lab ID:	282183-003	Sampled:	10/14/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Analyzed:	10/16/16
Basis:	as received		

Type: MS Diln Fac: 0.9940
 Lab ID: QC855855

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.5916	49.70	50.05	101	56-133
Benzene	<0.6892	49.70	53.52	108	57-120
Trichloroethene	<0.7179	49.70	51.00	103	49-145
Toluene	<0.7549	49.70	51.18	103	51-120
Chlorobenzene	<0.6189	49.70	48.53	98	47-120

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	119	80-138
Toluene-d8	102	80-120
Bromofluorobenzene	93	78-123

Type: MSD Diln Fac: 0.9747
 Lab ID: QC855856

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	48.73	44.24	91	56-133	10	46
Benzene	48.73	47.36	97	57-120	10	44
Trichloroethene	48.73	44.66	92	49-145	11	46
Toluene	48.73	44.77	92	51-120	11	47
Chlorobenzene	48.73	41.91	86	47-120	13	50

Surrogate	%REC	Limits
Dibromofluoromethane	104	78-134
1,2-Dichloroethane-d4	120	80-138
Toluene-d8	102	80-120
Bromofluorobenzene	94	78-123

RPD= Relative Percent Difference

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-1-GW	Batch#:	240351
Lab ID:	282148-013	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Prepared:	10/20/16
Diln Fac:	1.000	Analyzed:	10/21/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.4	2.2
Phenol	ND	9.4	1.6
bis(2-Chloroethyl)ether	ND	9.4	1.5
2-Chlorophenol	ND	9.4	1.5
1,3-Dichlorobenzene	ND	9.4	1.5
1,4-Dichlorobenzene	ND	9.4	1.6
Benzyl alcohol	ND	9.4	1.4
1,2-Dichlorobenzene	ND	9.4	1.6
2-Methylphenol	ND	9.4	1.4
bis(2-Chloroisopropyl) ether	ND	9.4	2.6
4-Methylphenol	ND	9.4	1.4
N-Nitroso-di-n-propylamine	ND	9.4	1.9
Hexachloroethane	ND	9.4	1.6
Nitrobenzene	ND	9.4	1.5
Isophorone	ND	9.4	1.8
2-Nitrophenol	ND	19	2.4
2,4-Dimethylphenol	ND	9.4	1.2
Benzoic acid	ND	47	9.6
bis(2-Chloroethoxy)methane	ND	9.4	1.2
2,4-Dichlorophenol	ND	9.4	1.3
1,2,4-Trichlorobenzene	ND	9.4	1.3
Naphthalene	ND	9.4	1.4
4-Chloroaniline	ND	9.4	1.2
Hexachlorobutadiene	ND	9.4	1.3
4-Chloro-3-methylphenol	ND	9.4	1.3
2-Methylnaphthalene	ND	9.4	1.4
Hexachlorocyclopentadiene	ND	19	4.7
2,4,6-Trichlorophenol	ND	9.4	0.93
2,4,5-Trichlorophenol	ND	9.4	0.89
2-Chloronaphthalene	ND	9.4	1.5
2-Nitroaniline	ND	19	1.7
Dimethylphthalate	ND	9.4	1.5
Acenaphthylene	ND	9.4	1.4
2,6-Dinitrotoluene	ND	9.4	1.3
3-Nitroaniline	ND	19	0.98
Acenaphthene	ND	9.4	1.3
2,4-Dinitrophenol	ND	19	2.0
4-Nitrophenol	ND	19	1.1
Dibenzofuran	ND	9.4	1.4
2,4-Dinitrotoluene	ND	9.4	1.4
Diethylphthalate	ND	9.4	1.5
Fluorene	ND	9.4	1.5
4-Chlorophenyl-phenylether	ND	9.4	1.3
4-Nitroaniline	ND	19	1.1
4,6-Dinitro-2-methylphenol	ND	19	1.6
N-Nitrosodiphenylamine	ND	9.4	1.2
Azobenzene	ND	9.4	1.5
4-Bromophenyl-phenylether	ND	9.4	1.1
Hexachlorobenzene	ND	9.4	1.2
Pentachlorophenol	ND	19	1.2
Phenanthrene	ND	9.4	1.2
Anthracene	ND	9.4	1.3

*= Value outside of QC limits; see narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-1-GW	Batch#:	240351
Lab ID:	282148-013	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Prepared:	10/20/16
Diln Fac:	1.000	Analyzed:	10/21/16

Analyte	Result	RL	MDL
Di-n-butylphthalate	ND	9.4	1.1
Fluoranthene	ND	9.4	1.5
Pyrene	ND	9.4	1.2
Butylbenzylphthalate	ND	9.4	1.3
3,3'-Dichlorobenzidine	ND	19	0.59
Benzo(a)anthracene	ND	9.4	1.3
Chrysene	ND	9.4	1.3
bis(2-Ethylhexyl)phthalate	ND	9.4	1.6
Di-n-octylphthalate	ND	9.4	1.2
Benzo(b)fluoranthene	ND	9.4	1.3
Benzo(k)fluoranthene	ND	9.4	1.4
Benzo(a)pyrene	ND	9.4	1.1
Indeno(1,2,3-cd)pyrene	ND	9.4	1.4
Dibenz(a,h)anthracene	ND	9.4	1.3
Benzo(g,h,i)perylene	ND	9.4	1.4

Surrogate	%REC	Limits
2-Fluorophenol	88	38-120
Phenol-d5	85	38-120
2,4,6-Tribromophenol	89	46-120
Nitrobenzene-d5	79	51-120
2-Fluorobiphenyl	71	54-120
Terphenyl-d14	15 *	21-120

*= Value outside of QC limits; see narrative
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-3-GW	Batch#:	240250
Lab ID:	282148-014	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Prepared:	10/18/16
Diln Fac:	1.000	Analyzed:	10/20/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.4	2.2
Phenol	ND	9.4	1.6
bis(2-Chloroethyl)ether	ND	9.4	1.5
2-Chlorophenol	ND	9.4	1.5
1,3-Dichlorobenzene	ND	9.4	1.5
1,4-Dichlorobenzene	ND	9.4	1.6
Benzyl alcohol	ND	9.4	1.4
1,2-Dichlorobenzene	ND	9.4	1.6
2-Methylphenol	ND	9.4	1.4
bis(2-Chloroisopropyl) ether	ND	9.4	2.6
4-Methylphenol	ND	9.4	1.4
N-Nitroso-di-n-propylamine	ND	9.4	1.9
Hexachloroethane	ND	9.4	1.6
Nitrobenzene	ND	9.4	1.5
Isophorone	ND	9.4	1.8
2-Nitrophenol	ND	19	2.4
2,4-Dimethylphenol	ND	9.4	1.2
Benzoic acid	ND	47	9.6
bis(2-Chloroethoxy)methane	ND	9.4	1.2
2,4-Dichlorophenol	ND	9.4	1.3
1,2,4-Trichlorobenzene	ND	9.4	1.3
Naphthalene	ND	9.4	1.4
4-Chloroaniline	ND	9.4	1.2
Hexachlorobutadiene	ND	9.4	1.3
4-Chloro-3-methylphenol	ND	9.4	1.3
2-Methylnaphthalene	ND	9.4	1.4
Hexachlorocyclopentadiene	ND	19	4.7
2,4,6-Trichlorophenol	ND	9.4	0.93
2,4,5-Trichlorophenol	ND	9.4	0.89
2-Chloronaphthalene	ND	9.4	1.5
2-Nitroaniline	ND	19	1.7
Dimethylphthalate	ND	9.4	1.5
Acenaphthylene	ND	9.4	1.4
2,6-Dinitrotoluene	ND	9.4	1.3
3-Nitroaniline	ND	19	0.98
Acenaphthene	ND	9.4	1.3
2,4-Dinitrophenol	ND	19	2.0
4-Nitrophenol	ND	19	1.1
Dibenzofuran	ND	9.4	1.4
2,4-Dinitrotoluene	ND	9.4	1.4
Diethylphthalate	ND	9.4	1.5
Fluorene	ND	9.4	1.5
4-Chlorophenyl-phenylether	ND	9.4	1.3
4-Nitroaniline	ND	19	1.1
4,6-Dinitro-2-methylphenol	ND	19	1.6
N-Nitrosodiphenylamine	ND	9.4	1.2
Azobenzene	ND	9.4	1.5
4-Bromophenyl-phenylether	ND	9.4	1.1
Hexachlorobenzene	ND	9.4	1.2
Pentachlorophenol	ND	19	1.2
Phenanthrene	ND	9.4	1.2
Anthracene	ND	9.4	1.3
Di-n-butylphthalate	ND	9.4	1.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-3-GW	Batch#:	240250
Lab ID:	282148-014	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Prepared:	10/18/16
Diln Fac:	1.000	Analyzed:	10/20/16

Analyte	Result	RL	MDL
Fluoranthene	ND	9.4	1.5
Pyrene	ND	9.4	1.2
Butylbenzylphthalate	ND	9.4	1.3
3,3'-Dichlorobenzidine	ND	19	0.59
Benzo(a)anthracene	ND	9.4	1.3
Chrysene	ND	9.4	1.3
bis(2-Ethylhexyl)phthalate	ND	9.4	1.6
Di-n-octylphthalate	ND	9.4	1.2
Benzo(b)fluoranthene	ND	9.4	1.3
Benzo(k)fluoranthene	ND	9.4	1.4
Benzo(a)pyrene	ND	9.4	1.1
Indeno(1,2,3-cd)pyrene	ND	9.4	1.4
Dibenz(a,h)anthracene	ND	9.4	1.3
Benzo(g,h,i)perylene	ND	9.4	1.4

Surrogate	%REC	Limits
2-Fluorophenol	79	38-120
Phenol-d5	76	38-120
2,4,6-Tribromophenol	105	46-120
Nitrobenzene-d5	76	51-120
2-Fluorobiphenyl	83	54-120
Terphenyl-d14	23	21-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-4-GW	Batch#:	240250
Lab ID:	282148-015	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Prepared:	10/18/16
Diln Fac:	1.000	Analyzed:	10/19/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	9.4	1.4
Phenol	ND	9.4	0.96
bis(2-Chloroethyl)ether	ND	9.4	1.1
2-Chlorophenol	ND	9.4	0.77
1,3-Dichlorobenzene	ND	9.4	0.97
1,4-Dichlorobenzene	ND	9.4	0.99
Benzyl alcohol	ND	9.4	1.0
1,2-Dichlorobenzene	ND	9.4	2.0
2-Methylphenol	ND	9.4	2.0
bis(2-Chloroisopropyl) ether	ND	9.4	1.4
4-Methylphenol	ND	9.4	1.6
N-Nitroso-di-n-propylamine	ND	9.4	1.1
Hexachloroethane	ND	9.4	1.0
Nitrobenzene	ND	9.4	1.2
Isophorone	ND	9.4	1.2
2-Nitrophenol	ND	19	2.5
2,4-Dimethylphenol	ND	9.4	2.3
Benzoic acid	ND	47	15
bis(2-Chloroethoxy)methane	ND	9.4	1.0
2,4-Dichlorophenol	ND	9.4	2.0
1,2,4-Trichlorobenzene	ND	9.4	2.1
Naphthalene	ND	9.4	1.8
4-Chloroaniline	ND	9.4	1.9
Hexachlorobutadiene	ND	9.4	2.3
4-Chloro-3-methylphenol	ND	9.4	0.99
2-Methylnaphthalene	ND	9.4	1.7
Hexachlorocyclopentadiene	ND	19	4.7
2,4,6-Trichlorophenol	ND	9.4	0.86
2,4,5-Trichlorophenol	ND	9.4	0.80
2-Chloronaphthalene	ND	9.4	1.7
2-Nitroaniline	ND	19	1.1
Dimethylphthalate	ND	9.4	1.9
Acenaphthylene	ND	9.4	1.6
2,6-Dinitrotoluene	ND	9.4	1.7
3-Nitroaniline	ND	19	1.8
Acenaphthene	ND	9.4	1.7
2,4-Dinitrophenol	ND	19	4.7
4-Nitrophenol	ND	19	4.7
Dibenzofuran	ND	9.4	1.8
2,4-Dinitrotoluene	ND	9.4	2.0
Diethylphthalate	ND	9.4	0.96
Fluorene	ND	9.4	1.7
4-Chlorophenyl-phenylether	ND	9.4	1.5
4-Nitroaniline	ND	19	2.3
4,6-Dinitro-2-methylphenol	ND	19	3.8
N-Nitrosodiphenylamine	ND	9.4	1.6
Azobenzene	ND	9.4	1.1
4-Bromophenyl-phenylether	ND	9.4	1.9
Hexachlorobenzene	ND	9.4	1.9
Pentachlorophenol	ND	19	1.8
Phenanthrene	ND	9.4	1.8
Anthracene	ND	9.4	1.7
Di-n-butylphthalate	ND	9.4	1.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-4-GW	Batch#:	240250
Lab ID:	282148-015	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L	Prepared:	10/18/16
Diln Fac:	1.000	Analyzed:	10/19/16

Analyte	Result	RL	MDL
Fluoranthene	ND	9.4	1.8
Pyrene	ND	9.4	1.6
Butylbenzylphthalate	ND	9.4	0.95
3,3'-Dichlorobenzidine	ND	19	0.99
Benzo(a)anthracene	ND	9.4	1.5
Chrysene	ND	9.4	1.6
bis(2-Ethylhexyl)phthalate	ND	9.4	1.7
Di-n-octylphthalate	ND	9.4	1.7
Benzo(b)fluoranthene	ND	9.4	1.6
Benzo(k)fluoranthene	ND	9.4	1.8
Benzo(a)pyrene	ND	9.4	1.5
Indeno(1,2,3-cd)pyrene	ND	9.4	1.7
Dibenz(a,h)anthracene	ND	9.4	1.7
Benzo(g,h,i)perylene	ND	9.4	1.8

Surrogate	%REC	Limits
2-Fluorophenol	77	38-120
Phenol-d5	75	38-120
2,4,6-Tribromophenol	71	46-120
Nitrobenzene-d5	68	51-120
2-Fluorobiphenyl	70	54-120
Terphenyl-d14	38	21-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856055	Batch#:	240250
Matrix:	Water	Prepared:	10/17/16
Units:	ug/L	Analyzed:	10/18/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	0.76
Phenol	ND	10	0.98
bis(2-Chloroethyl)ether	ND	10	1.8
2-Chlorophenol	ND	10	1.0
1,3-Dichlorobenzene	ND	10	0.67
1,4-Dichlorobenzene	ND	10	0.65
Benzyl alcohol	ND	10	0.59
1,2-Dichlorobenzene	ND	10	0.69
2-Methylphenol	ND	10	0.63
bis(2-Chloroisopropyl) ether	ND	10	0.81
4-Methylphenol	ND	10	0.60
N-Nitroso-di-n-propylamine	ND	10	0.84
Hexachloroethane	ND	10	0.69
Nitrobenzene	ND	10	0.60
Isophorone	ND	10	0.67
2-Nitrophenol	ND	20	3.1
2,4-Dimethylphenol	ND	10	0.69
Benzoic acid	ND	50	15
bis(2-Chloroethoxy)methane	ND	10	0.56
2,4-Dichlorophenol	ND	10	0.73
1,2,4-Trichlorobenzene	ND	10	0.61
Naphthalene	ND	10	0.58
4-Chloroaniline	ND	10	0.65
Hexachlorobutadiene	ND	10	1.0
4-Chloro-3-methylphenol	ND	10	0.82
2-Methylnaphthalene	ND	10	0.70
Hexachlorocyclopentadiene	ND	20	6.7
2,4,6-Trichlorophenol	ND	10	1.1
2,4,5-Trichlorophenol	ND	10	1.1
2-Chloronaphthalene	ND	10	0.70
2-Nitroaniline	ND	20	2.6
Dimethylphthalate	ND	10	0.66
Acenaphthylene	ND	10	0.58
2,6-Dinitrotoluene	ND	10	0.67
3-Nitroaniline	ND	20	0.84
Acenaphthene	ND	10	0.70
2,4-Dinitrophenol	ND	20	6.7
4-Nitrophenol	ND	20	2.0
Dibenzofuran	ND	10	0.57
2,4-Dinitrotoluene	ND	10	0.65
Diethylphthalate	ND	10	0.68
Fluorene	ND	10	0.57
4-Chlorophenyl-phenylether	ND	10	1.0
4-Nitroaniline	ND	20	3.3
4,6-Dinitro-2-methylphenol	ND	20	2.5
N-Nitrosodiphenylamine	ND	10	1.9
Azobenzene	ND	10	0.65
4-Bromophenyl-phenylether	ND	10	1.0
Hexachlorobenzene	ND	10	0.68
Pentachlorophenol	ND	20	2.0
Phenanthrene	ND	10	0.71
Anthracene	ND	10	0.62
Di-n-butylphthalate	ND	10	1.4

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856055	Batch#:	240250
Matrix:	Water	Prepared:	10/17/16
Units:	ug/L	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Fluoranthene	ND	10	0.77
Pyrene	ND	10	0.74
Butylbenzylphthalate	ND	10	0.82
3,3'-Dichlorobenzidine	ND	20	2.5
Benzo(a)anthracene	ND	10	0.75
Chrysene	ND	10	0.70
bis(2-Ethylhexyl)phthalate	ND	10	1.6
Di-n-octylphthalate	ND	10	0.63
Benzo(b)fluoranthene	ND	10	0.71
Benzo(k)fluoranthene	ND	10	0.66
Benzo(a)pyrene	ND	10	0.57
Indeno(1,2,3-cd)pyrene	ND	10	0.77
Dibenz(a,h)anthracene	ND	10	0.79
Benzo(g,h,i)perylene	ND	10	0.87

Surrogate	%REC	Limits
2-Fluorophenol	77	38-120
Phenol-d5	76	38-120
2,4,6-Tribromophenol	75	46-120
Nitrobenzene-d5	82	51-120
2-Fluorobiphenyl	77	54-120
Terphenyl-d14	63	21-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	240250
Units:	ug/L	Prepared:	10/17/16
Diln Fac:	1.000	Analyzed:	10/18/16

Type: BS Lab ID: QC856056

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	67.96	85	46-120
2-Chlorophenol	80.00	68.27	85	48-120
1,4-Dichlorobenzene	80.00	52.64	66	52-120
N-Nitroso-di-n-propylamine	80.00	70.42	88	46-120
1,2,4-Trichlorobenzene	80.00	51.96	65	53-120
4-Chloro-3-methylphenol	80.00	61.10	76	40-120
Acenaphthene	30.00	26.83	89	61-120
4-Nitrophenol	80.00	45.38	57	40-120
2,4-Dinitrotoluene	80.00	68.47	86	64-120
Pentachlorophenol	80.00	63.43	79	47-120
Pyrene	30.00	30.45	101	62-120

Surrogate	%REC	Limits
2-Fluorophenol	80	38-120
Phenol-d5	84	38-120
2,4,6-Tribromophenol	78	46-120
Nitrobenzene-d5	73	51-120
2-Fluorobiphenyl	83	54-120
Terphenyl-d14	93	21-120

Type: BSD Lab ID: QC856057

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	56.65	71	46-120	18	55
2-Chlorophenol	80.00	57.47	72	48-120	17	54
1,4-Dichlorobenzene	80.00	44.20	55	52-120	17	30
N-Nitroso-di-n-propylamine	80.00	59.70	75	46-120	16	25
1,2,4-Trichlorobenzene	80.00	44.09	55	53-120	16	26
4-Chloro-3-methylphenol	80.00	53.36	67	40-120	14	54
Acenaphthene	30.00	23.35	78	61-120	14	25
4-Nitrophenol	80.00	39.16	49	40-120	15	45
2,4-Dinitrotoluene	80.00	60.66	76	64-120	12	32
Pentachlorophenol	80.00	54.90	69	47-120	14	48
Pyrene	30.00	26.80	89	62-120	13	26

Surrogate	%REC	Limits
2-Fluorophenol	68	38-120
Phenol-d5	71	38-120
2,4,6-Tribromophenol	69	46-120
Nitrobenzene-d5	62	51-120
2-Fluorobiphenyl	72	54-120
Terphenyl-d14	83	21-120

RPD= Relative Percent Difference

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856468	Batch#:	240351
Matrix:	Water	Prepared:	10/19/16
Units:	ug/L	Analyzed:	10/20/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	2.3
Phenol	ND	10	1.7
bis(2-Chloroethyl)ether	ND	10	1.6
2-Chlorophenol	ND	10	1.6
1,3-Dichlorobenzene	ND	10	1.6
1,4-Dichlorobenzene	ND	10	1.6
Benzyl alcohol	ND	10	1.5
1,2-Dichlorobenzene	ND	10	1.7
2-Methylphenol	ND	10	1.5
bis(2-Chloroisopropyl) ether	ND	10	2.7
4-Methylphenol	ND	10	1.5
N-Nitroso-di-n-propylamine	ND	10	2.0
Hexachloroethane	ND	10	1.7
Nitrobenzene	ND	10	1.6
Isophorone	ND	10	1.9
2-Nitrophenol	ND	20	2.6
2,4-Dimethylphenol	ND	10	1.3
Benzoic acid	ND	50	10
bis(2-Chloroethoxy)methane	ND	10	1.2
2,4-Dichlorophenol	ND	10	1.3
1,2,4-Trichlorobenzene	ND	10	1.4
Naphthalene	ND	10	1.4
4-Chloroaniline	ND	10	1.3
Hexachlorobutadiene	ND	10	1.3
4-Chloro-3-methylphenol	ND	10	1.4
2-Methylnaphthalene	ND	10	1.5
Hexachlorocyclopentadiene	ND	20	5.0
2,4,6-Trichlorophenol	ND	10	0.98
2,4,5-Trichlorophenol	ND	10	0.94
2-Chloronaphthalene	ND	10	1.5
2-Nitroaniline	ND	20	1.8
Dimethylphthalate	ND	10	1.5
Acenaphthylene	ND	10	1.5
2,6-Dinitrotoluene	ND	10	1.4
3-Nitroaniline	ND	20	1.0
Acenaphthene	ND	10	1.4
2,4-Dinitrophenol	ND	20	2.1
4-Nitrophenol	ND	20	1.2
Dibenzofuran	ND	10	1.5
2,4-Dinitrotoluene	ND	10	1.5
Diethylphthalate	ND	10	1.6
Fluorene	ND	10	1.5
4-Chlorophenyl-phenylether	ND	10	1.4
4-Nitroaniline	ND	20	1.2
4,6-Dinitro-2-methylphenol	ND	20	1.7
N-Nitrosodiphenylamine	ND	10	1.2
Azobenzene	ND	10	1.6
4-Bromophenyl-phenylether	ND	10	1.2
Hexachlorobenzene	ND	10	1.2
Pentachlorophenol	ND	20	1.3
Phenanthrene	ND	10	1.3
Anthracene	ND	10	1.3
Di-n-butylphthalate	ND	10	1.2

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856468	Batch#:	240351
Matrix:	Water	Prepared:	10/19/16
Units:	ug/L	Analyzed:	10/20/16

Analyte	Result	RL	MDL
Fluoranthene	ND	10	1.6
Pyrene	ND	10	1.3
Butylbenzylphthalate	ND	10	1.4
3,3'-Dichlorobenzidine	ND	20	0.63
Benzo(a)anthracene	ND	10	1.3
Chrysene	ND	10	1.4
bis(2-Ethylhexyl)phthalate	ND	10	1.7
Di-n-octylphthalate	ND	10	1.3
Benzo(b)fluoranthene	ND	10	1.4
Benzo(k)fluoranthene	ND	10	1.5
Benzo(a)pyrene	ND	10	1.1
Indeno(1,2,3-cd)pyrene	ND	10	1.4
Dibenz(a,h)anthracene	ND	10	1.4
Benzo(g,h,i)perylene	ND	10	1.5

Surrogate	%REC	Limits
2-Fluorophenol	79	38-120
Phenol-d5	77	38-120
2,4,6-Tribromophenol	96	46-120
Nitrobenzene-d5	76	51-120
2-Fluorobiphenyl	88	54-120
Terphenyl-d14	84	21-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	240351
Units:	ug/L	Prepared:	10/19/16
Diln Fac:	2.000	Analyzed:	10/20/16

Type: BS Lab ID: QC856469

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	57.29	72	46-120
2-Chlorophenol	80.00	62.34	78	48-120
1,4-Dichlorobenzene	80.00	61.34	77	52-120
N-Nitroso-di-n-propylamine	80.00	43.54	54	46-120
1,2,4-Trichlorobenzene	80.00	67.36	84	53-120
4-Chloro-3-methylphenol	80.00	65.11	81	40-120
Acenaphthene	30.00	22.94	76	61-120
4-Nitrophenol	80.00	52.91	66	40-120
2,4-Dinitrotoluene	80.00	70.04	88	64-120
Pentachlorophenol	80.00	60.24	75	47-120
Pyrene	30.00	25.57	85	62-120

Surrogate	%REC	Limits
2-Fluorophenol	72	38-120
Phenol-d5	74	38-120
2,4,6-Tribromophenol	93	46-120
Nitrobenzene-d5	70	51-120
2-Fluorobiphenyl	85	54-120
Terphenyl-d14	85	21-120

Type: BSD Lab ID: QC856470

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	61.34	77	46-120	7	55
2-Chlorophenol	80.00	67.55	84	48-120	8	54
1,4-Dichlorobenzene	80.00	65.22	82	52-120	6	30
N-Nitroso-di-n-propylamine	80.00	47.84	60	46-120	9	25
1,2,4-Trichlorobenzene	80.00	71.64	90	53-120	6	26
4-Chloro-3-methylphenol	80.00	71.03	89	40-120	9	54
Acenaphthene	30.00	25.41	85	61-120	10	25
4-Nitrophenol	80.00	58.40	73	40-120	10	45
2,4-Dinitrotoluene	80.00	76.40	96	64-120	9	32
Pentachlorophenol	80.00	66.47	83	47-120	10	48
Pyrene	30.00	28.53	95	62-120	11	26

Surrogate	%REC	Limits
2-Fluorophenol	74	38-120
Phenol-d5	78	38-120
2,4,6-Tribromophenol	103	46-120
Nitrobenzene-d5	75	51-120
2-Fluorobiphenyl	92	54-120
Terphenyl-d14	96	21-120

RPD= Relative Percent Difference

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-1-1	Batch#:	240222
Lab ID:	282148-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/18/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	33,000	3,300
Phenol	ND	33,000	1,700
bis(2-Chloroethyl) ether	ND	33,000	1,200
2-Chlorophenol	ND	33,000	1,600
1,3-Dichlorobenzene	ND	33,000	1,200
1,4-Dichlorobenzene	ND	33,000	1,000
Benzyl alcohol	ND	33,000	1,500
1,2-Dichlorobenzene	ND	33,000	940
2-Methylphenol	ND	33,000	1,500
bis(2-Chloroisopropyl) ether	ND	33,000	1,800
4-Methylphenol	ND	33,000	1,700
N-Nitroso-di-n-propylamine	ND	33,000	3,300
Hexachloroethane	ND	33,000	1,200
Nitrobenzene	ND	33,000	1,200
Isophorone	ND	33,000	1,100
2-Nitrophenol	ND	66,000	1,000
2,4-Dimethylphenol	ND	33,000	1,400
Benzoic acid	ND	170,000	50,000
bis(2-Chloroethoxy)methane	ND	33,000	1,100
2,4-Dichlorophenol	ND	33,000	1,300
1,2,4-Trichlorobenzene	ND	33,000	960
Naphthalene	ND	6,600	870
4-Chloroaniline	ND	33,000	3,300
Hexachlorobutadiene	ND	33,000	6,000
4-Chloro-3-methylphenol	ND	33,000	1,500
2-Methylnaphthalene	ND	6,600	980
Hexachlorocyclopentadiene	ND	66,000	6,000
2,4,6-Trichlorophenol	ND	33,000	1,400
2,4,5-Trichlorophenol	ND	33,000	870
2-Chloronaphthalene	ND	33,000	5,500
2-Nitroaniline	ND	66,000	3,300
Dimethylphthalate	ND	33,000	930
Acenaphthylene	ND	6,600	850
2,6-Dinitrotoluene	ND	33,000	870
3-Nitroaniline	ND	66,000	3,300
Acenaphthene	ND	6,600	1,200
2,4-Dinitrophenol	ND	66,000	16,000
4-Nitrophenol	ND	66,000	6,800
Dibenzofuran	ND	33,000	870
2,4-Dinitrotoluene	ND	33,000	960
Diethylphthalate	ND	33,000	840
Fluorene	ND	6,600	880
4-Chlorophenyl-phenylether	ND	33,000	970
4-Nitroaniline	ND	66,000	3,300
4,6-Dinitro-2-methylphenol	ND	66,000	4,200
N-Nitrosodiphenylamine	ND	33,000	5,500
Azobenzene	ND	33,000	1,200
4-Bromophenyl-phenylether	ND	33,000	5,800
Hexachlorobenzene	ND	33,000	1,200
Pentachlorophenol	ND	66,000	15,000
Phenanthrene	ND	6,600	950

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-1-1	Batch#:	240222
Lab ID:	282148-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/18/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Anthracene	ND	6,600	1,200
Di-n-butylphthalate	ND	33,000	1,200
Fluoranthene	ND	6,600	860
Pyrene	ND	6,600	930
Butylbenzylphthalate	ND	33,000	1,200
3,3'-Dichlorobenzidine	ND	66,000	4,300
Benzo(a)anthracene	ND	6,600	860
Chrysene	ND	6,600	1,200
bis(2-Ethylhexyl)phthalate	ND	33,000	870
Di-n-octylphthalate	ND	33,000	840
Benzo(b)fluoranthene	ND	6,600	1,200
Benzo(k)fluoranthene	ND	6,600	860
Benzo(a)pyrene	ND	6,600	860
Indeno(1,2,3-cd)pyrene	ND	6,600	1,200
Dibenz(a,h)anthracene	ND	6,600	1,200
Benzo(g,h,i)perylene	ND	6,600	860

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-1-5	Batch#:	240222
Lab ID:	282148-002	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	83,000	10,000
Phenol	ND	83,000	3,700
bis(2-Chloroethyl)ether	ND	83,000	5,500
2-Chlorophenol	ND	83,000	3,500
1,3-Dichlorobenzene	ND	83,000	10,000
1,4-Dichlorobenzene	ND	83,000	10,000
Benzyl alcohol	ND	83,000	4,100
1,2-Dichlorobenzene	ND	83,000	5,500
2-Methylphenol	ND	83,000	3,600
bis(2-Chloroisopropyl) ether	ND	83,000	4,000
4-Methylphenol	ND	83,000	4,000
N-Nitroso-di-n-propylamine	ND	83,000	3,800
Hexachloroethane	ND	83,000	10,000
Nitrobenzene	ND	83,000	5,500
Isophorone	ND	83,000	2,500
2-Nitrophenol	ND	170,000	9,700
2,4-Dimethylphenol	ND	83,000	4,600
Benzoic acid	ND	420,000	94,000
bis(2-Chloroethoxy)methane	ND	83,000	2,600
2,4-Dichlorophenol	ND	83,000	2,300
1,2,4-Trichlorobenzene	ND	83,000	5,500
Naphthalene	ND	17,000	3,200
4-Chloroaniline	ND	83,000	3,100
Hexachlorobutadiene	ND	83,000	5,500
4-Chloro-3-methylphenol	ND	83,000	2,200
2-Methylnaphthalene	ND	17,000	2,500
Hexachlorocyclopentadiene	ND	170,000	19,000
2,4,6-Trichlorophenol	ND	83,000	2,700
2,4,5-Trichlorophenol	ND	83,000	2,300
2-Chloronaphthalene	ND	83,000	2,100
2-Nitroaniline	ND	170,000	8,400
Dimethylphthalate	ND	83,000	2,100
Acenaphthylene	ND	17,000	2,100
2,6-Dinitrotoluene	ND	83,000	8,400
3-Nitroaniline	ND	170,000	10,000
Acenaphthene	ND	17,000	2,100
2,4-Dinitrophenol	ND	170,000	37,000
4-Nitrophenol	ND	170,000	19,000
Dibenzofuran	ND	83,000	2,100
2,4-Dinitrotoluene	ND	83,000	2,100
Diethylphthalate	ND	83,000	2,100
Fluorene	ND	17,000	2,100
4-Chlorophenyl-phenylether	ND	83,000	2,100
4-Nitroaniline	ND	170,000	10,000
4,6-Dinitro-2-methylphenol	ND	170,000	10,000
N-Nitrosodiphenylamine	ND	83,000	2,100
Azobenzene	ND	83,000	2,100
4-Bromophenyl-phenylether	ND	83,000	2,100
Hexachlorobenzene	ND	83,000	2,100
Pentachlorophenol	ND	170,000	26,000
Phenanthrene	ND	17,000	2,100

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-1-5	Batch#:	240222
Lab ID:	282148-002	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Anthracene	ND	17,000	2,200
Di-n-butylphthalate	ND	83,000	2,400
Fluoranthene	ND	17,000	2,300
Pyrene	ND	17,000	2,100
Butylbenzylphthalate	ND	83,000	2,400
3,3'-Dichlorobenzidine	ND	170,000	20,000
Benzo(a)anthracene	ND	17,000	2,100
Chrysene	ND	17,000	2,100
bis(2-Ethylhexyl)phthalate	ND	83,000	2,100
Di-n-octylphthalate	ND	83,000	8,500
Benzo(b)fluoranthene	ND	17,000	2,100
Benzo(k)fluoranthene	ND	17,000	2,100
Benzo(a)pyrene	ND	17,000	2,100
Indeno(1,2,3-cd)pyrene	ND	17,000	2,100
Dibenz(a,h)anthracene	ND	17,000	2,100
Benzo(g,h,i)perylene	ND	17,000	2,100

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-3-1	Batch#:	240222
Lab ID:	282148-005	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	3.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	1,000	130
Phenol	ND	1,000	45
bis(2-Chloroethyl)ether	ND	1,000	66
2-Chlorophenol	ND	1,000	42
1,3-Dichlorobenzene	ND	1,000	130
1,4-Dichlorobenzene	ND	1,000	130
Benzyl alcohol	ND	1,000	49
1,2-Dichlorobenzene	ND	1,000	66
2-Methylphenol	ND	1,000	43
bis(2-Chloroisopropyl) ether	ND	1,000	48
4-Methylphenol	ND	1,000	48
N-Nitroso-di-n-propylamine	ND	1,000	46
Hexachloroethane	ND	1,000	130
Nitrobenzene	ND	1,000	66
Isophorone	ND	1,000	31
2-Nitrophenol	ND	2,000	120
2,4-Dimethylphenol	ND	1,000	56
Benzoic acid	ND	5,000	1,100
bis(2-Chloroethoxy)methane	ND	1,000	31
2,4-Dichlorophenol	ND	1,000	28
1,2,4-Trichlorobenzene	ND	1,000	66
Naphthalene	ND	200	39
4-Chloroaniline	ND	1,000	38
Hexachlorobutadiene	ND	1,000	66
4-Chloro-3-methylphenol	ND	1,000	26
2-Methylnaphthalene	ND	200	30
Hexachlorocyclopentadiene	ND	2,000	230
2,4,6-Trichlorophenol	ND	1,000	33
2,4,5-Trichlorophenol	ND	1,000	28
2-Chloronaphthalene	ND	1,000	25
2-Nitroaniline	ND	2,000	100
Dimethylphthalate	ND	1,000	25
Acenaphthylene	ND	200	25
2,6-Dinitrotoluene	ND	1,000	100
3-Nitroaniline	ND	2,000	130
Acenaphthene	ND	200	25
2,4-Dinitrophenol	ND	2,000	450
4-Nitrophenol	ND	2,000	230
Dibenzofuran	ND	1,000	25
2,4-Dinitrotoluene	ND	1,000	25
Diethylphthalate	ND	1,000	25
Fluorene	ND	200	25
4-Chlorophenyl-phenylether	ND	1,000	25
4-Nitroaniline	ND	2,000	130
4,6-Dinitro-2-methylphenol	ND	2,000	130
N-Nitrosodiphenylamine	ND	1,000	25
Azobenzene	ND	1,000	25
4-Bromophenyl-phenylether	ND	1,000	25
Hexachlorobenzene	ND	1,000	25
Pentachlorophenol	ND	2,000	310
Phenanthrene	ND	200	25

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-3-1	Batch#:	240222
Lab ID:	282148-005	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	3.000		

Analyte	Result	RL	MDL
Anthracene	ND	200	27
Di-n-butylphthalate	ND	1,000	29
Fluoranthene	ND	200	28
Pyrene	ND	200	25
Butylbenzylphthalate	ND	1,000	29
3,3'-Dichlorobenzidine	ND	2,000	240
Benzo(a)anthracene	ND	200	25
Chrysene	ND	200	25
bis(2-Ethylhexyl)phthalate	ND	1,000	26
Di-n-octylphthalate	ND	1,000	100
Benzo(b)fluoranthene	30 J	200	25
Benzo(k)fluoranthene	ND	200	25
Benzo(a)pyrene	38 J	200	25
Indeno(1,2,3-cd)pyrene	130 J	200	25
Dibenz(a,h)anthracene	ND	200	25
Benzo(g,h,i)perylene	29 J	200	25

Surrogate	%REC	Limits
2-Fluorophenol	76	25-120
Phenol-d5	79	36-120
2,4,6-Tribromophenol	59	27-120
Nitrobenzene-d5	79	44-120
2-Fluorobiphenyl	90	47-120
Terphenyl-d14	77	49-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-3-5	Batch#:	240222
Lab ID:	282148-006	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/18/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	33,000	3,300
Phenol	ND	33,000	1,700
bis(2-Chloroethyl)ether	ND	33,000	1,300
2-Chlorophenol	ND	33,000	1,600
1,3-Dichlorobenzene	ND	33,000	1,200
1,4-Dichlorobenzene	ND	33,000	1,000
Benzyl alcohol	ND	33,000	1,600
1,2-Dichlorobenzene	ND	33,000	950
2-Methylphenol	ND	33,000	1,500
bis(2-Chloroisopropyl) ether	ND	33,000	1,800
4-Methylphenol	ND	33,000	1,800
N-Nitroso-di-n-propylamine	ND	33,000	3,300
Hexachloroethane	ND	33,000	1,200
Nitrobenzene	ND	33,000	1,200
Isophorone	ND	33,000	1,100
2-Nitrophenol	ND	67,000	1,000
2,4-Dimethylphenol	ND	33,000	1,400
Benzoic acid	ND	170,000	50,000
bis(2-Chloroethoxy)methane	ND	33,000	1,100
2,4-Dichlorophenol	ND	33,000	1,300
1,2,4-Trichlorobenzene	ND	33,000	970
Naphthalene	ND	6,700	880
4-Chloroaniline	ND	33,000	3,300
Hexachlorobutadiene	ND	33,000	6,100
4-Chloro-3-methylphenol	ND	33,000	1,500
2-Methylnaphthalene	ND	6,700	980
Hexachlorocyclopentadiene	ND	67,000	6,000
2,4,6-Trichlorophenol	ND	33,000	1,400
2,4,5-Trichlorophenol	ND	33,000	880
2-Chloronaphthalene	ND	33,000	5,500
2-Nitroaniline	ND	67,000	3,300
Dimethylphthalate	ND	33,000	930
Acenaphthylene	ND	6,700	850
2,6-Dinitrotoluene	ND	33,000	880
3-Nitroaniline	ND	67,000	3,300
Acenaphthene	ND	6,700	1,200
2,4-Dinitrophenol	ND	67,000	16,000
4-Nitrophenol	ND	67,000	6,900
Dibenzofuran	ND	33,000	880
2,4-Dinitrotoluene	ND	33,000	970
Diethylphthalate	ND	33,000	850
Fluorene	ND	6,700	890
4-Chlorophenyl-phenylether	ND	33,000	980
4-Nitroaniline	ND	67,000	3,300
4,6-Dinitro-2-methylphenol	ND	67,000	4,200
N-Nitrosodiphenylamine	ND	33,000	5,600
Azobenzene	ND	33,000	1,200
4-Bromophenyl-phenylether	ND	33,000	5,900
Hexachlorobenzene	ND	33,000	1,200
Pentachlorophenol	ND	67,000	15,000
Phenanthrene	ND	6,700	960

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-3-5	Batch#:	240222
Lab ID:	282148-006	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/18/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Anthracene	ND	6,700	1,200
Di-n-butylphthalate	ND	33,000	1,200
Fluoranthene	ND	6,700	860
Pyrene	ND	6,700	930
Butylbenzylphthalate	ND	33,000	1,200
3,3'-Dichlorobenzidine	ND	67,000	4,300
Benzo(a)anthracene	ND	6,700	860
Chrysene	ND	6,700	1,200
bis(2-Ethylhexyl)phthalate	ND	33,000	870
Di-n-octylphthalate	ND	33,000	840
Benzo(b)fluoranthene	ND	6,700	1,200
Benzo(k)fluoranthene	ND	6,700	870
Benzo(a)pyrene	ND	6,700	870
Indeno(1,2,3-cd)pyrene	ND	6,700	1,200
Dibenz(a,h)anthracene	ND	6,700	1,200
Benzo(g,h,i)perylene	ND	6,700	860

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-4-1	Batch#:	240222
Lab ID:	282148-009	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/18/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	330,000	33,000
Phenol	ND	330,000	17,000
bis(2-Chloroethyl)ether	ND	330,000	13,000
2-Chlorophenol	ND	330,000	16,000
1,3-Dichlorobenzene	ND	330,000	12,000
1,4-Dichlorobenzene	ND	330,000	10,000
Benzyl alcohol	ND	330,000	16,000
1,2-Dichlorobenzene	ND	330,000	9,500
2-Methylphenol	ND	330,000	15,000
bis(2-Chloroisopropyl) ether	ND	330,000	18,000
4-Methylphenol	ND	330,000	18,000
N-Nitroso-di-n-propylamine	ND	330,000	33,000
Hexachloroethane	ND	330,000	12,000
Nitrobenzene	ND	330,000	12,000
Isophorone	ND	330,000	11,000
2-Nitrophenol	ND	670,000	10,000
2,4-Dimethylphenol	ND	330,000	14,000
Benzoic acid	ND	1,700,000	500,000
bis(2-Chloroethoxy)methane	ND	330,000	11,000
2,4-Dichlorophenol	ND	330,000	13,000
1,2,4-Trichlorobenzene	ND	330,000	9,700
Naphthalene	ND	67,000	8,800
4-Chloroaniline	ND	330,000	33,000
Hexachlorobutadiene	ND	330,000	61,000
4-Chloro-3-methylphenol	ND	330,000	15,000
2-Methylnaphthalene	ND	67,000	9,800
Hexachlorocyclopentadiene	ND	670,000	60,000
2,4,6-Trichlorophenol	ND	330,000	14,000
2,4,5-Trichlorophenol	ND	330,000	8,800
2-Chloronaphthalene	ND	330,000	55,000
2-Nitroaniline	ND	670,000	33,000
Dimethylphthalate	ND	330,000	9,300
Acenaphthylene	ND	67,000	8,500
2,6-Dinitrotoluene	ND	330,000	8,800
3-Nitroaniline	ND	670,000	33,000
Acenaphthene	ND	67,000	12,000
2,4-Dinitrophenol	ND	670,000	160,000
4-Nitrophenol	ND	670,000	69,000
Dibenzofuran	ND	330,000	8,800
2,4-Dinitrotoluene	ND	330,000	9,700
Diethylphthalate	ND	330,000	8,500
Fluorene	ND	67,000	8,900
4-Chlorophenyl-phenylether	ND	330,000	9,800
4-Nitroaniline	ND	670,000	33,000
4,6-Dinitro-2-methylphenol	ND	670,000	42,000
N-Nitrosodiphenylamine	ND	330,000	56,000
Azobenzene	ND	330,000	12,000
4-Bromophenyl-phenylether	ND	330,000	59,000
Hexachlorobenzene	ND	330,000	12,000
Pentachlorophenol	ND	670,000	150,000
Phenanthrene	ND	67,000	9,600

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-4-1	Batch#:	240222
Lab ID:	282148-009	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/18/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Anthracene	ND	67,000	12,000
Di-n-butylphthalate	ND	330,000	12,000
Fluoranthene	ND	67,000	8,600
Pyrene	ND	67,000	9,400
Butylbenzylphthalate	ND	330,000	12,000
3,3'-Dichlorobenzidine	ND	670,000	43,000
Benzo(a)anthracene	ND	67,000	8,600
Chrysene	ND	67,000	12,000
bis(2-Ethylhexyl)phthalate	ND	330,000	8,700
Di-n-octylphthalate	ND	330,000	8,400
Benzo(b)fluoranthene	ND	67,000	12,000
Benzo(k)fluoranthene	ND	67,000	8,700
Benzo(a)pyrene	ND	67,000	8,700
Indeno(1,2,3-cd)pyrene	ND	67,000	12,000
Dibenz(a,h)anthracene	ND	67,000	12,000
Benzo(g,h,i)perylene	ND	67,000	8,600

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-4-5	Batch#:	240222
Lab ID:	282148-010	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	330	42
Phenol	ND	330	15
bis(2-Chloroethyl)ether	ND	330	22
2-Chlorophenol	ND	330	14
1,3-Dichlorobenzene	ND	330	42
1,4-Dichlorobenzene	ND	330	42
Benzyl alcohol	ND	330	16
1,2-Dichlorobenzene	ND	330	22
2-Methylphenol	ND	330	14
bis(2-Chloroisopropyl) ether	ND	330	16
4-Methylphenol	ND	330	16
N-Nitroso-di-n-propylamine	ND	330	15
Hexachloroethane	ND	330	42
Nitrobenzene	ND	330	22
Isophorone	ND	330	10
2-Nitrophenol	ND	660	39
2,4-Dimethylphenol	ND	330	19
Benzoic acid	ND	1,700	380
bis(2-Chloroethoxy)methane	ND	330	10
2,4-Dichlorophenol	ND	330	9.3
1,2,4-Trichlorobenzene	ND	330	22
Naphthalene	ND	66	13
4-Chloroaniline	ND	330	13
Hexachlorobutadiene	ND	330	22
4-Chloro-3-methylphenol	ND	330	8.6
2-Methylnaphthalene	ND	66	9.9
Hexachlorocyclopentadiene	ND	660	76
2,4,6-Trichlorophenol	ND	330	11
2,4,5-Trichlorophenol	ND	330	9.2
2-Chloronaphthalene	ND	330	8.4
2-Nitroaniline	ND	660	34
Dimethylphthalate	ND	330	8.4
Acenaphthylene	ND	66	8.4
2,6-Dinitrotoluene	ND	330	34
3-Nitroaniline	ND	660	42
Acenaphthene	ND	66	8.4
2,4-Dinitrophenol	ND	660	150
4-Nitrophenol	ND	660	75
Dibenzofuran	ND	330	8.4
2,4-Dinitrotoluene	ND	330	8.3
Diethylphthalate	ND	330	8.4
Fluorene	ND	66	8.4
4-Chlorophenyl-phenylether	ND	330	8.4
4-Nitroaniline	ND	660	42
4,6-Dinitro-2-methylphenol	ND	660	42
N-Nitrosodiphenylamine	ND	330	8.4
Azobenzene	ND	330	8.4
4-Bromophenyl-phenylether	ND	330	8.4
Hexachlorobenzene	ND	330	8.4
Pentachlorophenol	ND	660	100
Phenanthrene	ND	66	8.4
Anthracene	ND	66	9.0

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-4-5	Batch#:	240222
Lab ID:	282148-010	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Di-n-butylphthalate	ND	330	9.5
Fluoranthene	ND	66	9.3
Pyrene	ND	66	8.4
Butylbenzylphthalate	ND	330	9.6
3,3'-Dichlorobenzidine	ND	660	79
Benzo(a)anthracene	ND	66	8.4
Chrysene	ND	66	8.4
bis(2-Ethylhexyl)phthalate	ND	330	8.5
Di-n-octylphthalate	ND	330	34
Benzo(b)fluoranthene	ND	66	8.4
Benzo(k)fluoranthene	ND	66	8.4
Benzo(a)pyrene	ND	66	8.4
Indeno(1,2,3-cd)pyrene	ND	66	8.4
Dibenz(a,h)anthracene	ND	66	8.4
Benzo(g,h,i)perylene	ND	66	8.4

Surrogate	%REC	Limits
2-Fluorophenol	72	25-120
Phenol-d5	74	36-120
2,4,6-Tribromophenol	73	27-120
Nitrobenzene-d5	74	44-120
2-Fluorobiphenyl	76	47-120
Terphenyl-d14	69	49-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855937	Batch#:	240222
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/17/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	330	47
Phenol	ND	330	9.9
bis(2-Chloroethyl)ether	ND	330	59
2-Chlorophenol	ND	330	9.9
1,3-Dichlorobenzene	ND	330	56
1,4-Dichlorobenzene	ND	330	9.9
Benzyl alcohol	ND	330	11
1,2-Dichlorobenzene	ND	330	9.9
2-Methylphenol	ND	330	14
bis(2-Chloroisopropyl) ether	ND	330	9.9
4-Methylphenol	ND	330	9.9
N-Nitroso-di-n-propylamine	ND	330	9.9
Hexachloroethane	ND	330	9.9
Nitrobenzene	ND	330	11
Isophorone	ND	330	9.9
2-Nitrophenol	ND	660	9.9
2,4-Dimethylphenol	ND	330	14
Benzoic acid	ND	1,700	430
bis(2-Chloroethoxy)methane	ND	330	9.9
2,4-Dichlorophenol	ND	330	9.9
1,2,4-Trichlorobenzene	ND	330	9.9
Naphthalene	ND	66	9.9
4-Chloroaniline	ND	330	9.3
Hexachlorobutadiene	ND	330	8.8
4-Chloro-3-methylphenol	ND	330	8.3
2-Methylnaphthalene	ND	66	9.9
Hexachlorocyclopentadiene	ND	660	14
2,4,6-Trichlorophenol	ND	330	12
2,4,5-Trichlorophenol	ND	330	8.3
2-Chloronaphthalene	ND	330	8.9
2-Nitroaniline	ND	660	11
Dimethylphthalate	ND	330	9.9
Acenaphthylene	ND	66	8.9
2,6-Dinitrotoluene	ND	330	8.9
3-Nitroaniline	ND	660	9.9
Acenaphthene	ND	66	9.9
2,4-Dinitrophenol	ND	660	64
4-Nitrophenol	ND	660	71
Dibenzofuran	ND	330	10
2,4-Dinitrotoluene	ND	330	9.5
Diethylphthalate	ND	330	11
Fluorene	ND	66	9.8
4-Chlorophenyl-phenylether	ND	330	9.6
4-Nitroaniline	ND	660	9.9
4,6-Dinitro-2-methylphenol	ND	660	76
N-Nitrosodiphenylamine	ND	330	10
Azobenzene	ND	330	8.5
4-Bromophenyl-phenylether	ND	330	10
Hexachlorobenzene	ND	330	11
Pentachlorophenol	ND	660	130
Phenanthrene	ND	66	10
Anthracene	ND	66	11
Di-n-butylphthalate	ND	330	12

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855937	Batch#:	240222
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/17/16

Analyte	Result	RL	MDL
Fluoranthene	ND	66	10
Pyrene	ND	66	11
Butylbenzylphthalate	ND	330	9.9
3,3'-Dichlorobenzidine	ND	660	9.9
Benzo(a)anthracene	ND	66	10
Chrysene	ND	66	11
bis(2-Ethylhexyl)phthalate	ND	330	13
Di-n-octylphthalate	ND	330	9.9
Benzo(b)fluoranthene	ND	66	8.9
Benzo(k)fluoranthene	ND	66	9.4
Benzo(a)pyrene	ND	66	8.7
Indeno(1,2,3-cd)pyrene	ND	66	8.7
Dibenz(a,h)anthracene	ND	66	9.2
Benzo(g,h,i)perylene	ND	66	10

Surrogate	%REC	Limits
2-Fluorophenol	69	25-120
Phenol-d5	67	36-120
2,4,6-Tribromophenol	75	27-120
Nitrobenzene-d5	63	44-120
2-Fluorobiphenyl	73	47-120
Terphenyl-d14	75	49-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855938	Batch#:	240222
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/17/16

Analyte	Spiked	Result	%REC	Limits
Phenol	2,685	2,159	80	42-120
2-Chlorophenol	2,685	2,164	81	45-120
1,4-Dichlorobenzene	2,685	1,843	69	48-120
N-Nitroso-di-n-propylamine	2,685	2,224	83	27-123
1,2,4-Trichlorobenzene	2,685	1,798	67	50-120
4-Chloro-3-methylphenol	2,685	2,143	80	59-120
Acenaphthene	1,007	948.4	94	53-120
4-Nitrophenol	2,685	1,693	63	47-120
2,4-Dinitrotoluene	2,685	2,432	91	55-120
Pentachlorophenol	2,685	2,249	84	32-120
Pyrene	1,007	1,041	103	52-120

Surrogate	%REC	Limits
2-Fluorophenol	76	25-120
Phenol-d5	81	36-120
2,4,6-Tribromophenol	82	27-120
Nitrobenzene-d5	71	44-120
2-Fluorobiphenyl	82	47-120
Terphenyl-d14	98	49-120

Organochlorine Pesticides			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Field ID:	SB-1-1	Batch#:	240225
Lab ID:	282148-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/24/16
Diln Fac:	20.00		

Analyte	Result	RL	MDL
alpha-BHC	ND	34	3.9
beta-BHC	ND	34	8.2
gamma-BHC	ND	34	4.3
delta-BHC	ND	34	5.5
Heptachlor	ND	34	3.8
Aldrin	ND	34	4.1
Heptachlor epoxide	ND	34	4.4
Endosulfan I	ND	34	3.5
Dieldrin	ND	34	7.9
4,4'-DDE	370	66	12
Endrin	ND	66	11
Endosulfan II	ND	66	9.9
Endosulfan sulfate	ND	66	10
4,4'-DDD	ND	66	14
Endrin aldehyde	ND	66	6.7
4,4'-DDT	480	66	9.4
alpha-Chlordane	ND	34	4.1
gamma-Chlordane	12 C J	34	4.9
Methoxychlor	ND	340	62
Toxaphene	ND	1,200	180

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

C= Presence confirmed, but RPD between columns exceeds 40%

J= Estimated value

DO= Diluted Out

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Organochlorine Pesticides			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Field ID:	SB-3-1	Batch#:	240225
Lab ID:	282148-005	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/24/16
Diln Fac:	5.000		

Analyte	Result	RL	MDL
alpha-BHC	ND	8.5	0.99
beta-BHC	ND	8.5	2.1
gamma-BHC	ND	8.5	1.1
delta-BHC	ND	8.5	1.4
Heptachlor	ND	8.5	0.96
Aldrin	ND	8.5	1.0
Heptachlor epoxide	ND	8.5	1.1
Endosulfan I	ND	8.5	0.88
Dieldrin	ND	8.5	2.0
4,4'-DDE	59	16	2.9
Endrin	ND	16	2.8
Endosulfan II	ND	16	2.5
Endosulfan sulfate	ND	16	2.6
4,4'-DDD	ND	16	3.6
Endrin aldehyde	ND	16	1.7
4,4'-DDT	13 J	16	2.4
alpha-Chlordane	ND	8.5	1.0
gamma-Chlordane	2.6 J	8.5	1.2
Methoxychlor	ND	85	16
Toxaphene	ND	300	46

Surrogate	%REC	Limits
TCMX	88	44-125
Decachlorobiphenyl	81	39-121

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Organochlorine Pesticides			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Field ID:	SB-4-1	Batch#:	240225
Lab ID:	282148-009	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	200.0		

Analyte	Result	RL	MDL
alpha-BHC	ND	340	50
beta-BHC	ND #	340	93
gamma-BHC	ND	340	43
delta-BHC	ND	340	49
Heptachlor	ND #	340	49
Aldrin	ND	340	52
Heptachlor epoxide	ND	340	52
Endosulfan I	ND	340	50
Dieldrin	ND	340	86
4,4'-DDE	ND #	650	93
Endrin	ND	650	97
Endosulfan II	ND	650	86
Endosulfan sulfate	ND #	650	100
4,4'-DDD	ND #	650	68
Endrin aldehyde	ND	650	110
4,4'-DDT	ND #	650	66
alpha-Chlordane	ND	340	47
gamma-Chlordane	ND	340	60
Methoxychlor	ND #	3,400	500
Toxaphene	ND	12,000	2,300

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

#= CCV drift outside limits; average CCV drift within limits per method requirements
 DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Organochlorine Pesticides			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855947	Batch#:	240225
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/18/16

Analyte	Result	RL	MDL
alpha-BHC	ND	1.7	0.20
beta-BHC	ND	1.7	0.41
gamma-BHC	ND	1.7	0.22
delta-BHC	ND	1.7	0.28
Heptachlor	ND	1.7	0.19
Aldrin	ND	1.7	0.20
Heptachlor epoxide	ND	1.7	0.22
Endosulfan I	ND	1.7	0.18
Dieldrin	ND	1.7	0.40
4,4'-DDE	ND	3.3	0.59
Endrin	ND	3.3	0.56
Endosulfan II	ND	3.3	0.50
Endosulfan sulfate	ND	3.3	0.51
4,4'-DDD	ND	3.3	0.73
Endrin aldehyde	ND	3.3	0.34
4,4'-DDT	ND	3.3	0.47
alpha-Chlordane	ND	1.7	0.21
gamma-Chlordane	ND	1.7	0.24
Methoxychlor	ND	17	3.1
Toxaphene	ND	60	9.1

Surrogate	%REC	Limits
TCMX	83	44-125
Decachlorobiphenyl	83	39-121

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Organochlorine Pesticides			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855948	Batch#:	240225
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/18/16

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.36	9.077	68	44-121
Heptachlor	13.36	9.161 #	69	45-129
Aldrin	13.36	9.266	69	45-120
Dieldrin	13.36	10.53	79	49-131
Endrin	13.36	10.72 #	80	43-135
4,4'-DDT	13.36	10.80 #	81	37-141

Surrogate	%REC	Limits
TCMX	61	44-125
Decachlorobiphenyl	75	39-121

#= CCV drift outside limits; average CCV drift within limits per method requirements

Polychlorinated Biphenyls (PCBs)

Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/17/16
Batch#:	240147		

Field ID:	SB-1-1	Diln Fac:	1.000
Type:	SAMPLE	Prepared:	10/14/16
Lab ID:	282148-001		

Analyte	Result	RL	MDL
Aroclor-1016	ND	12	3.0
Aroclor-1221	ND	24	8.1
Aroclor-1232	ND	12	3.9
Aroclor-1242	ND	12	3.6
Aroclor-1248	ND	12	3.9
Aroclor-1254	54	12	3.1
Aroclor-1260	60	12	2.0

Surrogate	%REC	Limits
Decachlorobiphenyl	124	25-135

Field ID:	SB-3-1	Diln Fac:	1.000
Type:	SAMPLE	Prepared:	10/14/16
Lab ID:	282148-005		

Analyte	Result	RL	MDL
Aroclor-1016	ND	12	3.0
Aroclor-1221	ND	24	8.0
Aroclor-1232	ND	12	3.9
Aroclor-1242	ND	12	3.6
Aroclor-1248	ND	12	3.8
Aroclor-1254	ND	12	3.1
Aroclor-1260	150	12	1.9

Surrogate	%REC	Limits
Decachlorobiphenyl	104	25-135

DO= Diluted Out

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Polychlorinated Biphenyls (PCBs)			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8082
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/13/16
Basis:	as received	Analyzed:	10/17/16
Batch#:	240147		

Field ID: SB-4-1 Diln Fac: 10.00
 Type: SAMPLE Prepared: 10/14/16
 Lab ID: 282148-009

Analyte	Result	RL	MDL
Aroclor-1016	ND	83	29
Aroclor-1221	ND	170	79
Aroclor-1232	ND	83	39
Aroclor-1242	ND	83	36
Aroclor-1248	ND	83	38
Aroclor-1254	ND	83	30
Aroclor-1260	ND	83	19

Surrogate	%REC	Limits
Decachlorobiphenyl	DO	25-135

Type: BLANK Diln Fac: 1.000
 Lab ID: QC855637 Prepared: 10/13/16

Analyte	Result	RL	MDL
Aroclor-1016	ND	4.7	1.2
Aroclor-1221	ND	9.5	3.2
Aroclor-1232	ND	4.7	1.5
Aroclor-1242	ND	4.7	1.4
Aroclor-1248	ND	4.7	1.5
Aroclor-1254	ND	4.7	1.2
Aroclor-1260	ND	4.7	0.77

Surrogate	%REC	Limits
Decachlorobiphenyl	121	25-135

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855638	Batch#:	240147
Matrix:	Soil	Prepared:	10/13/16
Units:	ug/Kg	Analyzed:	10/17/16

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	166.5	168.5	101	64-140
Aroclor-1260	166.5	172.7	104	65-146

Surrogate	%REC	Limits
Decachlorobiphenyl	111	25-135

Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8082
Field ID:	ZZZZZZZZZZ	Batch#:	240147
MSS Lab ID:	282096-001	Sampled:	10/12/16
Matrix:	Soil	Received:	10/13/16
Units:	ug/Kg	Prepared:	10/13/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	1.000		

Type: MS Lab ID: QC855639

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<2.968	169.0	162.1	96	60-161
Aroclor-1260	<1.941	169.0	165.5	98	42-166

Surrogate	%REC	Limits
Decachlorobiphenyl	84	25-135

Type: MSD Lab ID: QC855640

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	167.4	149.9	90	60-161	7	43
Aroclor-1260	167.4	165.6	99	42-166	1	51

Surrogate	%REC	Limits
Decachlorobiphenyl	85	25-135

RPD= Relative Percent Difference

California Title 22 Metals			
Lab #:	282148	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-1-1	Basis:	as received
Lab ID:	282148-001	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	4.0	2.0	0.16	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Arsenic	5.3	0.27	0.078	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Barium	240	0.27	0.058	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Beryllium	0.39	0.11	0.013	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cadmium	0.61	0.27	0.027	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Chromium	51	0.27	0.068	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cobalt	12	0.27	0.032	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Copper	42	0.27	0.090	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Lead	99	0.27	0.075	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Mercury	0.43	0.016	0.0029	240775	10/31/16	10/31/16	METHOD	EPA 7471A
Molybdenum	0.83	0.27	0.053	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Nickel	45	0.27	0.071	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Selenium	ND	2.0	0.17	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Silver	ND	0.27	0.043	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Thallium	ND	0.54	0.15	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Vanadium	53	0.27	0.061	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Zinc	130	1.1	0.22	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282148	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-1-5	Basis:	as received
Lab ID:	282148-002	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	3.3	1.8	0.14	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Arsenic	3.5	0.23	0.066	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Barium	220	0.23	0.049	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Beryllium	0.42	0.091	0.011	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cadmium	0.48	0.23	0.023	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Chromium	42	0.23	0.057	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cobalt	21	0.23	0.027	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Copper	48	0.23	0.076	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Lead	16	0.23	0.063	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Mercury	0.056	0.015	0.0028	240775	10/31/16	10/31/16	METHOD	EPA 7471A
Molybdenum	0.27	0.23	0.044	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Nickel	21	0.23	0.060	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Selenium	ND	1.8	0.15	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Silver	ND	0.23	0.036	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Thallium	ND	0.45	0.13	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Vanadium	41	0.23	0.052	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Zinc	34	0.91	0.18	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282148	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-3-1	Basis:	as received
Lab ID:	282148-005	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	2.8	1.9	0.14	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Arsenic	19	0.24	0.069	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Barium	110	0.24	0.051	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Beryllium	0.26	0.095	0.012	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cadmium	0.75	0.24	0.024	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Chromium	72	0.24	0.060	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cobalt	7.7	0.24	0.029	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Copper	9.6	0.24	0.079	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Lead	35	0.24	0.066	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Mercury	0.11	0.017	0.0031	240775	10/31/16	10/31/16	METHOD	EPA 7471A
Molybdenum	0.37	0.24	0.047	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Nickel	21	0.24	0.063	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Selenium	ND	1.9	0.15	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Silver	ND	0.24	0.038	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Thallium	ND	0.48	0.13	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Vanadium	52	0.24	0.054	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Zinc	66	0.95	0.19	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282148	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-3-5	Basis:	as received
Lab ID:	282148-006	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	2.7	1.9	0.14	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Arsenic	3.1	0.24	0.069	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Barium	150	0.24	0.051	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Beryllium	0.27	0.094	0.012	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cadmium	0.38	0.24	0.024	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Chromium	52	0.24	0.059	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cobalt	7.6	0.24	0.028	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Copper	27	0.24	0.079	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Lead	53	0.24	0.066	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Mercury	0.40	0.015	0.0028	240775	10/31/16	10/31/16	METHOD	EPA 7471A
Molybdenum	0.81	0.24	0.046	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Nickel	27	0.24	0.062	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Selenium	ND	1.9	0.15	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Silver	ND	0.24	0.038	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Thallium	ND	0.47	0.13	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Vanadium	44	0.24	0.054	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Zinc	48	0.94	0.19	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282148	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-4-1	Basis:	as received
Lab ID:	282148-009	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	2.7	2.0	0.15	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Arsenic	0.82	0.25	0.071	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Barium	43	0.25	0.053	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Beryllium	0.088 J	0.098	0.012	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cadmium	0.42	0.25	0.025	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Chromium	6.2	0.25	0.062	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cobalt	8.0	0.25	0.029	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Copper	46	0.25	0.082	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Lead	3.3	0.25	0.068	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Mercury	0.074	0.017	0.0031	240776	10/31/16	10/31/16	METHOD	EPA 7471A
Molybdenum	0.12 J	0.25	0.048	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Nickel	13	0.25	0.065	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Selenium	ND	2.0	0.16	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Silver	ND	0.25	0.039	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Thallium	0.42 J	0.49	0.14	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Vanadium	57	0.25	0.056	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Zinc	33	0.98	0.20	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282148	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-4-5	Basis:	as received
Lab ID:	282148-010	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/13/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	2.7	1.9	0.15	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Arsenic	2.7	0.24	0.071	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Barium	63	0.24	0.052	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Beryllium	0.26	0.097	0.012	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cadmium	0.32	0.24	0.025	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Chromium	50	0.24	0.061	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Cobalt	7.1	0.24	0.029	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Copper	5.8	0.24	0.081	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Lead	9.3	0.24	0.068	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Mercury	0.044	0.017	0.0030	240776	10/31/16	10/31/16	METHOD	EPA 7471A
Molybdenum	0.27	0.24	0.047	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Nickel	25	0.24	0.064	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Selenium	ND	1.9	0.16	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Silver	ND	0.24	0.039	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Thallium	0.35 J	0.49	0.14	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Vanadium	50	0.24	0.055	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B
Zinc	29	0.97	0.19	240435	10/21/16	10/21/16	EPA 3050B	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3050B
Project#:	0363086	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856787	Batch#:	240435
Matrix:	Soil	Prepared:	10/21/16
Units:	mg/Kg	Analyzed:	10/21/16

Analyte	Result	RL	MDL
Antimony	ND	2.0	0.16
Arsenic	ND	0.26	0.076
Barium	ND	0.26	0.056
Beryllium	ND	0.10	0.013
Cadmium	ND	0.26	0.027
Chromium	ND	0.26	0.066
Cobalt	ND	0.26	0.031
Copper	ND	0.26	0.087
Lead	ND	0.26	0.073
Molybdenum	ND	0.26	0.051
Nickel	ND	0.26	0.069
Selenium	ND	2.0	0.17
Silver	ND	0.26	0.042
Thallium	ND	0.52	0.15
Vanadium	ND	0.26	0.059
Zinc	ND	1.0	0.21

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3050B
Project#:	0363086	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	240435
Units:	mg/Kg	Prepared:	10/21/16
Diln Fac:	1.000	Analyzed:	10/21/16

Type: BS Lab ID: QC856788

Analyte	Spiked	Result	%REC	Limits
Antimony	49.02	44.12	90	80-120
Arsenic	49.02	44.54	91	80-120
Barium	49.02	49.82	102	80-120
Beryllium	24.51	25.14	103	80-120
Cadmium	49.02	48.78	100	80-120
Chromium	49.02	49.30	101	80-120
Cobalt	49.02	47.02	96	80-120
Copper	49.02	49.37	101	80-120
Lead	49.02	45.35	93	80-120
Molybdenum	49.02	45.49	93	80-120
Nickel	49.02	48.92	100	80-120
Selenium	49.02	44.89	92	80-120
Silver	4.902	4.522	92	80-120
Thallium	49.02	46.87	96	80-120
Vanadium	49.02	48.93	100	80-120
Zinc	49.02	47.45	97	80-120

Type: BSD Lab ID: QC856789

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	55.56	50.58	91	80-120	1	20
Arsenic	55.56	51.85	93	80-120	3	20
Barium	55.56	55.70	100	80-120	1	20
Beryllium	27.78	28.44	102	80-120	0	20
Cadmium	55.56	54.92	99	80-120	1	20
Chromium	55.56	55.74	100	80-120	0	20
Cobalt	55.56	52.52	95	80-120	1	20
Copper	55.56	55.43	100	80-120	1	20
Lead	55.56	51.97	94	80-120	1	20
Molybdenum	55.56	52.32	94	80-120	1	20
Nickel	55.56	55.22	99	80-120	0	20
Selenium	55.56	52.18	94	80-120	3	20
Silver	5.556	5.081	91	80-120	1	20
Thallium	55.56	53.71	97	80-120	1	20
Vanadium	55.56	55.31	100	80-120	0	20
Zinc	55.56	53.35	96	80-120	1	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3050B
Project#:	0363086	Analysis:	EPA 6010B
Field ID:	SB-1-1	Batch#:	240435
MSS Lab ID:	282148-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	mg/Kg	Prepared:	10/21/16
Basis:	as received	Analyzed:	10/21/16
Diln Fac:	1.000		

Type: MS Lab ID: QC856790

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	3.969	51.55	26.81	44	15-120
Arsenic	5.284	51.55	48.81	84	69-120
Barium	238.8	51.55	283.7	87 NM	35-154
Beryllium	0.3942	25.77	25.87	99	75-120
Cadmium	0.6074	51.55	48.92	94	71-120
Chromium	51.33	51.55	105.4	105	57-133
Cobalt	11.91	51.55	59.31	92	56-125
Copper	41.67	51.55	98.64	111	54-144
Lead	98.93	51.55	155.6	110	53-125
Molybdenum	0.8320	51.55	43.74	83	66-120
Nickel	44.59	51.55	94.47	97	44-141
Selenium	<0.1718	51.55	42.28	82	61-120
Silver	<0.04287	5.155	4.448	86	69-120
Thallium	<0.1510	51.55	44.98	87	59-120
Vanadium	52.92	51.55	102.7	97	52-144
Zinc	126.9	51.55	197.7	137	45-145

Type: MSD Lab ID: QC856791

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	52.63	20.52	31	15-120	28	41
Arsenic	52.63	49.55	84	69-120	0	35
Barium	52.63	301.5	119 NM	35-154	6	36
Beryllium	26.32	26.15	98	75-120	1	20
Cadmium	52.63	49.66	93	71-120	1	25
Chromium	52.63	103.3	99	57-133	3	33
Cobalt	52.63	56.74	85	56-125	6	36
Copper	52.63	92.90	97	54-144	7	38
Lead	52.63	158.7	114	53-125	1	42
Molybdenum	52.63	45.05	84	66-120	1	20
Nickel	52.63	87.86	82	44-141	8	39
Selenium	52.63	43.69	83	61-120	1	33
Silver	5.263	4.556	87	69-120	0	22
Thallium	52.63	46.28	88	59-120	1	27
Vanadium	52.63	99.99	89	52-144	4	29
Zinc	52.63	166.4	75	45-145	18	39

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

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240775
Lab ID:	QC858208	Prepared:	10/31/16
Matrix:	Soil	Analyzed:	10/31/16
Units:	mg/Kg		

Result	RL	MDL
ND	0.017	0.0030

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	240775
Matrix:	Soil	Prepared:	10/31/16
Units:	mg/Kg	Analyzed:	10/31/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC858209	0.2119	0.2045	97	80-120		
BSD	QC858210	0.2155	0.2141	99	80-120	3	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	SB-1-1	Batch#:	240775
MSS Lab ID:	282148-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	mg/Kg	Prepared:	10/31/16
Basis:	as received	Analyzed:	10/31/16

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC858211	0.4301	0.2083	0.5708	68 *	69-142		
MSD	QC858212		0.1984	0.6447	108	69-142	14	36

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240776
Lab ID:	QC858216	Prepared:	10/31/16
Matrix:	Soil	Analyzed:	10/31/16
Units:	mg/Kg		

Result	RL	MDL
ND	0.016	0.0029

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	240776
Matrix:	Soil	Prepared:	10/31/16
Units:	mg/Kg	Analyzed:	10/31/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC858217	0.2016	0.1997	99	80-120		
BSD	QC858218	0.2083	0.2051	98	80-120	1	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282148	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	240776
MSS Lab ID:	281918-005	Sampled:	10/06/16
Matrix:	Soil	Received:	10/07/16
Units:	mg/Kg	Prepared:	10/31/16
Basis:	as received	Analyzed:	10/31/16

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC858219	0.1499	0.2232	0.6979	246 *	69-142		
MSD	QC858220		0.2049	0.4134	129	69-142	46 *	36

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference



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 282196
ANALYTICAL REPORT

ERM
1277 Treat Blvd.
Walnut Creek, CA 94597

Project : 0363086
Location : Martin Extension
Level : II

Table with 2 columns: Sample ID, Lab ID. Rows include SB-5-1 through SB-2-GW and TRIP BLANK.

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.

Handwritten signature of Dina Ali

Signature: _____

Date: 10/31/2016

Dina Ali
Project Manager
dina.ali@ctberk.com

CASE NARRATIVE

Laboratory number: 282196
Client: ERM
Project: 0363086
Location: Martin Extension
Request Date: 10/14/16
Samples Received: 10/14/16

This data package contains sample and QC results for four soil samples and three water samples, requested for the above referenced project on 10/14/16. The samples were received on ice and intact.

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

Gasoline C7-C12 was detected between the MDL and the RL in the method blank for batch 240218; this analyte was not detected in samples at or above the RL. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B) Water:

SB-2-GW (lab # 282196-010) was diluted due to the dark and viscous nature of the sample extract. No other analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B) Soil:

Matrix spikes QC856004, QC856005 (batch 240237) were not reported because the parent sample required a dilution that would have diluted out the spikes. Matrix spikes QC855894, QC855895 (batch 240208) were not reported because the parent sample required a dilution that would have diluted out the spikes. SB-5-5 (lab # 282196-002), SB-2-1 (lab # 282196-005), and SB-2-3 (lab # 282196-006) were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

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

No analytical problems were encountered.

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

Methylene chloride was detected between the MDL and the RL in SB-2-3 (lab # 282196-006); this analyte is a common laboratory contaminant. No other analytical problems were encountered.

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

SB-5-GW (lab # 282196-004) and SB-2-GW (lab # 282196-010) were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

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

Matrix spikes QC855939, QC855940 (batch 240222) were not reported because the parent sample required a dilution that would have diluted out the spikes. A number of samples were diluted due to the dark and viscous nature of the sample extracts. No other analytical problems were encountered.

CASE NARRATIVE

Laboratory number: 282196
Client: ERM
Project: 0363086
Location: Martin Extension
Request Date: 10/14/16
Samples Received: 10/14/16

Pesticides (EPA 8081A):

All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. All samples underwent florisol cleanup using EPA Method 3620C. Matrix spikes QC855949, QC855950 (batch 240225) were not reported because the parent sample required a dilution that would have diluted out the spikes. SB-5-1 (lab # 282196-001), SB-2-1 (lab # 282196-005), and SB-2-3 (lab # 282196-006) were diluted due to the color of the sample extracts. No other analytical problems were encountered.

PCBs (EPA 8082):

All samples underwent sulfuric acid cleanup using EPA Method 3665A. All samples underwent sulfur cleanup using the copper option in EPA Method 3660B. No analytical problems were encountered.

Metals (EPA 6010B and EPA 7470A) Water:

No analytical problems were encountered.

Metals (EPA 6010B and EPA 7471A) Soil:

Low recovery was observed for mercury in the MS of SB-1-1 (lab # 282148-001); the BS/BSD were within limits, and the associated RPD was within limits. High recovery was observed for copper in the MSD of SB-5-1 (lab # 282196-001); the BS/BSD were within limits, and the associated RPD was within limits. High RPD was observed for antimony in the MS/MSD of SB-5-1 (lab # 282196-001); the RPD was acceptable in the BS/BSD. Zinc was detected above the RL in the method blank for batch 240331; this analyte was detected in samples at a level at least 10 times that of the blank. Silver and nickel were detected between the MDL and the RL in the method blank for batch 240331; these analytes were either not detected in samples at or above the RL, or detected at a level at least 10 times that of the blank. No other analytical problems were encountered.

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 282196 Date Received 10/14/16 Number of coolers 1
 Client ERM Project Martin Extension

Date Opened 10/14 By (print) CB (sign) [Signature]
 Date Logged in ↓ By (print) DTN (sign) [Signature]
 Date Labeled ↓ By (print) CB (sign) [Signature]

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) 4.1

Temperature blank(s) included? Thermometer# _____ IR Gun# B

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? (pH strip lot# 80BDH1461) 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

20 1/3 VOA For Sample 011 Record with bubbles > 6mm
added #1 NO3 to Sample 002, 0101 to pH < 2 @ 10/14/16 20:00

CB
CB
CB

Curtis & Tompkins Sample Preservation for 282196

Sample	pH: <2	>9	>12	Other
-004a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
g	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
h	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
i	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
j	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
k	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
-010a	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
b	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
c	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
e	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
f	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
g	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
h	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
i	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
j	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
k	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____

Analyst: CB
 Date: 10/19/16
 Page 1 of 1

Detections Summary for 282196

Results for any subcontracted analyses are not included in this summary.

Client : ERM
 Project : 0363086
 Location : Martin Extension

Client Sample ID : SB-5-1

Laboratory Sample ID :

282196-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.096	J	1.1	0.057	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	32	Y	1.0	0.31	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	210		5.0	1.5	mg/Kg	As Recd	1.000	EPA 8015B	EPA 3550B
Acetone	3.8	J	19	3.1	ug/Kg	As Recd	0.9506	EPA 8260B	EPA 5030B
Fluoranthene	38	J	200	31	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
Pyrene	51	J	200	33	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
Benzo(a)anthracene	37	J	200	31	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
Chrysene	45	J	200	34	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
Benzo(b)fluoranthene	40	J	200	27	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
Benzo(a)pyrene	32	J	200	26	ug/Kg	As Recd	3.000	EPA 8270C	EPA 3550B
4,4'-DDE	510		160	29	ug/Kg	As Recd	50.00	EPA 8081A	EPA 3550B
4,4'-DDD	130	C,J	160	36	ug/Kg	As Recd	50.00	EPA 8081A	EPA 3550B
4,4'-DDT	240		160	23	ug/Kg	As Recd	50.00	EPA 8081A	EPA 3550B
gamma-Chlordane	26	C,J	85	12	ug/Kg	As Recd	50.00	EPA 8081A	EPA 3550B
Aroclor-1254	54		12	3.1	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Aroclor-1260	200		12	2.0	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Antimony	21		1.9	0.15	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	12		0.24	0.071	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	290		0.24	0.052	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.35		0.097	0.012	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	1.9		0.24	0.025	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	99		0.24	0.061	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	8.4		0.24	0.029	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	130		0.24	0.081	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	790		24	6.8	mg/Kg	As Recd	100.0	EPA 6010B	EPA 3050B
Mercury	4.2		0.16	0.029	mg/Kg	As Recd	10.00	EPA 7471A	METHOD
Molybdenum	0.57		0.24	0.047	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	22		0.24	0.064	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	55		0.24	0.055	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	860		97	19	mg/Kg	As Recd	100.0	EPA 6010B	EPA 3050B

Client Sample ID : SB-5-5

Laboratory Sample ID :

282196-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.069	J	0.96	0.051	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	43	Y	10	3.1	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550B
Motor Oil C24-C36	570		50	15	mg/Kg	As Recd	10.00	EPA 8015B	EPA 3550B
Acetone	4.8	J	17	2.8	ug/Kg	As Recd	0.8432	EPA 8260B	EPA 5030B
Antimony	1.9	J	2.0	0.16	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	6.2		0.27	0.077	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	62		0.27	0.057	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.21		0.11	0.013	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.36		0.27	0.027	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	40		0.27	0.067	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	28		0.27	0.032	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	12		0.27	0.089	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	14		0.27	0.074	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.098		0.017	0.0030	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.54		0.27	0.052	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	21		0.27	0.070	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Silver	2.7		0.27	0.042	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Thallium	0.33	J	0.53	0.15	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	40		0.27	0.061	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	33		1.1	0.21	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-5-GW

Laboratory Sample ID :

282196-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	270	Y	50	16	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Motor Oil C24-C36	1,700		300	96	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	1,200		8.3	1.9	ug/L	As Recd	16.67	EPA 8260B	EPA 5030B
Arsenic	32		5.0	1.3	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Barium	570		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Beryllium	2.0		2.0	0.20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cadmium	3.2	J	5.0	0.40	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Chromium	600		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cobalt	110		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	51		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	72		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Mercury	0.19	J	0.20	0.040	ug/L	TOTAL	1.000	EPA 7470A	METHOD
Molybdenum	17		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Nickel	500		5.0	0.50	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Thallium	5.1	J	10	1.9	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Vanadium	440		5.0	0.57	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	320		20	5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A

Client Sample ID : SB-2-1

Laboratory Sample ID :

282196-005

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.083	J	1.0	0.053	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	100	Y	20	6.1	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Motor Oil C24-C36	930		100	30	mg/Kg	As Recd	20.00	EPA 8015B	EPA 3550B
Acetone	54		19	3.1	ug/Kg	As Recd	0.9294	EPA 8260B	EPA 5030B
2-Butanone	6.9	J	9.3	1.2	ug/Kg	As Recd	0.9294	EPA 8260B	EPA 5030B
Benzo(a)anthracene	1,200	J	6,600	1,000	ug/Kg	As Recd	50.00	EPA 8270C	EPA 3550B
Benzo(b)fluoranthene	950	J	6,600	890	ug/Kg	As Recd	50.00	EPA 8270C	EPA 3550B
Aroclor-1254	18		12	3.0	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Aroclor-1260	27		12	1.9	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Antimony	1.2	J	2.0	0.16	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	3.3		0.27	0.078	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	150		0.27	0.058	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.29		0.11	0.013	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.56		0.27	0.027	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	120		0.27	0.068	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	8.1		0.27	0.032	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	25		0.27	0.090	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	31		0.27	0.075	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.15		0.017	0.0030	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.86		0.27	0.053	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	32		0.27	0.071	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Thallium	0.39	J	0.54	0.15	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	42		0.27	0.061	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	86		1.1	0.22	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-2-3

Laboratory Sample ID :

282196-006

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	0.077	J	0.98	0.052	mg/Kg	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	12	Y	3.0	0.91	mg/Kg	As Recd	3.000	EPA 8015B	EPA 3550B
Motor Oil C24-C36	120		15	4.5	mg/Kg	As Recd	3.000	EPA 8015B	EPA 3550B
Acetone	65		19	3.1	ug/Kg	As Recd	0.9488	EPA 8260B	EPA 5030B
Methylene Chloride	1.2	J	19	1.1	ug/Kg	As Recd	0.9488	EPA 8260B	EPA 5030B
2-Butanone	9.5		9.5	1.3	ug/Kg	As Recd	0.9488	EPA 8260B	EPA 5030B
Aroclor-1260	87		12	1.9	ug/Kg	As Recd	1.000	EPA 8082	EPA 3550B
Antimony	4.4		2.0	0.15	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Arsenic	4.1		0.26	0.075	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Barium	110		0.26	0.055	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Beryllium	0.23		0.10	0.013	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cadmium	0.93		0.26	0.026	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Chromium	100		0.26	0.065	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Cobalt	9.0		0.26	0.031	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Copper	71		0.26	0.086	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Lead	110		0.26	0.072	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Mercury	0.17		0.016	0.0030	mg/Kg	As Recd	1.000	EPA 7471A	METHOD
Molybdenum	0.77		0.26	0.050	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Nickel	26		0.26	0.068	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Vanadium	49		0.26	0.059	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B
Zinc	170		1.0	0.21	mg/Kg	As Recd	1.000	EPA 6010B	EPA 3050B

Client Sample ID : SB-2-GW

Laboratory Sample ID :

282196-010

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	16,000	Y	500	160	ug/L	As Recd	10.00	EPA 8015B	EPA 3520C
Motor Oil C24-C36	85,000		3,000	960	ug/L	As Recd	10.00	EPA 8015B	EPA 3520C
Gasoline C7-C12	9.2	J	50	6.4	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	4.8		0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Benzene	0.1	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
4-Methyl-2-Pentanone	1.5	J	10	0.7	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Toluene	0.3	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
m,p-Xylenes	0.1	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
1,2,4-Trimethylbenzene	0.2	J	0.5	0.1	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Phenol	19	J	94	9.2	ug/L	As Recd	10.00	EPA 8270C	EPA 3520C
Antimony	14		10	2.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Arsenic	12		5.0	1.3	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Barium	290		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Beryllium	1.0	J	2.0	0.20	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Chromium	660		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cobalt	33		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	37		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	56		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Mercury	0.33		0.20	0.040	ug/L	TOTAL	1.000	EPA 7470A	METHOD
Molybdenum	19		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Nickel	150		5.0	0.50	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Thallium	3.4	J	10	1.9	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Vanadium	310		5.0	0.57	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	170		20	5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A

Client Sample ID : TRIP BLANK

Laboratory Sample ID :

282196-011

No Detections

C = Presence confirmed, but RPD between columns exceeds 40%

J = Estimated value

Y = Sample exhibits chromatographic pattern which does not resemble standard

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Diln Fac:	1.000
MSS Lab ID:	282171-001	Batch#:	240218
Matrix:	Soil	Sampled:	10/14/16
Units:	mg/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Type: MS Lab ID: QC855922

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	0.1157	10.53	7.103	66	50-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	99	78-138

Type: MSD Lab ID: QC855923

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	10.20	6.208	60	50-120	10	31

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	78-138

RPD= Relative Percent Difference

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Soil	Batch#:	240218
Units:	mg/Kg	Analyzed:	10/17/16
Diln Fac:	1.000		

Type: BS Lab ID: QC855962

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1.000	1.038	104	80-121

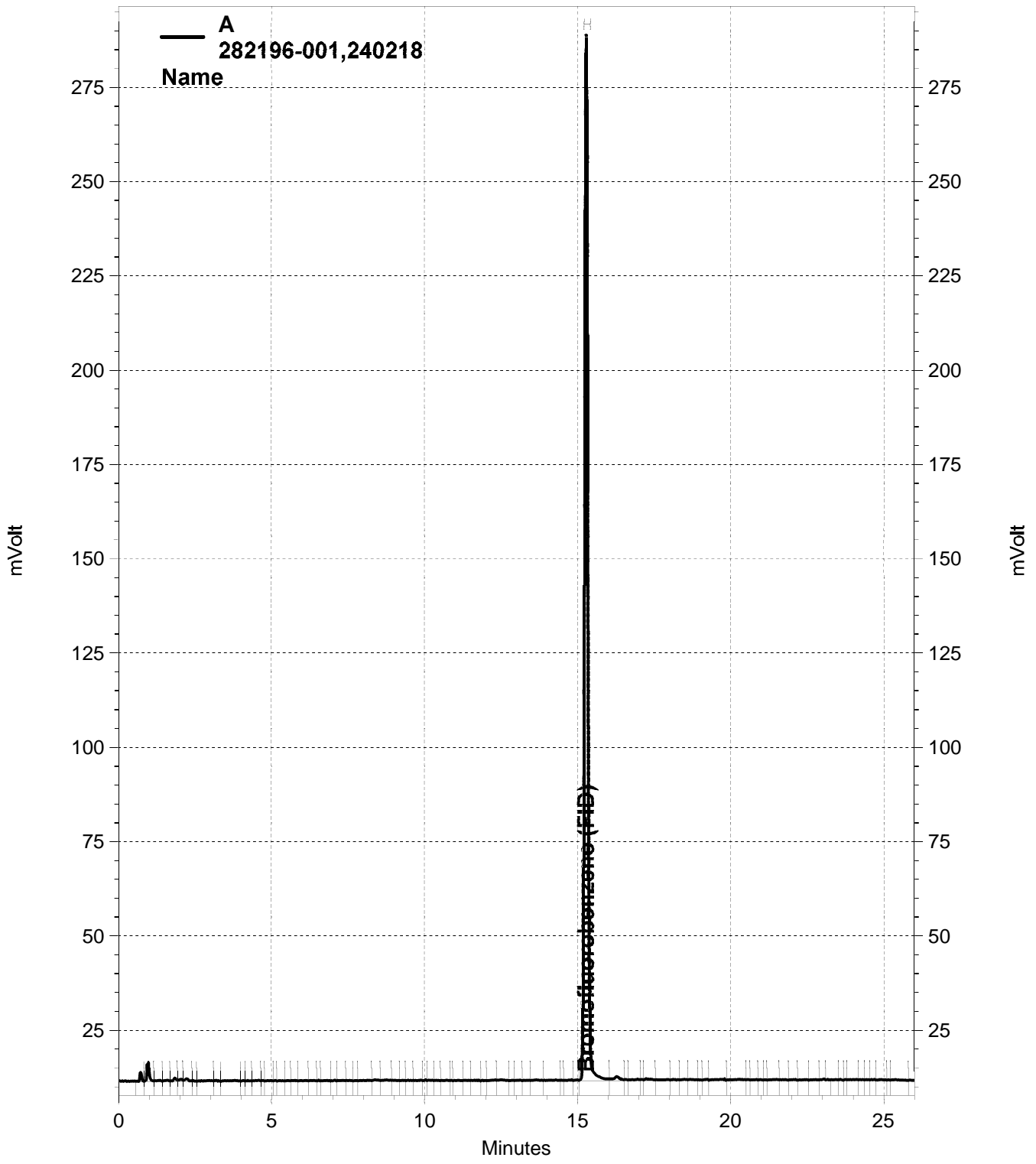
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	78-138

Type: BSD Lab ID: QC855963

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2.000	2.111	106	80-121	2	20

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	100	78-138

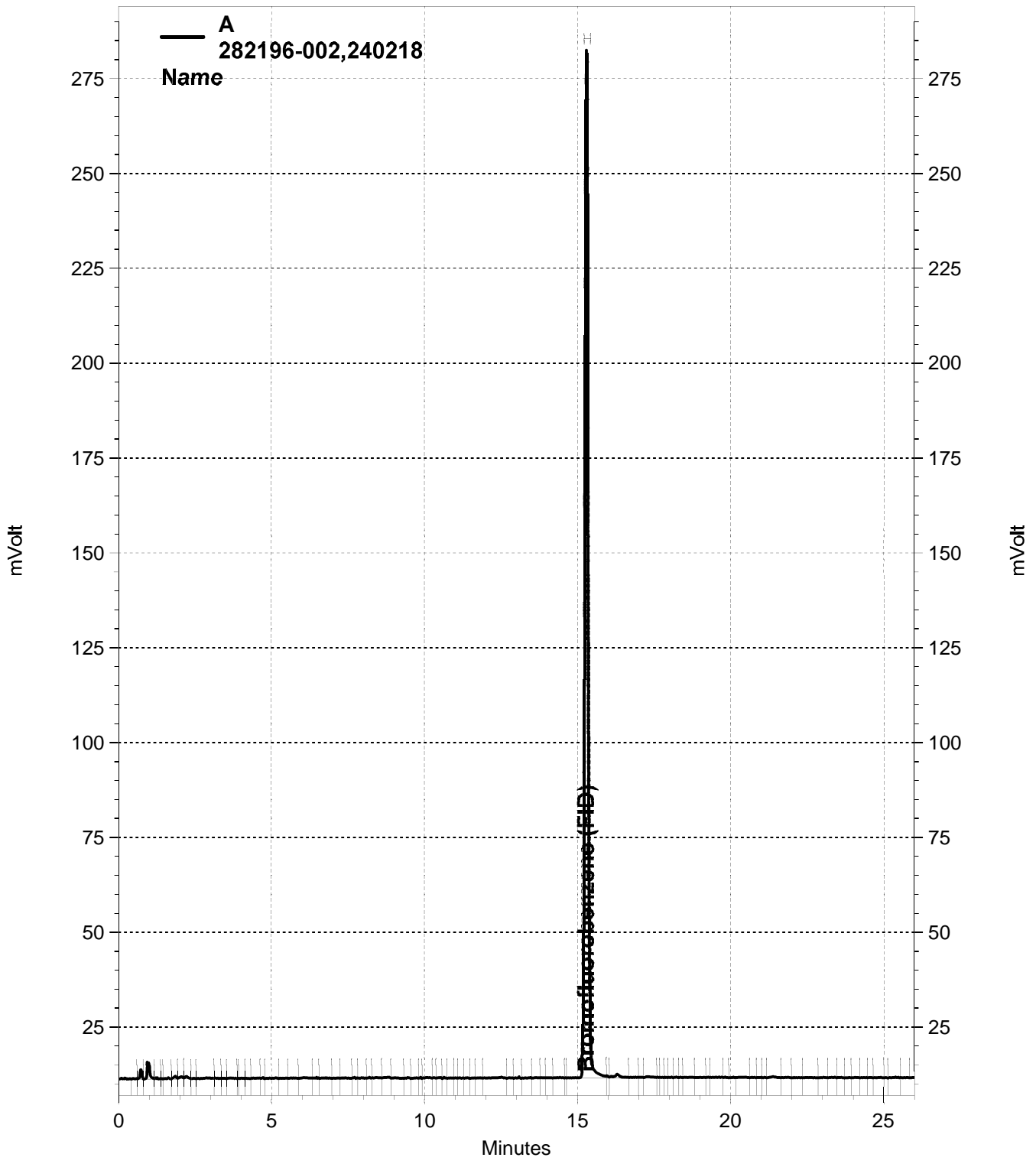
RPD= Relative Percent Difference



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282196-001,240218
Name

Benzofluorenone (FID)

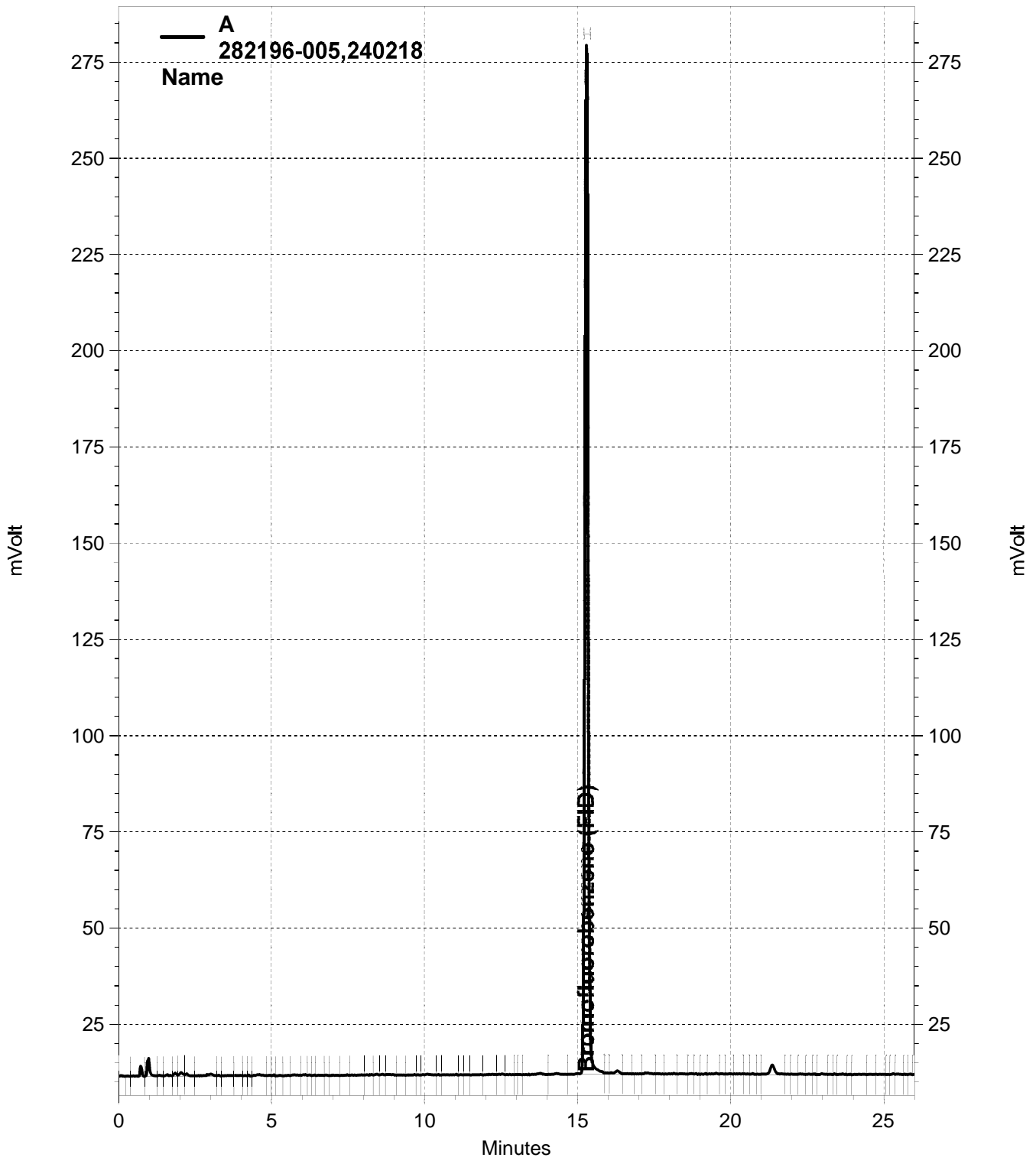
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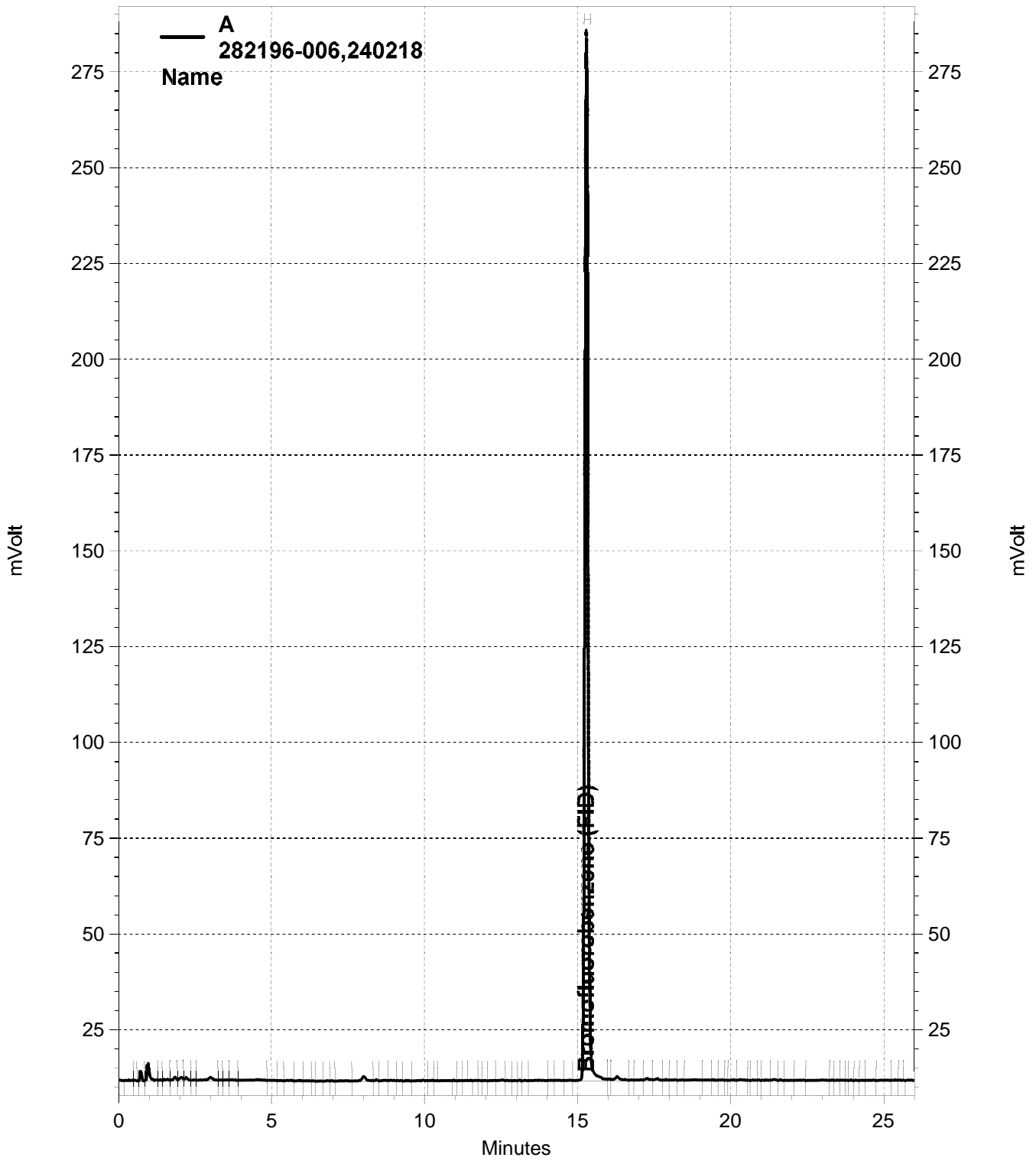
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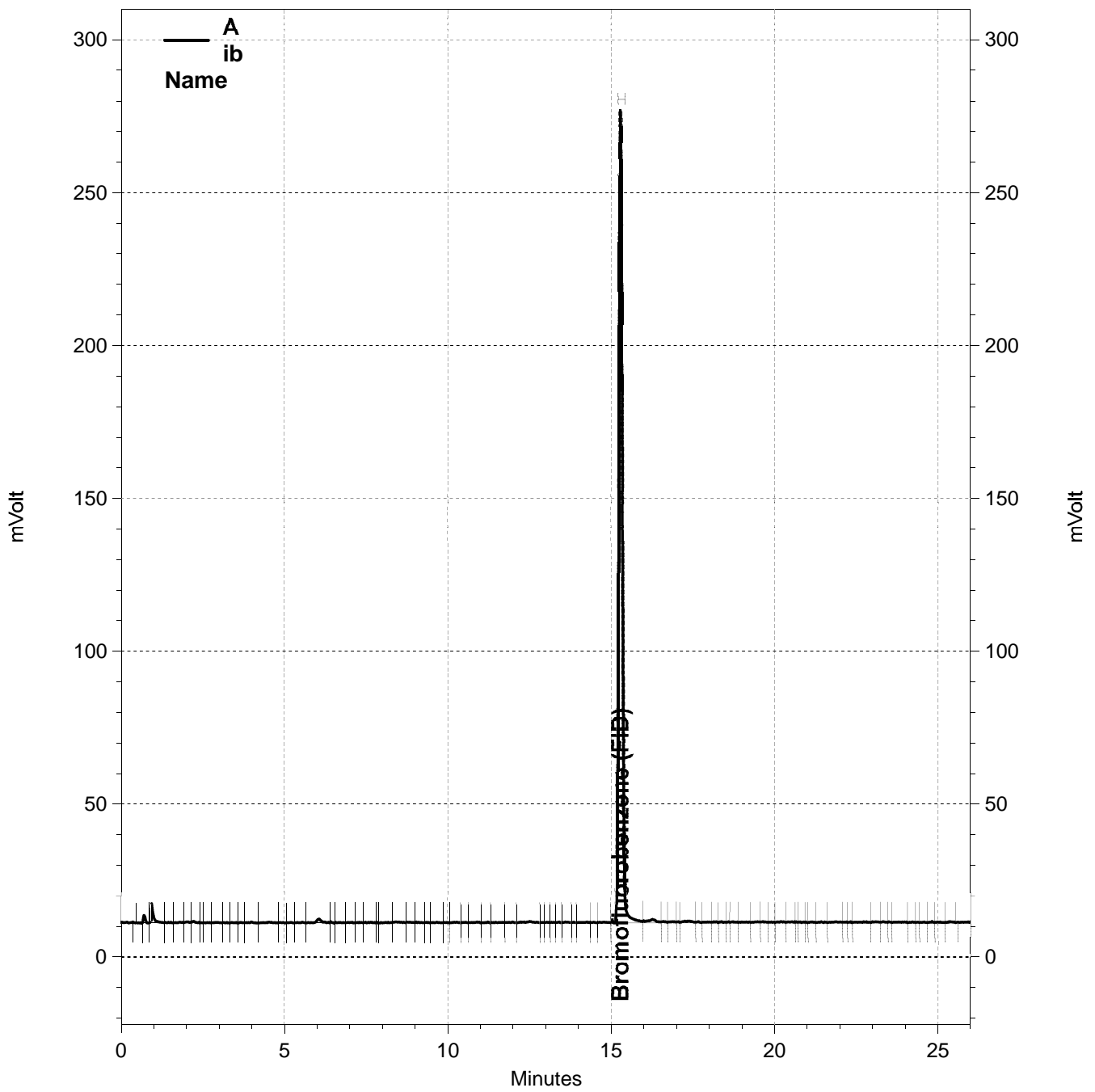


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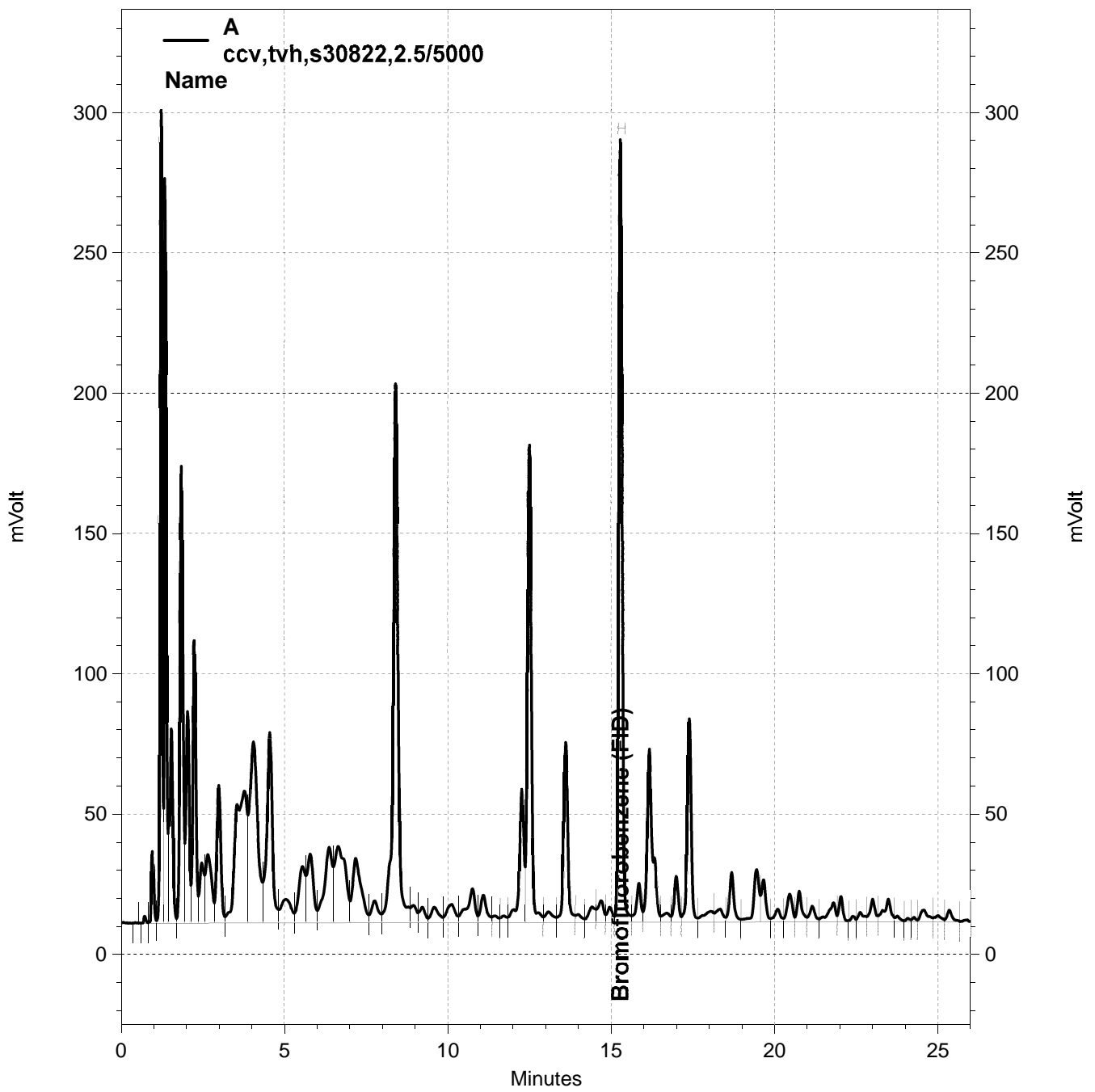
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Total Extractable Hydrocarbons			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Prepared:	10/19/16
Batch#:	240325		

Field ID: SB-5-GW Diln Fac: 1.000
 Type: SAMPLE Sampled: 10/13/16
 Lab ID: 282196-004 Analyzed: 10/21/16

Analyte	Result	RL	MDL
Diesel C10-C24	270 Y	50	16
Motor Oil C24-C36	1,700	300	96

Surrogate	%REC	Limits
o-Terphenyl	81	67-136

Field ID: SB-2-GW Diln Fac: 10.00
 Type: SAMPLE Sampled: 10/14/16
 Lab ID: 282196-010 Analyzed: 10/21/16

Analyte	Result	RL	MDL
Diesel C10-C24	16,000 Y	500	160
Motor Oil C24-C36	85,000	3,000	960

Surrogate	%REC	Limits
o-Terphenyl	DO	67-136

Type: BLANK Diln Fac: 1.000
 Lab ID: QC856364 Analyzed: 10/20/16

Analyte	Result	RL	MDL
Diesel C10-C24	ND	50	16
Motor Oil C24-C36	ND	300	96

Surrogate	%REC	Limits
o-Terphenyl	95	67-136

Y= Sample exhibits chromatographic pattern which does not resemble standard
 DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	240325
Units:	ug/L	Prepared:	10/19/16
Diln Fac:	1.000	Analyzed:	10/20/16

Type: BS Lab ID: QC856365

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,161	86	60-121

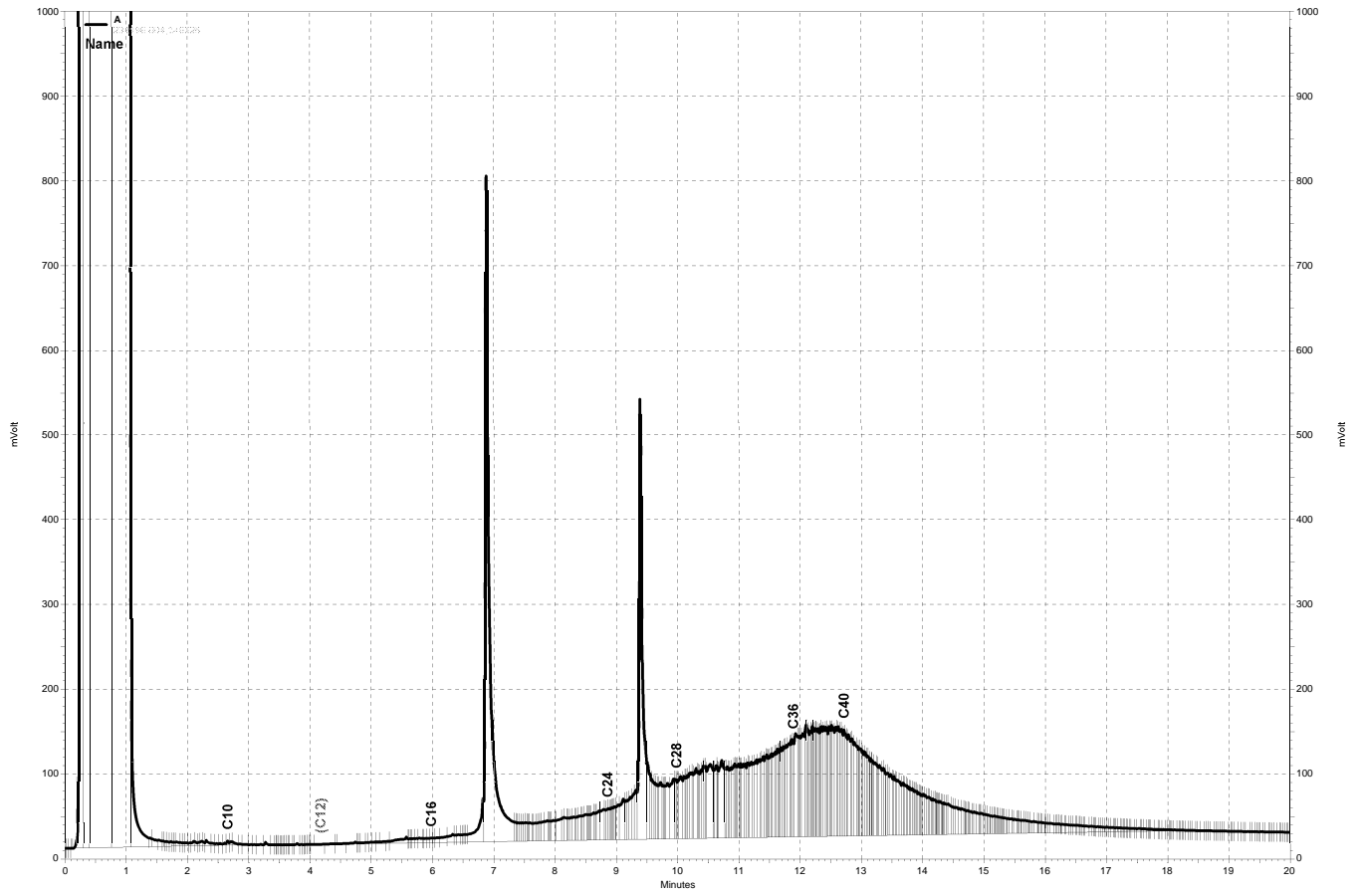
Surrogate	%REC	Limits
o-Terphenyl	105	67-136

Type: BSD Lab ID: QC856366

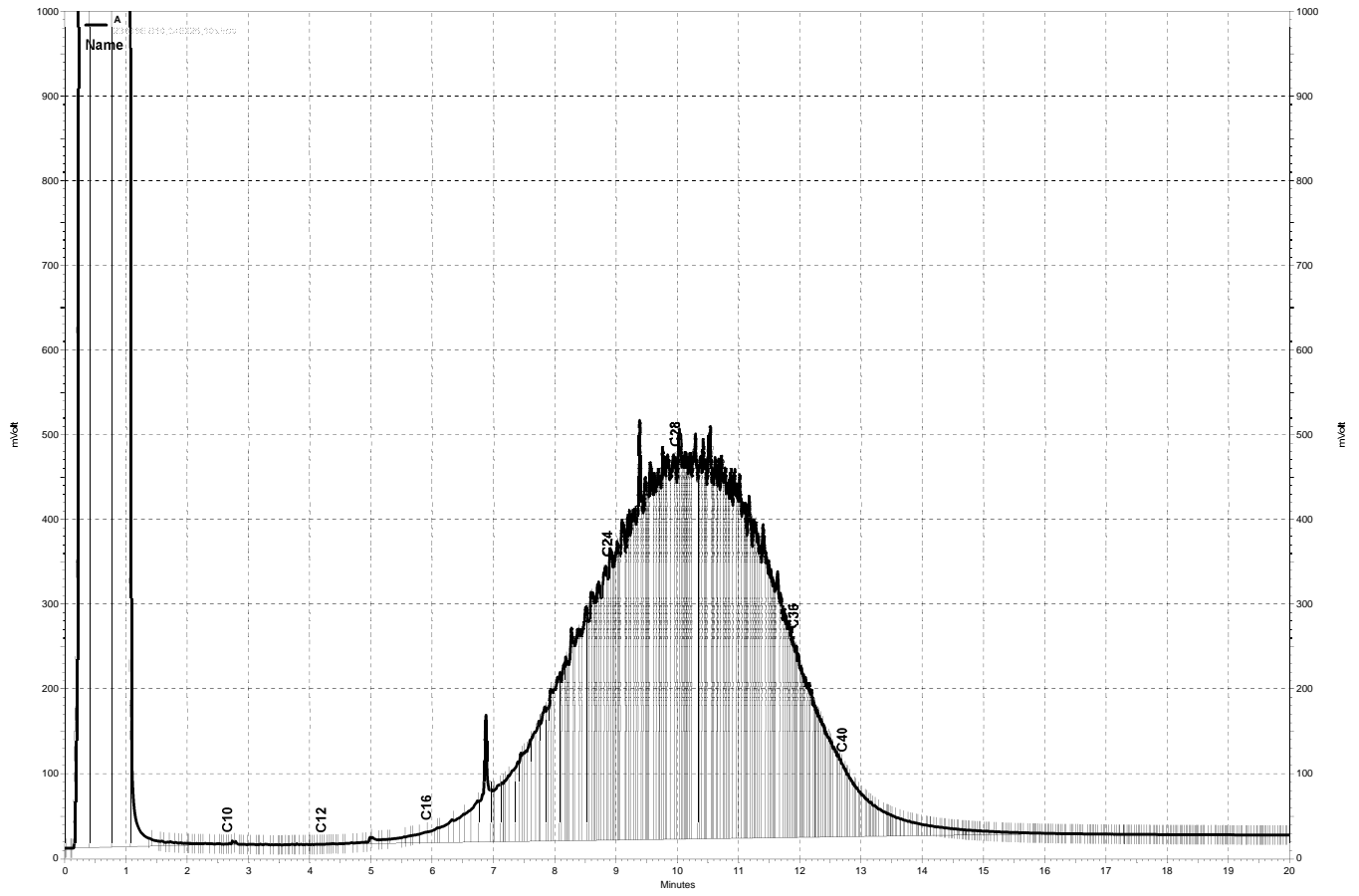
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,108	84	60-121	2	32

Surrogate	%REC	Limits
o-Terphenyl	100	67-136

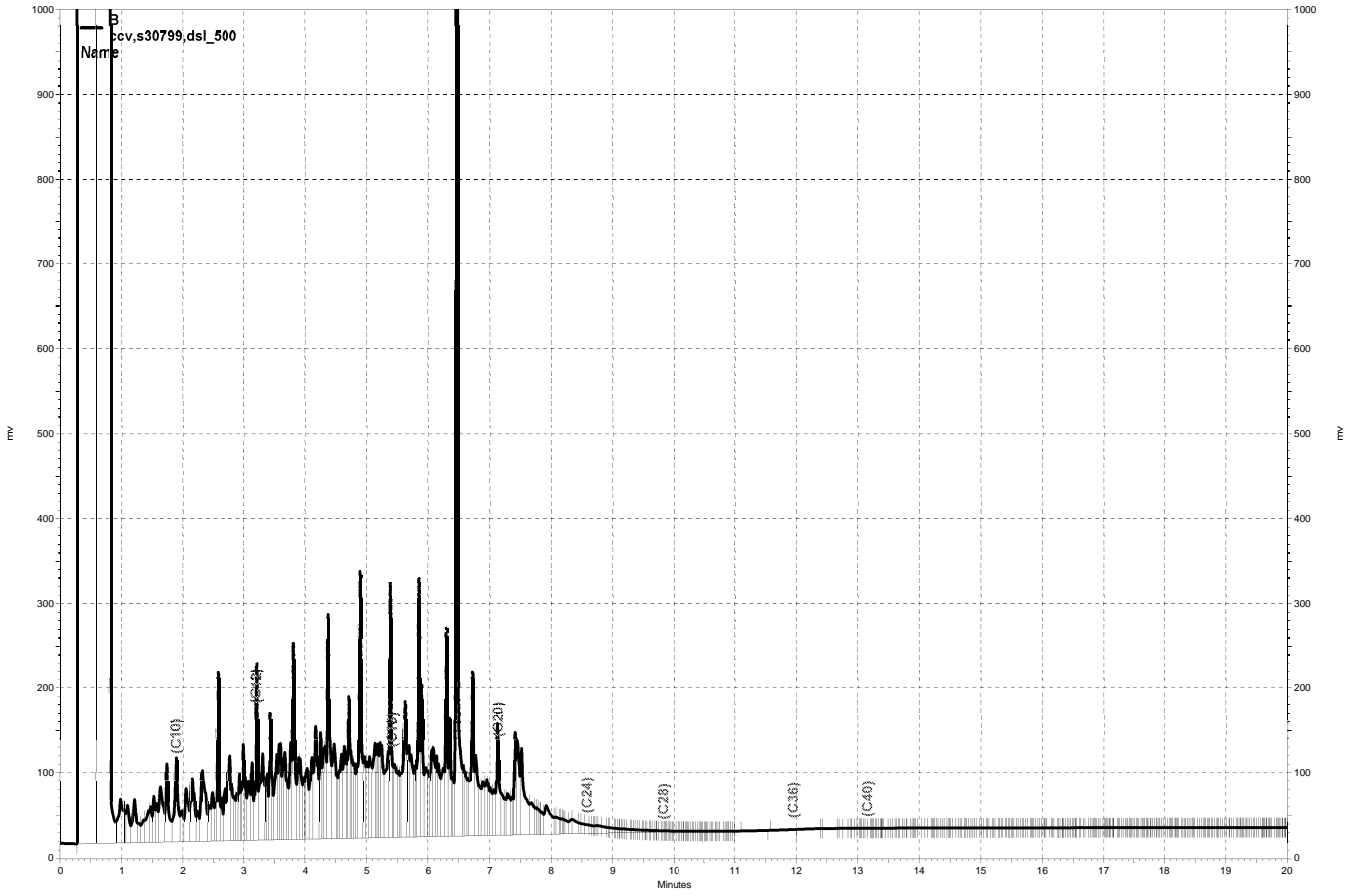
RPD= Relative Percent Difference



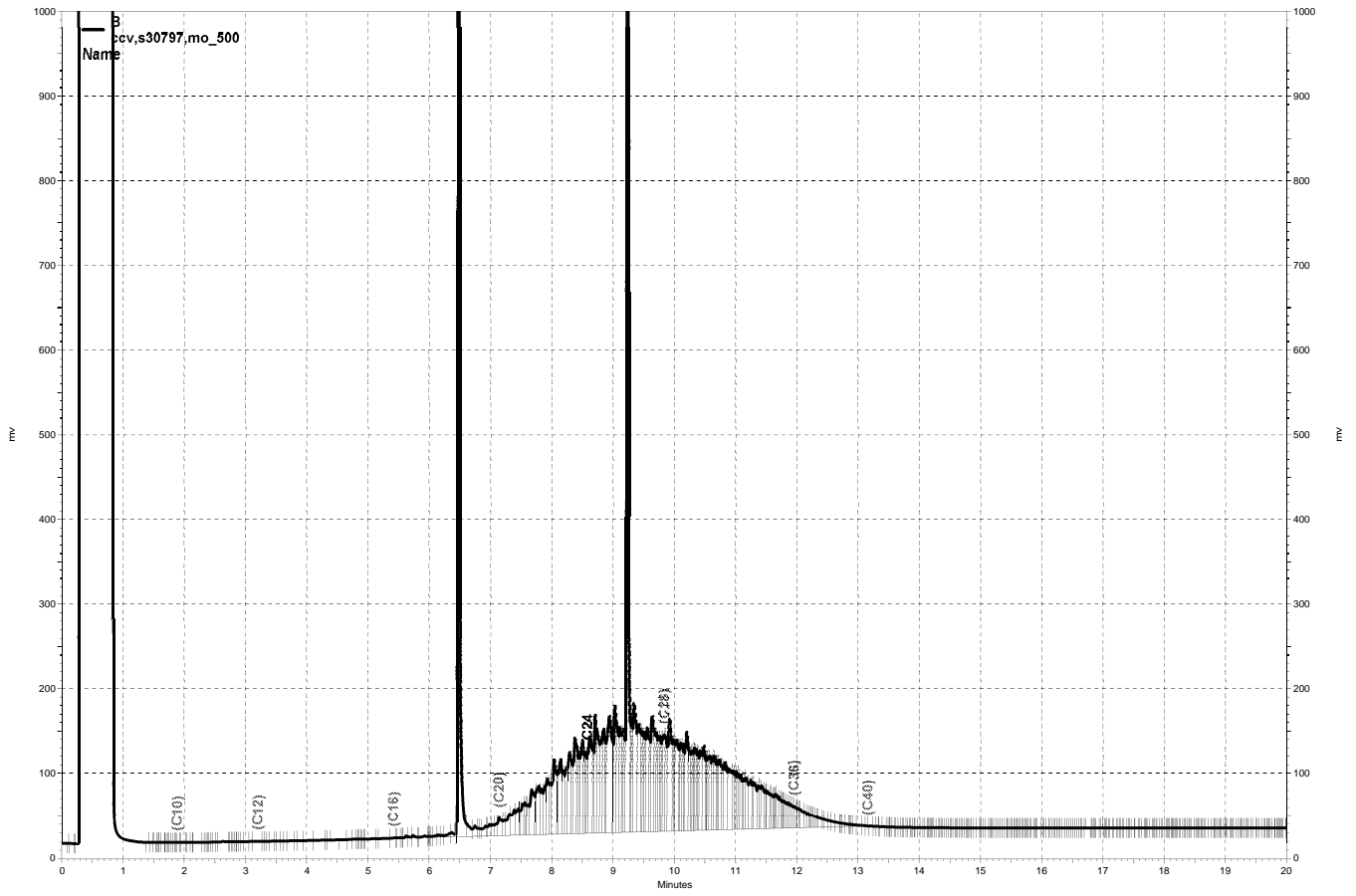
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Total Extractable Hydrocarbons			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/14/16
Basis:	as received	Prepared:	10/17/16

Field ID: SB-5-1 Diln Fac: 1.000
 Type: SAMPLE Batch#: 240208
 Lab ID: 282196-001 Analyzed: 10/17/16

Analyte	Result	RL	MDL
Diesel C10-C24	32 Y	1.0	0.31
Motor Oil C24-C36	210	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	75	59-140

Field ID: SB-5-5 Diln Fac: 10.00
 Type: SAMPLE Batch#: 240237
 Lab ID: 282196-002 Analyzed: 10/18/16

Analyte	Result	RL	MDL
Diesel C10-C24	43 Y	10	3.1
Motor Oil C24-C36	570	50	15

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

Field ID: SB-2-1 Diln Fac: 20.00
 Type: SAMPLE Batch#: 240208
 Lab ID: 282196-005 Analyzed: 10/17/16

Analyte	Result	RL	MDL
Diesel C10-C24	100 Y	20	6.1
Motor Oil C24-C36	930	100	30

Surrogate	%REC	Limits
o-Terphenyl	DO	59-140

Field ID: SB-2-3 Diln Fac: 3.000
 Type: SAMPLE Batch#: 240237
 Lab ID: 282196-006 Analyzed: 10/18/16

Analyte	Result	RL	MDL
Diesel C10-C24	12 Y	3.0	0.91
Motor Oil C24-C36	120	15	4.5

Surrogate	%REC	Limits
o-Terphenyl	90	59-140

Y= Sample exhibits chromatographic pattern which does not resemble standard
 DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855893	Batch#:	240208
Matrix:	Soil	Prepared:	10/17/16
Units:	mg/Kg	Analyzed:	10/17/16

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.17	46.46	93	58-137

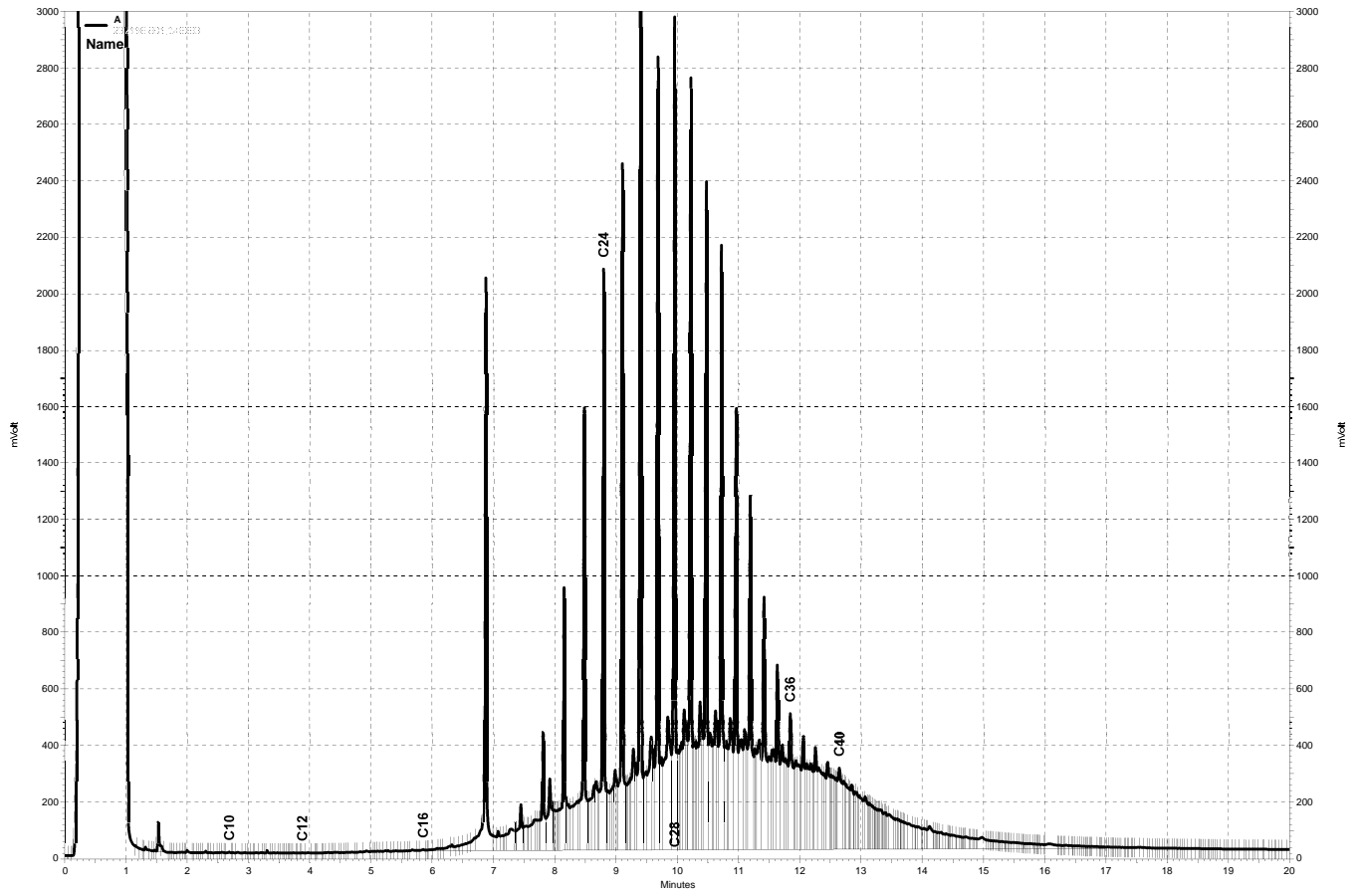
Surrogate	%REC	Limits
o-Terphenyl	97	59-140

Batch QC Report

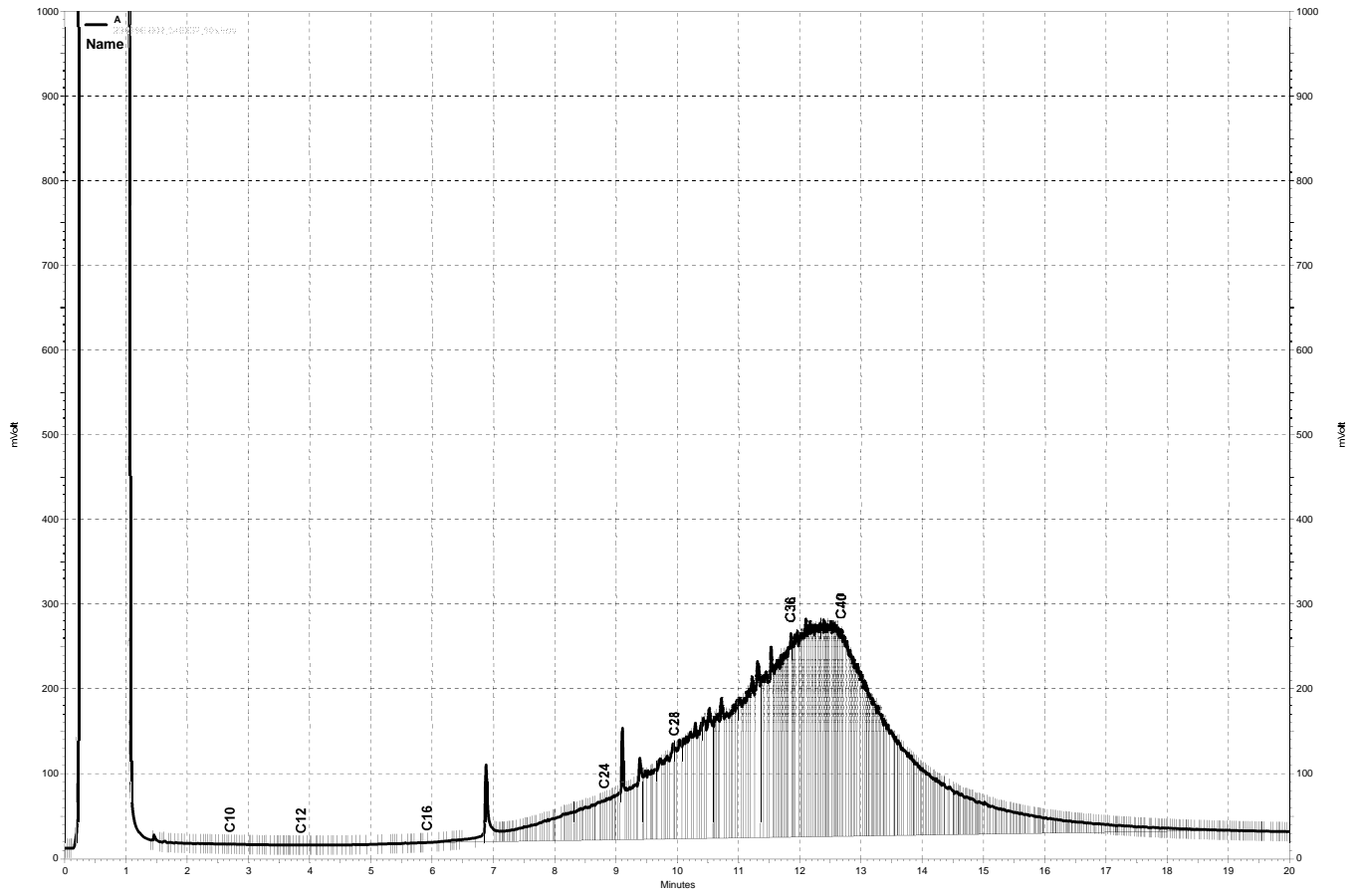
Total Extractable Hydrocarbons			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC856003	Batch#:	240237
Matrix:	Soil	Prepared:	10/17/16
Units:	mg/Kg	Analyzed:	10/18/16

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	49.82	45.93	92	58-137

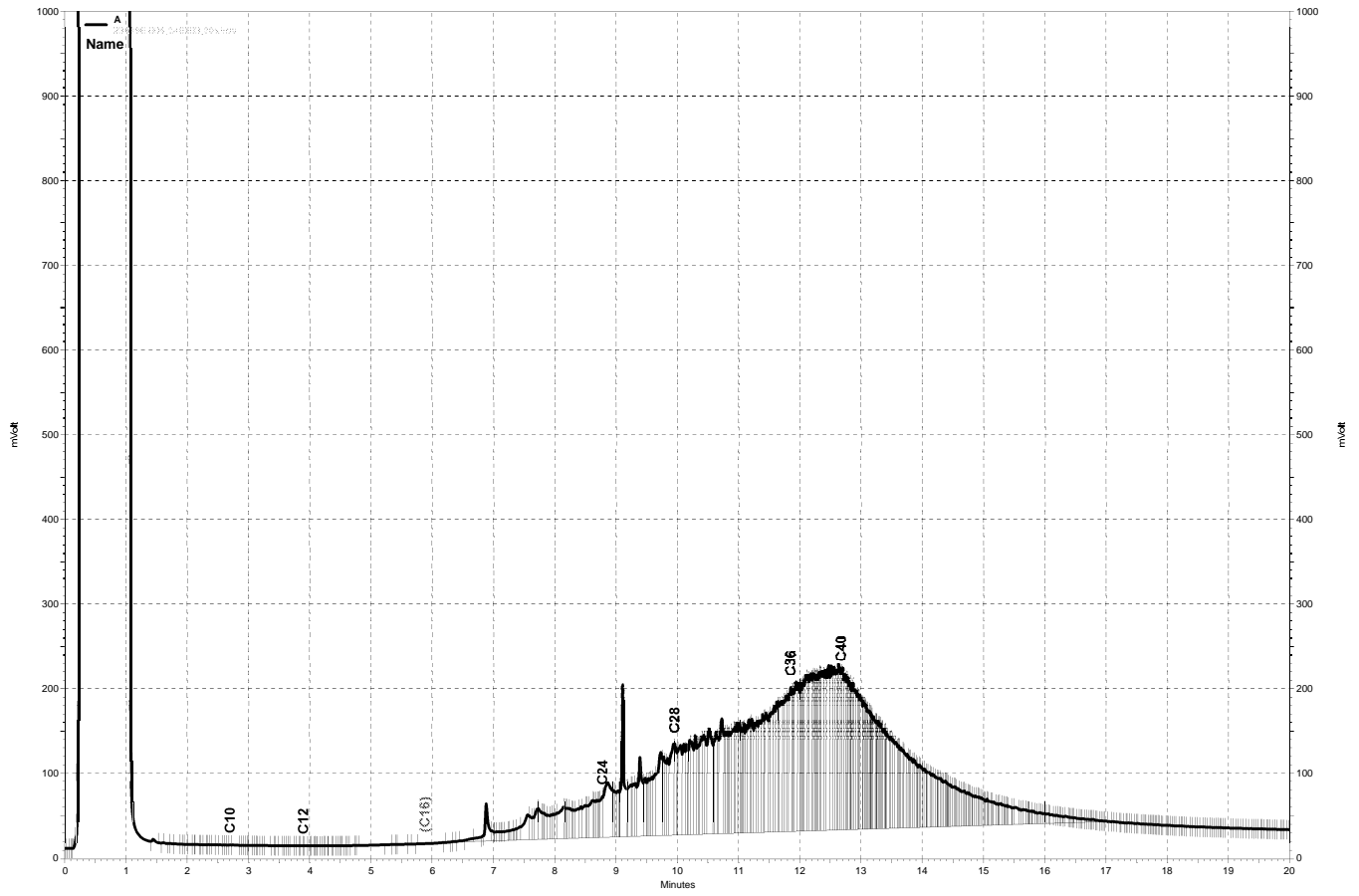
Surrogate	%REC	Limits
o-Terphenyl	97	59-140



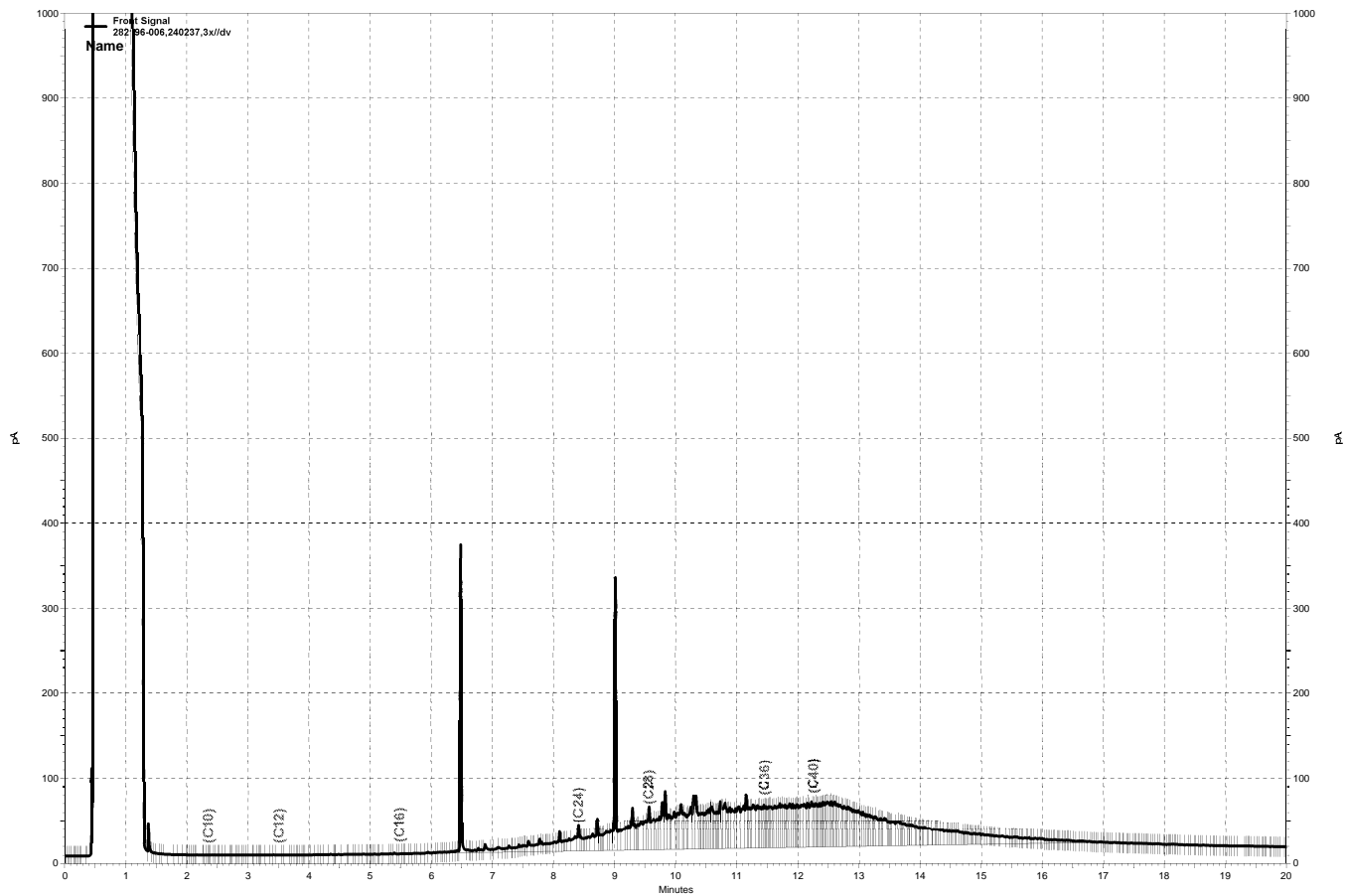
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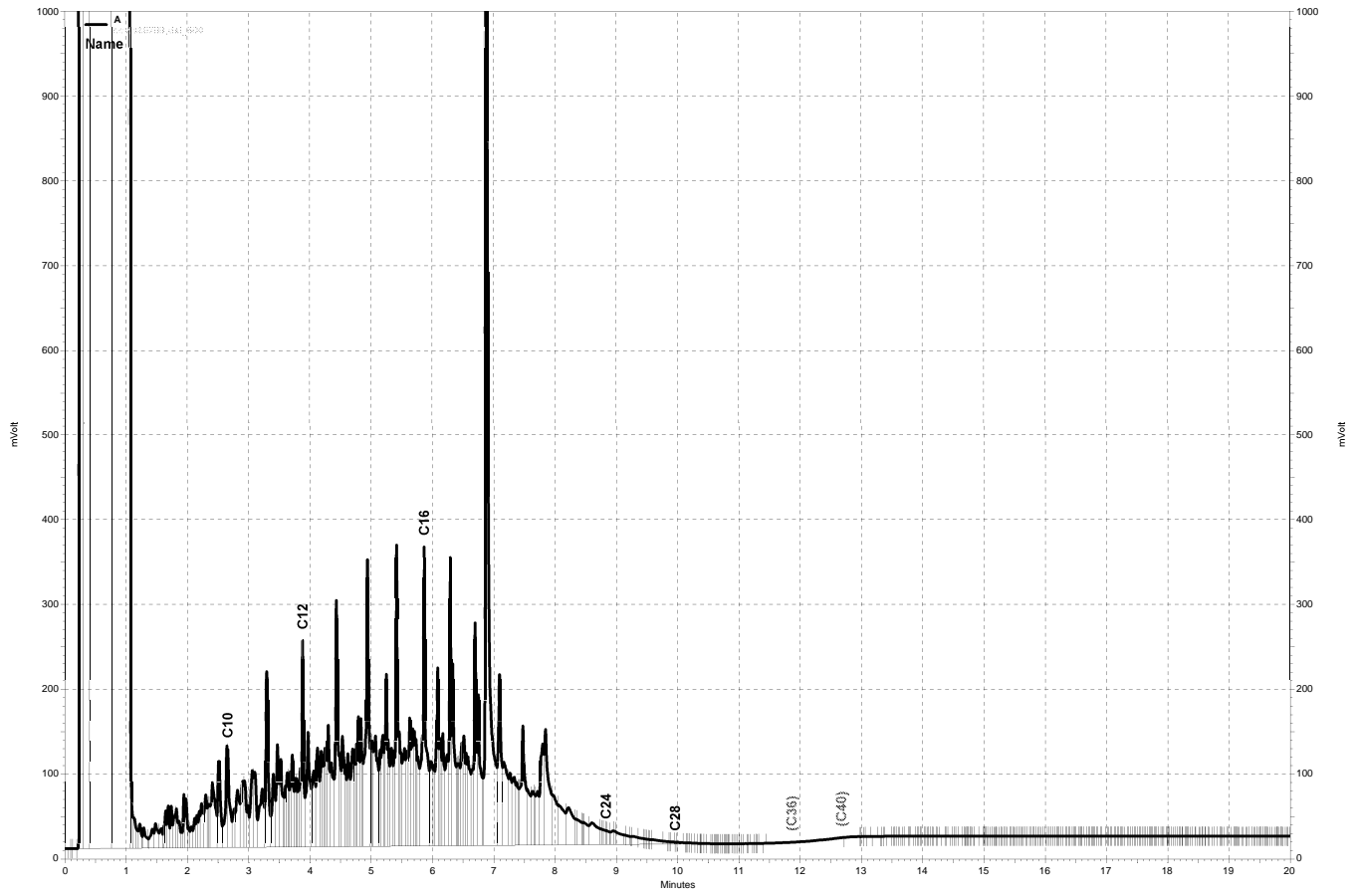
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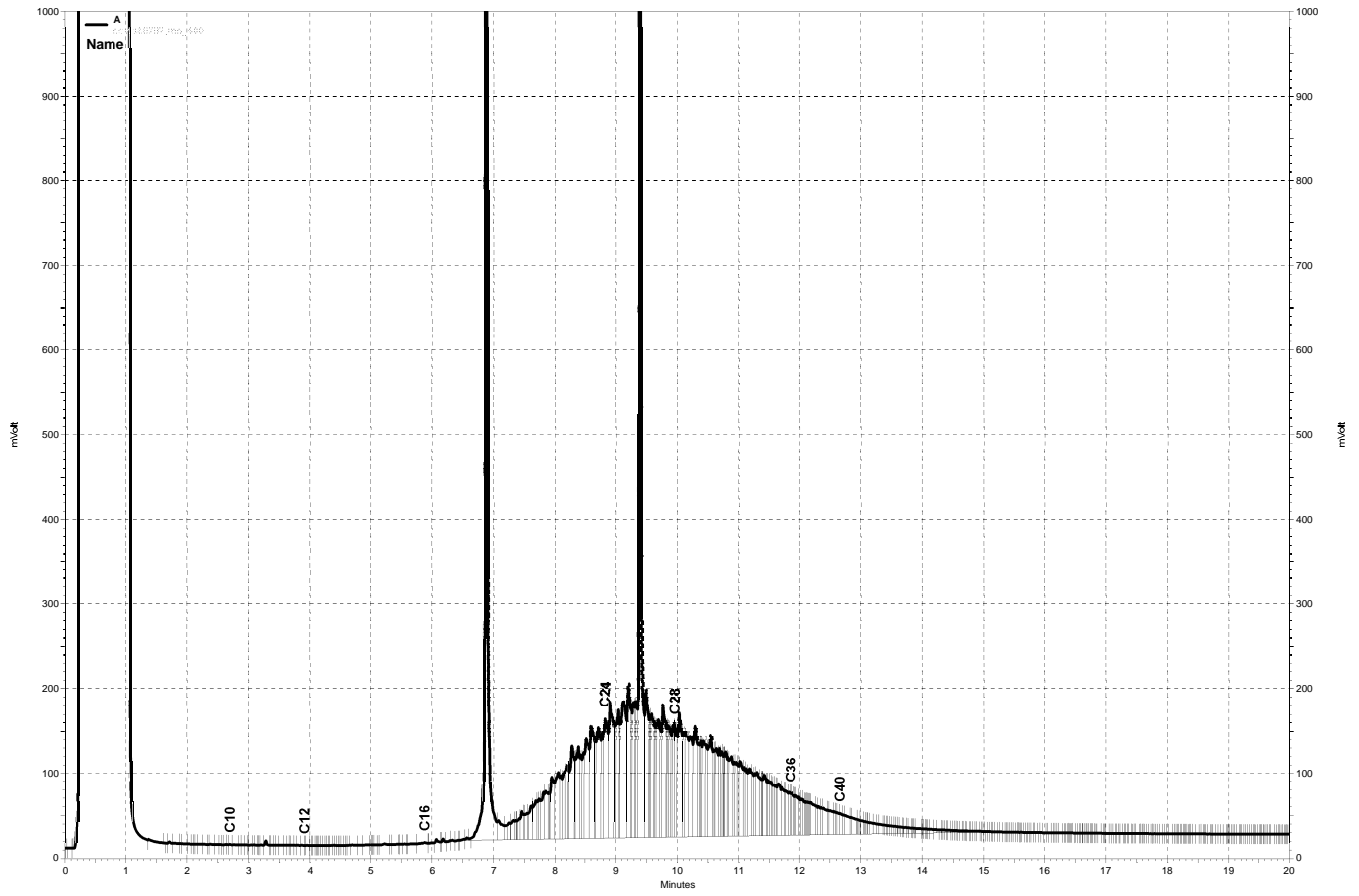
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Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-5-GW	Batch#:	240209
Lab ID:	282196-004	Sampled:	10/13/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	16.67		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	830	110
Freon 12	ND	17	1.7
Chloromethane	ND	17	4.5
Vinyl Chloride	ND	8.3	1.7
Bromomethane	ND	17	3.0
Chloroethane	ND	17	4.5
Trichlorofluoromethane	ND	17	3.8
Acetone	ND	170	55
Freon 113	ND	33	2.2
1,1-Dichloroethene	ND	8.3	2.5
Methylene Chloride	ND	170	2.9
Carbon Disulfide	ND	8.3	1.7
MTBE	1,200	8.3	1.9
trans-1,2-Dichloroethene	ND	8.3	2.5
Vinyl Acetate	ND	170	19
1,1-Dichloroethane	ND	8.3	2.6
2-Butanone	ND	170	8.3
cis-1,2-Dichloroethene	ND	8.3	2.1
2,2-Dichloropropane	ND	8.3	2.4
Chloroform	ND	8.3	1.7
Bromochloromethane	ND	8.3	2.3
1,1,1-Trichloroethane	ND	8.3	2.1
1,1-Dichloropropene	ND	8.3	2.2
Carbon Tetrachloride	ND	8.3	2.1
1,2-Dichloroethane	ND	8.3	1.8
Benzene	ND	8.3	1.7
Trichloroethene	ND	8.3	1.7
1,2-Dichloropropane	ND	8.3	2.3
Bromodichloromethane	ND	8.3	2.0
Dibromomethane	ND	8.3	2.4
4-Methyl-2-Pentanone	ND	170	11
cis-1,3-Dichloropropene	ND	8.3	1.8
Toluene	ND	8.3	1.7
trans-1,3-Dichloropropene	ND	8.3	2.3
1,1,2-Trichloroethane	ND	8.3	2.6
2-Hexanone	ND	170	8.3
1,3-Dichloropropane	ND	8.3	2.5
Tetrachloroethene	ND	8.3	1.7
Dibromochloromethane	ND	8.3	2.4
1,2-Dibromoethane	ND	8.3	2.2
Chlorobenzene	ND	8.3	2.2
1,1,1,2-Tetrachloroethane	ND	8.3	1.7
Ethylbenzene	ND	8.3	1.7
m,p-Xylenes	ND	8.3	2.4
o-Xylene	ND	8.3	1.7
Styrene	ND	8.3	1.7
Bromoform	ND	17	2.4
Isopropylbenzene	ND	8.3	1.7
1,1,2,2-Tetrachloroethane	ND	8.3	2.0
1,2,3-Trichloropropane	ND	8.3	2.6
Propylbenzene	ND	8.3	1.7
Bromobenzene	ND	8.3	1.8
1,3,5-Trimethylbenzene	ND	8.3	1.7

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-5-GW	Batch#:	240209
Lab ID:	282196-004	Sampled:	10/13/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	16.67		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	8.3	1.7
4-Chlorotoluene	ND	8.3	1.7
tert-Butylbenzene	ND	8.3	1.7
1,2,4-Trimethylbenzene	ND	8.3	1.7
sec-Butylbenzene	ND	8.3	1.7
para-Isopropyl Toluene	ND	8.3	1.7
1,3-Dichlorobenzene	ND	8.3	1.9
1,4-Dichlorobenzene	ND	8.3	1.7
n-Butylbenzene	ND	8.3	1.7
1,2-Dichlorobenzene	ND	8.3	1.7
1,2-Dibromo-3-Chloropropane	ND	33	4.2
1,2,4-Trichlorobenzene	ND	8.3	2.2
Hexachlorobutadiene	ND	33	2.3
Naphthalene	ND	33	1.8
1,2,3-Trichlorobenzene	ND	8.3	2.3

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-128
1,2-Dichloroethane-d4	107	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	88	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-2-GW	Batch#:	240209
Lab ID:	282196-010	Sampled:	10/14/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Gasoline C7-C12	9.2 J	50	6.4
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.3
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.2
Methylene Chloride	ND	10	0.2
Carbon Disulfide	ND	0.5	0.1
MTBE	4.8	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.1
1,1-Dichloroethane	ND	0.5	0.2
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	0.1 J	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	1.5 J	10	0.7
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	0.3 J	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.2
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	0.1 J	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.2
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-2-GW	Batch#:	240209
Lab ID:	282196-010	Sampled:	10/14/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
1,3,5-Trimethylbenzene	ND	0.5	0.1
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	0.2 J	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.1
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	90	80-128
1,2-Dichloroethane-d4	107	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	86	80-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	TRIP BLANK	Batch#:	240209
Lab ID:	282196-011	Sampled:	10/13/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	50	6.4
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.3
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.2
Methylene Chloride	ND	10	0.2
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.1
1,1-Dichloroethane	ND	0.5	0.2
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.7
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.2
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.2
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	TRIP BLANK	Batch#:	240209
Lab ID:	282196-011	Sampled:	10/13/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.1
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-128
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	89	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report
Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	240209
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Type: BS Lab ID: QC855877

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	12.50	11.40	91	66-135
Benzene	12.50	12.73	102	80-123
Trichloroethene	12.50	11.89	95	80-123
Toluene	12.50	12.32	99	80-121
Chlorobenzene	12.50	12.83	103	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-128
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	90	80-120

Type: BSD Lab ID: QC855878

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	12.50	10.51	84	66-135	8	24
Benzene	12.50	11.89	95	80-123	7	20
Trichloroethene	12.50	11.24	90	80-123	6	20
Toluene	12.50	11.38	91	80-121	8	20
Chlorobenzene	12.50	12.04	96	80-123	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	95	75-139
Toluene-d8	93	80-120
Bromofluorobenzene	89	80-120

RPD= Relative Percent Difference

Batch QC Report
Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855879	Batch#:	240209
Matrix:	Water	Analyzed:	10/17/16
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	50	6.4
Freon 12	ND	1.0	0.1
Chloromethane	ND	1.0	0.3
Vinyl Chloride	ND	0.5	0.1
Bromomethane	ND	1.0	0.2
Chloroethane	ND	1.0	0.3
Trichlorofluoromethane	ND	1.0	0.2
Acetone	ND	10	3.3
Freon 113	ND	2.0	0.1
1,1-Dichloroethene	ND	0.5	0.2
Methylene Chloride	ND	10	0.2
Carbon Disulfide	ND	0.5	0.1
MTBE	ND	0.5	0.1
trans-1,2-Dichloroethene	ND	0.5	0.2
Vinyl Acetate	ND	10	1.1
1,1-Dichloroethane	ND	0.5	0.2
2-Butanone	ND	10	0.5
cis-1,2-Dichloroethene	ND	0.5	0.1
2,2-Dichloropropane	ND	0.5	0.1
Chloroform	ND	0.5	0.1
Bromochloromethane	ND	0.5	0.1
1,1,1-Trichloroethane	ND	0.5	0.1
1,1-Dichloropropene	ND	0.5	0.1
Carbon Tetrachloride	ND	0.5	0.1
1,2-Dichloroethane	ND	0.5	0.1
Benzene	ND	0.5	0.1
Trichloroethene	ND	0.5	0.1
1,2-Dichloropropane	ND	0.5	0.1
Bromodichloromethane	ND	0.5	0.1
Dibromomethane	ND	0.5	0.1
4-Methyl-2-Pentanone	ND	10	0.7
cis-1,3-Dichloropropene	ND	0.5	0.1
Toluene	ND	0.5	0.1
trans-1,3-Dichloropropene	ND	0.5	0.1
1,1,2-Trichloroethane	ND	0.5	0.2
2-Hexanone	ND	10	0.5
1,3-Dichloropropane	ND	0.5	0.1
Tetrachloroethene	ND	0.5	0.1
Dibromochloromethane	ND	0.5	0.1
1,2-Dibromoethane	ND	0.5	0.1
Chlorobenzene	ND	0.5	0.1
1,1,1,2-Tetrachloroethane	ND	0.5	0.1
Ethylbenzene	ND	0.5	0.1
m,p-Xylenes	ND	0.5	0.1
o-Xylene	ND	0.5	0.1
Styrene	ND	0.5	0.1
Bromoform	ND	1.0	0.1
Isopropylbenzene	ND	0.5	0.1
1,1,2,2-Tetrachloroethane	ND	0.5	0.1
1,2,3-Trichloropropane	ND	0.5	0.2
Propylbenzene	ND	0.5	0.1
Bromobenzene	ND	0.5	0.1
1,3,5-Trimethylbenzene	ND	0.5	0.1

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855879	Batch#:	240209
Matrix:	Water	Analyzed:	10/17/16
Units:	ug/L		

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	0.5	0.1
4-Chlorotoluene	ND	0.5	0.1
tert-Butylbenzene	ND	0.5	0.1
1,2,4-Trimethylbenzene	ND	0.5	0.1
sec-Butylbenzene	ND	0.5	0.1
para-Isopropyl Toluene	ND	0.5	0.1
1,3-Dichlorobenzene	ND	0.5	0.1
1,4-Dichlorobenzene	ND	0.5	0.1
n-Butylbenzene	ND	0.5	0.1
1,2-Dichlorobenzene	ND	0.5	0.1
1,2-Dibromo-3-Chloropropane	ND	2.0	0.3
1,2,4-Trichlorobenzene	ND	0.5	0.1
Hexachlorobutadiene	ND	2.0	0.1
Naphthalene	ND	2.0	0.1
1,2,3-Trichlorobenzene	ND	0.5	0.1

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	89	80-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	240209
Units:	ug/L	Analyzed:	10/17/16
Diln Fac:	1.000		

Type: BS Lab ID: QC855890

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,114	111	70-130

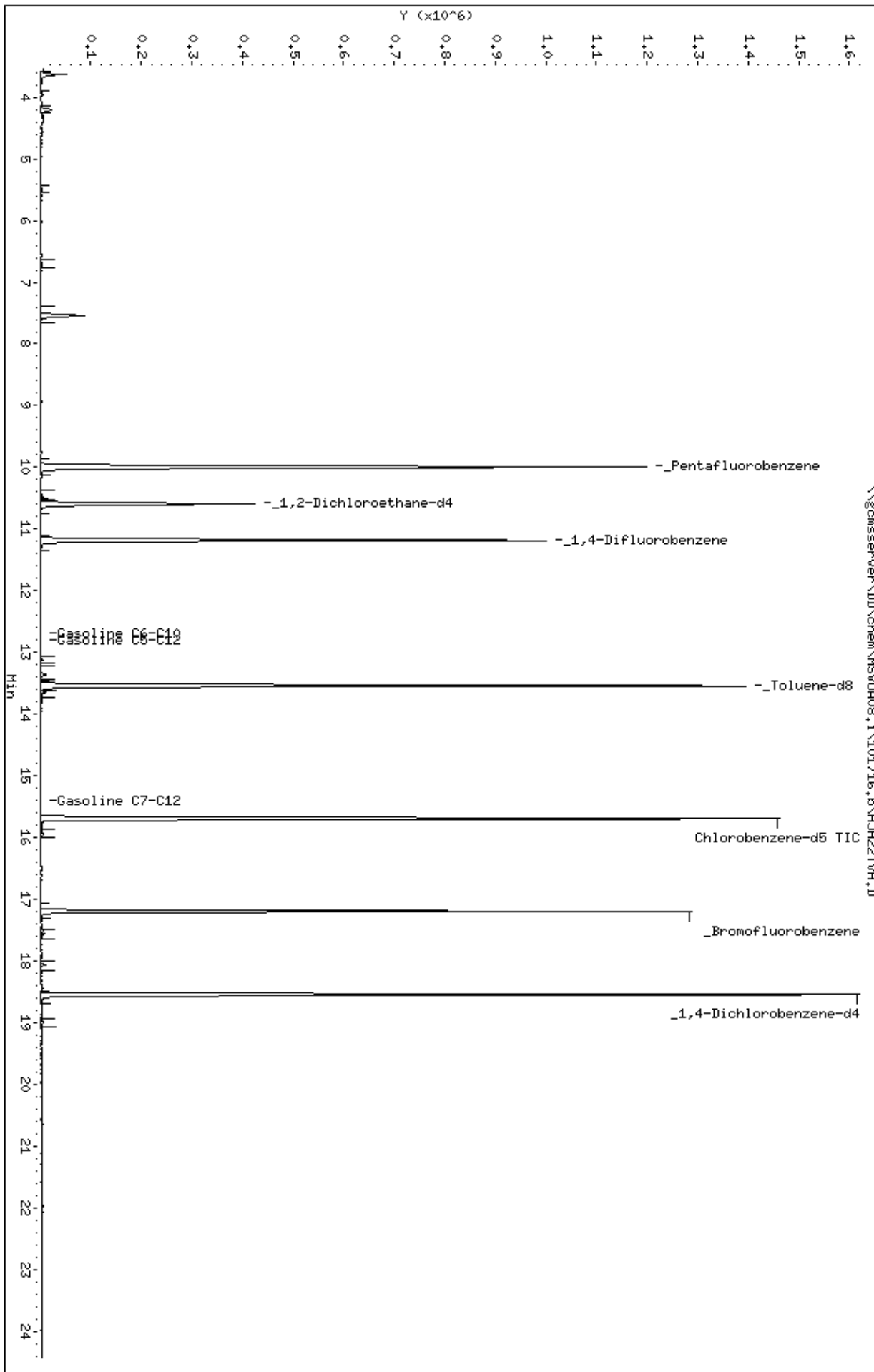
Surrogate	%REC	Limits
Dibromofluoromethane	94	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	90	80-120

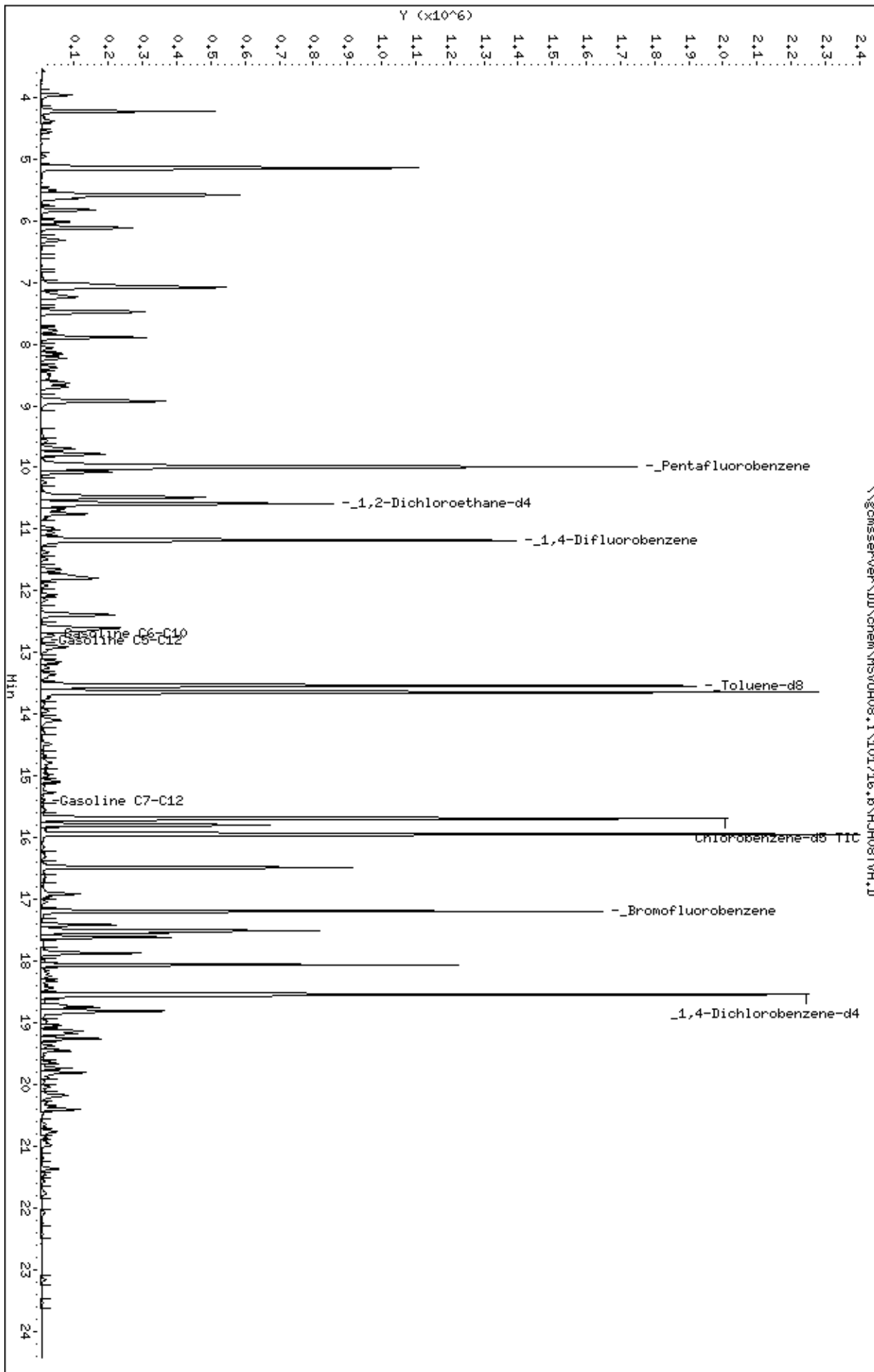
Type: BSD Lab ID: QC855891

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,074	107	70-130	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	94	80-120
Bromofluorobenzene	90	80-120

RPD= Relative Percent Difference





Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-5-1	Diln Fac:	0.9506
Lab ID:	282196-001	Batch#:	240284
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Freon 12	ND	9.5	0.4
Chloromethane	ND	9.5	1.0
Vinyl Chloride	ND	9.5	0.9
Bromomethane	ND	9.5	1.1
Chloroethane	ND	9.5	0.5
Trichlorofluoromethane	ND	4.8	0.7
Acetone	3.8 J	19	3.1
Freon 113	ND	4.8	0.4
1,1-Dichloroethene	ND	4.8	0.9
Methylene Chloride	ND	19	1.1
Carbon Disulfide	ND	4.8	0.8
MTBE	ND	4.8	1.0
trans-1,2-Dichloroethene	ND	4.8	0.8
Vinyl Acetate	ND	48	0.7
1,1-Dichloroethane	ND	4.8	1.1
2-Butanone	ND	9.5	1.3
cis-1,2-Dichloroethene	ND	4.8	0.8
2,2-Dichloropropane	ND	4.8	1.0
Chloroform	ND	4.8	1.2
Bromochloromethane	ND	4.8	0.9
1,1,1-Trichloroethane	ND	4.8	0.8
1,1-Dichloropropene	ND	4.8	0.6
Carbon Tetrachloride	ND	4.8	0.5
1,2-Dichloroethane	ND	4.8	0.9
Benzene	ND	4.8	0.9
Trichloroethene	ND	4.8	0.8
1,2-Dichloropropane	ND	4.8	0.7
Bromodichloromethane	ND	4.8	0.8
Dibromomethane	ND	4.8	0.7
4-Methyl-2-Pentanone	ND	9.5	1.0
cis-1,3-Dichloropropene	ND	4.8	0.6
Toluene	ND	4.8	0.7
trans-1,3-Dichloropropene	ND	4.8	0.6
1,1,2-Trichloroethane	ND	4.8	0.6
2-Hexanone	ND	9.5	0.8
1,3-Dichloropropane	ND	4.8	0.8
Tetrachloroethene	ND	4.8	0.5
Dibromochloromethane	ND	4.8	0.5
1,2-Dibromoethane	ND	4.8	0.6
Chlorobenzene	ND	4.8	0.7
1,1,1,2-Tetrachloroethane	ND	4.8	0.6
Ethylbenzene	ND	4.8	0.6
m,p-Xylenes	ND	4.8	1.2
o-Xylene	ND	4.8	0.6
Styrene	ND	4.8	0.5
Bromoform	ND	4.8	0.4
Isopropylbenzene	ND	4.8	0.5
1,1,2,2-Tetrachloroethane	ND	4.8	0.4
1,2,3-Trichloropropane	ND	4.8	0.6
Propylbenzene	ND	4.8	0.4
Bromobenzene	ND	4.8	0.5
1,3,5-Trimethylbenzene	ND	4.8	0.5

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-5-1	Diln Fac:	0.9506
Lab ID:	282196-001	Batch#:	240284
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.8	0.6
4-Chlorotoluene	ND	4.8	0.6
tert-Butylbenzene	ND	4.8	0.4
1,2,4-Trimethylbenzene	ND	4.8	0.6
sec-Butylbenzene	ND	4.8	0.4
para-Isopropyl Toluene	ND	4.8	0.4
1,3-Dichlorobenzene	ND	4.8	0.4
1,4-Dichlorobenzene	ND	4.8	0.5
n-Butylbenzene	ND	4.8	0.4
1,2-Dichlorobenzene	ND	4.8	0.5
1,2-Dibromo-3-Chloropropane	ND	4.8	0.9
1,2,4-Trichlorobenzene	ND	4.8	0.4
Hexachlorobutadiene	ND	4.8	0.3
Naphthalene	ND	4.8	1.0
1,2,3-Trichlorobenzene	ND	4.8	0.4

Surrogate	%REC	Limits
Dibromofluoromethane	102	78-134
1,2-Dichloroethane-d4	102	80-138
Toluene-d8	81	80-120
Bromofluorobenzene	90	78-123

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-5-5	Diln Fac:	0.8432
Lab ID:	282196-002	Batch#:	240284
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Freon 12	ND	8.4	0.3
Chloromethane	ND	8.4	0.9
Vinyl Chloride	ND	8.4	0.8
Bromomethane	ND	8.4	1.0
Chloroethane	ND	8.4	0.4
Trichlorofluoromethane	ND	4.2	0.6
Acetone	4.8 J	17	2.8
Freon 113	ND	4.2	0.4
1,1-Dichloroethene	ND	4.2	0.8
Methylene Chloride	ND	17	0.9
Carbon Disulfide	ND	4.2	0.7
MTBE	ND	4.2	0.8
trans-1,2-Dichloroethene	ND	4.2	0.7
Vinyl Acetate	ND	42	0.6
1,1-Dichloroethane	ND	4.2	1.0
2-Butanone	ND	8.4	1.1
cis-1,2-Dichloroethene	ND	4.2	0.7
2,2-Dichloropropane	ND	4.2	0.9
Chloroform	ND	4.2	1.1
Bromochloromethane	ND	4.2	0.8
1,1,1-Trichloroethane	ND	4.2	0.7
1,1-Dichloropropene	ND	4.2	0.5
Carbon Tetrachloride	ND	4.2	0.4
1,2-Dichloroethane	ND	4.2	0.8
Benzene	ND	4.2	0.8
Trichloroethene	ND	4.2	0.7
1,2-Dichloropropane	ND	4.2	0.7
Bromodichloromethane	ND	4.2	0.7
Dibromomethane	ND	4.2	0.7
4-Methyl-2-Pentanone	ND	8.4	0.9
cis-1,3-Dichloropropene	ND	4.2	0.5
Toluene	ND	4.2	0.6
trans-1,3-Dichloropropene	ND	4.2	0.5
1,1,2-Trichloroethane	ND	4.2	0.5
2-Hexanone	ND	8.4	0.7
1,3-Dichloropropane	ND	4.2	0.7
Tetrachloroethene	ND	4.2	0.4
Dibromochloromethane	ND	4.2	0.4
1,2-Dibromoethane	ND	4.2	0.5
Chlorobenzene	ND	4.2	0.6
1,1,1,2-Tetrachloroethane	ND	4.2	0.5
Ethylbenzene	ND	4.2	0.6
m,p-Xylenes	ND	4.2	1.1
o-Xylene	ND	4.2	0.5
Styrene	ND	4.2	0.5
Bromoform	ND	4.2	0.3
Isopropylbenzene	ND	4.2	0.4
1,1,2,2-Tetrachloroethane	ND	4.2	0.3
1,2,3-Trichloropropane	ND	4.2	0.5
Propylbenzene	ND	4.2	0.4
Bromobenzene	ND	4.2	0.4
1,3,5-Trimethylbenzene	ND	4.2	0.5

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-5-5	Diln Fac:	0.8432
Lab ID:	282196-002	Batch#:	240284
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.2	0.6
4-Chlorotoluene	ND	4.2	0.5
tert-Butylbenzene	ND	4.2	0.3
1,2,4-Trimethylbenzene	ND	4.2	0.5
sec-Butylbenzene	ND	4.2	0.4
para-Isopropyl Toluene	ND	4.2	0.4
1,3-Dichlorobenzene	ND	4.2	0.4
1,4-Dichlorobenzene	ND	4.2	0.5
n-Butylbenzene	ND	4.2	0.3
1,2-Dichlorobenzene	ND	4.2	0.4
1,2-Dibromo-3-Chloropropane	ND	4.2	0.8
1,2,4-Trichlorobenzene	ND	4.2	0.4
Hexachlorobutadiene	ND	4.2	0.3
Naphthalene	ND	4.2	0.8
1,2,3-Trichlorobenzene	ND	4.2	0.4

Surrogate	%REC	Limits
Dibromofluoromethane	107	78-134
1,2-Dichloroethane-d4	114	80-138
Toluene-d8	83	80-120
Bromofluorobenzene	101	78-123

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-2-1	Diln Fac:	0.9294
Lab ID:	282196-005	Batch#:	240284
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Freon 12	ND	9.3	0.4
Chloromethane	ND	9.3	1.0
Vinyl Chloride	ND	9.3	0.9
Bromomethane	ND	9.3	1.1
Chloroethane	ND	9.3	0.5
Trichlorofluoromethane	ND	4.6	0.6
Acetone	54	19	3.1
Freon 113	ND	4.6	0.4
1,1-Dichloroethene	ND	4.6	0.9
Methylene Chloride	ND	19	1.0
Carbon Disulfide	ND	4.6	0.8
MTBE	ND	4.6	0.9
trans-1,2-Dichloroethene	ND	4.6	0.8
Vinyl Acetate	ND	46	0.7
1,1-Dichloroethane	ND	4.6	1.1
2-Butanone	6.9 J	9.3	1.2
cis-1,2-Dichloroethene	ND	4.6	0.8
2,2-Dichloropropane	ND	4.6	1.0
Chloroform	ND	4.6	1.2
Bromochloromethane	ND	4.6	0.9
1,1,1-Trichloroethane	ND	4.6	0.8
1,1-Dichloropropene	ND	4.6	0.6
Carbon Tetrachloride	ND	4.6	0.4
1,2-Dichloroethane	ND	4.6	0.9
Benzene	ND	4.6	0.8
Trichloroethene	ND	4.6	0.8
1,2-Dichloropropane	ND	4.6	0.7
Bromodichloromethane	ND	4.6	0.8
Dibromomethane	ND	4.6	0.7
4-Methyl-2-Pentanone	ND	9.3	0.9
cis-1,3-Dichloropropene	ND	4.6	0.6
Toluene	ND	4.6	0.7
trans-1,3-Dichloropropene	ND	4.6	0.6
1,1,2-Trichloroethane	ND	4.6	0.6
2-Hexanone	ND	9.3	0.8
1,3-Dichloropropane	ND	4.6	0.8
Tetrachloroethene	ND	4.6	0.5
Dibromochloromethane	ND	4.6	0.5
1,2-Dibromoethane	ND	4.6	0.6
Chlorobenzene	ND	4.6	0.6
1,1,1,2-Tetrachloroethane	ND	4.6	0.6
Ethylbenzene	ND	4.6	0.6
m,p-Xylenes	ND	4.6	1.2
o-Xylene	ND	4.6	0.6
Styrene	ND	4.6	0.5
Bromoform	ND	4.6	0.4
Isopropylbenzene	ND	4.6	0.5
1,1,2,2-Tetrachloroethane	ND	4.6	0.4
1,2,3-Trichloropropane	ND	4.6	0.5
Propylbenzene	ND	4.6	0.4
Bromobenzene	ND	4.6	0.5
1,3,5-Trimethylbenzene	ND	4.6	0.5

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-2-1	Diln Fac:	0.9294
Lab ID:	282196-005	Batch#:	240284
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.6	0.6
4-Chlorotoluene	ND	4.6	0.6
tert-Butylbenzene	ND	4.6	0.4
1,2,4-Trimethylbenzene	ND	4.6	0.6
sec-Butylbenzene	ND	4.6	0.4
para-Isopropyl Toluene	ND	4.6	0.4
1,3-Dichlorobenzene	ND	4.6	0.4
1,4-Dichlorobenzene	ND	4.6	0.5
n-Butylbenzene	ND	4.6	0.4
1,2-Dichlorobenzene	ND	4.6	0.5
1,2-Dibromo-3-Chloropropane	ND	4.6	0.9
1,2,4-Trichlorobenzene	ND	4.6	0.4
Hexachlorobutadiene	ND	4.6	0.3
Naphthalene	ND	4.6	0.9
1,2,3-Trichlorobenzene	ND	4.6	0.4

Surrogate	%REC	Limits
Dibromofluoromethane	113	78-134
1,2-Dichloroethane-d4	119	80-138
Toluene-d8	90	80-120
Bromofluorobenzene	85	78-123

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-2-3	Diln Fac:	0.9488
Lab ID:	282196-006	Batch#:	240284
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Freon 12	ND	9.5	0.4
Chloromethane	ND	9.5	1.0
Vinyl Chloride	ND	9.5	0.9
Bromomethane	ND	9.5	1.1
Chloroethane	ND	9.5	0.5
Trichlorofluoromethane	ND	4.7	0.7
Acetone	65	19	3.1
Freon 113	ND	4.7	0.4
1,1-Dichloroethene	ND	4.7	0.9
Methylene Chloride	1.2 J	19	1.1
Carbon Disulfide	ND	4.7	0.8
MTBE	ND	4.7	0.9
trans-1,2-Dichloroethene	ND	4.7	0.8
Vinyl Acetate	ND	47	0.7
1,1-Dichloroethane	ND	4.7	1.1
2-Butanone	9.5	9.5	1.3
cis-1,2-Dichloroethene	ND	4.7	0.8
2,2-Dichloropropane	ND	4.7	1.0
Chloroform	ND	4.7	1.2
Bromochloromethane	ND	4.7	0.9
1,1,1-Trichloroethane	ND	4.7	0.8
1,1-Dichloropropene	ND	4.7	0.6
Carbon Tetrachloride	ND	4.7	0.5
1,2-Dichloroethane	ND	4.7	0.9
Benzene	ND	4.7	0.9
Trichloroethene	ND	4.7	0.8
1,2-Dichloropropane	ND	4.7	0.7
Bromodichloromethane	ND	4.7	0.8
Dibromomethane	ND	4.7	0.7
4-Methyl-2-Pentanone	ND	9.5	1.0
cis-1,3-Dichloropropene	ND	4.7	0.6
Toluene	ND	4.7	0.7
trans-1,3-Dichloropropene	ND	4.7	0.6
1,1,2-Trichloroethane	ND	4.7	0.6
2-Hexanone	ND	9.5	0.8
1,3-Dichloropropane	ND	4.7	0.8
Tetrachloroethene	ND	4.7	0.5
Dibromochloromethane	ND	4.7	0.5
1,2-Dibromoethane	ND	4.7	0.6
Chlorobenzene	ND	4.7	0.7
1,1,1,2-Tetrachloroethane	ND	4.7	0.6
Ethylbenzene	ND	4.7	0.6
m,p-Xylenes	ND	4.7	1.2
o-Xylene	ND	4.7	0.6
Styrene	ND	4.7	0.5
Bromoform	ND	4.7	0.4
Isopropylbenzene	ND	4.7	0.5
1,1,2,2-Tetrachloroethane	ND	4.7	0.4
1,2,3-Trichloropropane	ND	4.7	0.6
Propylbenzene	ND	4.7	0.4
Bromobenzene	ND	4.7	0.5
1,3,5-Trimethylbenzene	ND	4.7	0.5

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Field ID:	SB-2-3	Diln Fac:	0.9488
Lab ID:	282196-006	Batch#:	240284
Matrix:	Soil	Sampled:	10/13/16
Units:	ug/Kg	Received:	10/14/16
Basis:	as received	Analyzed:	10/18/16

Analyte	Result	RL	MDL
2-Chlorotoluene	ND	4.7	0.6
4-Chlorotoluene	ND	4.7	0.6
tert-Butylbenzene	ND	4.7	0.4
1,2,4-Trimethylbenzene	ND	4.7	0.6
sec-Butylbenzene	ND	4.7	0.4
para-Isopropyl Toluene	ND	4.7	0.4
1,3-Dichlorobenzene	ND	4.7	0.4
1,4-Dichlorobenzene	ND	4.7	0.5
n-Butylbenzene	ND	4.7	0.4
1,2-Dichlorobenzene	ND	4.7	0.5
1,2-Dibromo-3-Chloropropane	ND	4.7	0.9
1,2,4-Trichlorobenzene	ND	4.7	0.4
Hexachlorobutadiene	ND	4.7	0.3
Naphthalene	ND	4.7	0.9
1,2,3-Trichlorobenzene	ND	4.7	0.4

Surrogate	%REC	Limits
Dibromofluoromethane	115	78-134
1,2-Dichloroethane-d4	120	80-138
Toluene-d8	83	80-120
Bromofluorobenzene	87	78-123

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC856196	Batch#:	240284
Matrix:	Soil	Analyzed:	10/18/16
Units:	ug/Kg		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	28.08	112	70-134
Benzene	25.00	29.85	119	80-123
Trichloroethene	25.00	27.61	110	80-128
Toluene	25.00	23.47	94	80-120
Chlorobenzene	25.00	24.13	97	80-123

Surrogate	%REC	Limits
Dibromofluoromethane	99	78-134
1,2-Dichloroethane-d4	102	80-138
Toluene-d8	85	80-120
Bromofluorobenzene	85	78-123

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856197	Batch#:	240284
Matrix:	Soil	Analyzed:	10/18/16
Units:	ug/Kg		

Analyte	Result	RL	MDL
Freon 12	ND	10	0.4
Chloromethane	ND	10	1.0
Vinyl Chloride	ND	10	0.9
Bromomethane	ND	10	1.2
Chloroethane	ND	10	0.5
Trichlorofluoromethane	ND	5.0	0.7
Acetone	ND	20	3.3
Freon 113	ND	5.0	0.4
1,1-Dichloroethene	ND	5.0	0.9
Methylene Chloride	ND	20	1.1
Carbon Disulfide	ND	5.0	0.9
MTBE	ND	5.0	1.0
trans-1,2-Dichloroethene	ND	5.0	0.8
Vinyl Acetate	ND	50	0.7
1,1-Dichloroethane	ND	5.0	1.2
2-Butanone	ND	10	1.3
cis-1,2-Dichloroethene	ND	5.0	0.9
2,2-Dichloropropane	ND	5.0	1.1
Chloroform	ND	5.0	1.3
Bromochloromethane	ND	5.0	0.9
1,1,1-Trichloroethane	ND	5.0	0.8
1,1-Dichloropropene	ND	5.0	0.6
Carbon Tetrachloride	ND	5.0	0.5
1,2-Dichloroethane	ND	5.0	0.9
Benzene	ND	5.0	0.9
Trichloroethene	ND	5.0	0.8
1,2-Dichloropropane	ND	5.0	0.8
Bromodichloromethane	ND	5.0	0.8
Dibromomethane	ND	5.0	0.8
4-Methyl-2-Pentanone	ND	10	1.0
cis-1,3-Dichloropropene	ND	5.0	0.6
Toluene	ND	5.0	0.7
trans-1,3-Dichloropropene	ND	5.0	0.6
1,1,2-Trichloroethane	ND	5.0	0.6
2-Hexanone	ND	10	0.9
1,3-Dichloropropane	ND	5.0	0.8
Tetrachloroethene	ND	5.0	0.5
Dibromochloromethane	ND	5.0	0.5
1,2-Dibromoethane	ND	5.0	0.7
Chlorobenzene	ND	5.0	0.7
1,1,1,2-Tetrachloroethane	ND	5.0	0.6
Ethylbenzene	ND	5.0	0.7
m,p-Xylenes	ND	5.0	1.3
o-Xylene	ND	5.0	0.6
Styrene	ND	5.0	0.6
Bromoform	ND	5.0	0.4
Isopropylbenzene	ND	5.0	0.5
1,1,2,2-Tetrachloroethane	ND	5.0	0.4
1,2,3-Trichloropropane	ND	5.0	0.6
Propylbenzene	ND	5.0	0.4
Bromobenzene	ND	5.0	0.5
1,3,5-Trimethylbenzene	ND	5.0	0.6
2-Chlorotoluene	ND	5.0	0.7

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 5030B
Project#:	0363086	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856197	Batch#:	240284
Matrix:	Soil	Analyzed:	10/18/16
Units:	ug/Kg		

Analyte	Result	RL	MDL
4-Chlorotoluene	ND	5.0	0.6
tert-Butylbenzene	ND	5.0	0.4
1,2,4-Trimethylbenzene	ND	5.0	0.6
sec-Butylbenzene	ND	5.0	0.4
para-Isopropyl Toluene	ND	5.0	0.4
1,3-Dichlorobenzene	ND	5.0	0.4
1,4-Dichlorobenzene	ND	5.0	0.5
n-Butylbenzene	ND	5.0	0.4
1,2-Dichlorobenzene	ND	5.0	0.5
1,2-Dibromo-3-Chloropropane	ND	5.0	0.9
1,2,4-Trichlorobenzene	ND	5.0	0.4
Hexachlorobutadiene	ND	5.0	0.3
Naphthalene	ND	5.0	1.0
1,2,3-Trichlorobenzene	ND	5.0	0.4

Surrogate	%REC	Limits
Dibromofluoromethane	112	78-134
1,2-Dichloroethane-d4	108	80-138
Toluene-d8	82	80-120
Bromofluorobenzene	93	78-123

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-5-GW	Batch#:	240250
Lab ID:	282196-004	Sampled:	10/13/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Prepared:	10/18/16
Diln Fac:	20.00	Analyzed:	10/19/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	190	14
Phenol	ND	190	18
bis(2-Chloroethyl)ether	ND	190	34
2-Chlorophenol	ND	190	19
1,3-Dichlorobenzene	ND	190	13
1,4-Dichlorobenzene	ND	190	12
Benzyl alcohol	ND	190	11
1,2-Dichlorobenzene	ND	190	13
2-Methylphenol	ND	190	12
bis(2-Chloroisopropyl) ether	ND	190	15
4-Methylphenol	ND	190	11
N-Nitroso-di-n-propylamine	ND	190	16
Hexachloroethane	ND	190	13
Nitrobenzene	ND	190	11
Isophorone	ND	190	13
2-Nitrophenol	ND	380	59
2,4-Dimethylphenol	ND	190	13
Benzoic acid	ND	940	280
bis(2-Chloroethoxy)methane	ND	190	11
2,4-Dichlorophenol	ND	190	14
1,2,4-Trichlorobenzene	ND	190	11
Naphthalene	ND	190	11
4-Chloroaniline	ND	190	12
Hexachlorobutadiene	ND	190	19
4-Chloro-3-methylphenol	ND	190	15
2-Methylnaphthalene	ND	190	13
Hexachlorocyclopentadiene	ND	380	130
2,4,6-Trichlorophenol	ND	190	21
2,4,5-Trichlorophenol	ND	190	21
2-Chloronaphthalene	ND	190	13
2-Nitroaniline	ND	380	49
Dimethylphthalate	ND	190	12
Acenaphthylene	ND	190	11
2,6-Dinitrotoluene	ND	190	13
3-Nitroaniline	ND	380	16
Acenaphthene	ND	190	13
2,4-Dinitrophenol	ND	380	130
4-Nitrophenol	ND	380	38
Dibenzofuran	ND	190	11
2,4-Dinitrotoluene	ND	190	12
Diethylphthalate	ND	190	13
Fluorene	ND	190	11
4-Chlorophenyl-phenylether	ND	190	19
4-Nitroaniline	ND	380	63
4,6-Dinitro-2-methylphenol	ND	380	47
N-Nitrosodiphenylamine	ND	190	35
Azobenzene	ND	190	12
4-Bromophenyl-phenylether	ND	190	19
Hexachlorobenzene	ND	190	13
Pentachlorophenol	ND	380	38
Phenanthrene	ND	190	13
Anthracene	ND	190	12

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-5-GW	Batch#:	240250
Lab ID:	282196-004	Sampled:	10/13/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Prepared:	10/18/16
Diln Fac:	20.00	Analyzed:	10/19/16

Analyte	Result	RL	MDL
Di-n-butylphthalate	ND	190	26
Fluoranthene	ND	190	15
Pyrene	ND	190	14
Butylbenzylphthalate	ND	190	15
3,3'-Dichlorobenzidine	ND	380	48
Benzo(a)anthracene	ND	190	14
Chrysene	ND	190	13
bis(2-Ethylhexyl)phthalate	ND	190	31
Di-n-octylphthalate	ND	190	12
Benzo(b)fluoranthene	ND	190	13
Benzo(k)fluoranthene	ND	190	12
Benzo(a)pyrene	ND	190	11
Indeno(1,2,3-cd)pyrene	ND	190	14
Dibenz(a,h)anthracene	ND	190	15
Benzo(g,h,i)perylene	ND	190	16

Surrogate	%REC	Limits
2-Fluorophenol	DO	38-120
Phenol-d5	DO	38-120
2,4,6-Tribromophenol	DO	46-120
Nitrobenzene-d5	DO	51-120
2-Fluorobiphenyl	DO	54-120
Terphenyl-d14	DO	21-120

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-2-GW	Batch#:	240250
Lab ID:	282196-010	Sampled:	10/14/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Prepared:	10/18/16
Diln Fac:	10.00	Analyzed:	10/19/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	94	7.2
Phenol	19 J	94	9.2
bis(2-Chloroethyl)ether	ND	94	17
2-Chlorophenol	ND	94	9.6
1,3-Dichlorobenzene	ND	94	6.3
1,4-Dichlorobenzene	ND	94	6.1
Benzyl alcohol	ND	94	5.5
1,2-Dichlorobenzene	ND	94	6.5
2-Methylphenol	ND	94	6.0
bis(2-Chloroisopropyl) ether	ND	94	7.6
4-Methylphenol	ND	94	5.7
N-Nitroso-di-n-propylamine	ND	94	7.9
Hexachloroethane	ND	94	6.5
Nitrobenzene	ND	94	5.7
Isophorone	ND	94	6.4
2-Nitrophenol	ND	190	30
2,4-Dimethylphenol	ND	94	6.5
Benzoic acid	ND	470	140
bis(2-Chloroethoxy)methane	ND	94	5.3
2,4-Dichlorophenol	ND	94	6.9
1,2,4-Trichlorobenzene	ND	94	5.7
Naphthalene	ND	94	5.5
4-Chloroaniline	ND	94	6.1
Hexachlorobutadiene	ND	94	9.4
4-Chloro-3-methylphenol	ND	94	7.7
2-Methylnaphthalene	ND	94	6.6
Hexachlorocyclopentadiene	ND	190	63
2,4,6-Trichlorophenol	ND	94	11
2,4,5-Trichlorophenol	ND	94	11
2-Chloronaphthalene	ND	94	6.6
2-Nitroaniline	ND	190	25
Dimethylphthalate	ND	94	6.2
Acenaphthylene	ND	94	5.5
2,6-Dinitrotoluene	ND	94	6.3
3-Nitroaniline	ND	190	7.9
Acenaphthene	ND	94	6.6
2,4-Dinitrophenol	ND	190	63
4-Nitrophenol	ND	190	19
Dibenzofuran	ND	94	5.3
2,4-Dinitrotoluene	ND	94	6.2
Diethylphthalate	ND	94	6.4
Fluorene	ND	94	5.4
4-Chlorophenyl-phenylether	ND	94	9.4
4-Nitroaniline	ND	190	31
4,6-Dinitro-2-methylphenol	ND	190	24
N-Nitrosodiphenylamine	ND	94	18
Azobenzene	ND	94	6.2
4-Bromophenyl-phenylether	ND	94	9.4
Hexachlorobenzene	ND	94	6.4
Pentachlorophenol	ND	190	19
Phenanthrene	ND	94	6.7

J= Estimated value
 DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-2-GW	Batch#:	240250
Lab ID:	282196-010	Sampled:	10/14/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L	Prepared:	10/18/16
Diln Fac:	10.00	Analyzed:	10/19/16

Analyte	Result	RL	MDL
Anthracene	ND	94	5.9
Di-n-butylphthalate	ND	94	13
Fluoranthene	ND	94	7.3
Pyrene	ND	94	7.0
Butylbenzylphthalate	ND	94	7.7
3,3'-Dichlorobenzidine	ND	190	24
Benzo(a)anthracene	ND	94	7.1
Chrysene	ND	94	6.6
bis(2-Ethylhexyl)phthalate	ND	94	15
Di-n-octylphthalate	ND	94	5.9
Benzo(b)fluoranthene	ND	94	6.7
Benzo(k)fluoranthene	ND	94	6.2
Benzo(a)pyrene	ND	94	5.4
Indeno(1,2,3-cd)pyrene	ND	94	7.2
Dibenz(a,h)anthracene	ND	94	7.4
Benzo(g,h,i)perylene	ND	94	8.2

Surrogate	%REC	Limits
2-Fluorophenol	DO	38-120
Phenol-d5	DO	38-120
2,4,6-Tribromophenol	DO	46-120
Nitrobenzene-d5	DO	51-120
2-Fluorobiphenyl	DO	54-120
Terphenyl-d14	DO	21-120

J= Estimated value
 DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856055	Batch#:	240250
Matrix:	Water	Prepared:	10/17/16
Units:	ug/L	Analyzed:	10/18/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	10	0.76
Phenol	ND	10	0.98
bis(2-Chloroethyl)ether	ND	10	1.8
2-Chlorophenol	ND	10	1.0
1,3-Dichlorobenzene	ND	10	0.67
1,4-Dichlorobenzene	ND	10	0.65
Benzyl alcohol	ND	10	0.59
1,2-Dichlorobenzene	ND	10	0.69
2-Methylphenol	ND	10	0.63
bis(2-Chloroisopropyl) ether	ND	10	0.81
4-Methylphenol	ND	10	0.60
N-Nitroso-di-n-propylamine	ND	10	0.84
Hexachloroethane	ND	10	0.69
Nitrobenzene	ND	10	0.60
Isophorone	ND	10	0.67
2-Nitrophenol	ND	20	3.1
2,4-Dimethylphenol	ND	10	0.69
Benzoic acid	ND	50	15
bis(2-Chloroethoxy)methane	ND	10	0.56
2,4-Dichlorophenol	ND	10	0.73
1,2,4-Trichlorobenzene	ND	10	0.61
Naphthalene	ND	10	0.58
4-Chloroaniline	ND	10	0.65
Hexachlorobutadiene	ND	10	1.0
4-Chloro-3-methylphenol	ND	10	0.82
2-Methylnaphthalene	ND	10	0.70
Hexachlorocyclopentadiene	ND	20	6.7
2,4,6-Trichlorophenol	ND	10	1.1
2,4,5-Trichlorophenol	ND	10	1.1
2-Chloronaphthalene	ND	10	0.70
2-Nitroaniline	ND	20	2.6
Dimethylphthalate	ND	10	0.66
Acenaphthylene	ND	10	0.58
2,6-Dinitrotoluene	ND	10	0.67
3-Nitroaniline	ND	20	0.84
Acenaphthene	ND	10	0.70
2,4-Dinitrophenol	ND	20	6.7
4-Nitrophenol	ND	20	2.0
Dibenzofuran	ND	10	0.57
2,4-Dinitrotoluene	ND	10	0.65
Diethylphthalate	ND	10	0.68
Fluorene	ND	10	0.57
4-Chlorophenyl-phenylether	ND	10	1.0
4-Nitroaniline	ND	20	3.3
4,6-Dinitro-2-methylphenol	ND	20	2.5
N-Nitrosodiphenylamine	ND	10	1.9
Azobenzene	ND	10	0.65
4-Bromophenyl-phenylether	ND	10	1.0
Hexachlorobenzene	ND	10	0.68
Pentachlorophenol	ND	20	2.0
Phenanthrene	ND	10	0.71
Anthracene	ND	10	0.62
Di-n-butylphthalate	ND	10	1.4

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856055	Batch#:	240250
Matrix:	Water	Prepared:	10/17/16
Units:	ug/L	Analyzed:	10/18/16

Analyte	Result	RL	MDL
Fluoranthene	ND	10	0.77
Pyrene	ND	10	0.74
Butylbenzylphthalate	ND	10	0.82
3,3'-Dichlorobenzidine	ND	20	2.5
Benzo(a)anthracene	ND	10	0.75
Chrysene	ND	10	0.70
bis(2-Ethylhexyl)phthalate	ND	10	1.6
Di-n-octylphthalate	ND	10	0.63
Benzo(b)fluoranthene	ND	10	0.71
Benzo(k)fluoranthene	ND	10	0.66
Benzo(a)pyrene	ND	10	0.57
Indeno(1,2,3-cd)pyrene	ND	10	0.77
Dibenz(a,h)anthracene	ND	10	0.79
Benzo(g,h,i)perylene	ND	10	0.87

Surrogate	%REC	Limits
2-Fluorophenol	77	38-120
Phenol-d5	76	38-120
2,4,6-Tribromophenol	75	46-120
Nitrobenzene-d5	82	51-120
2-Fluorobiphenyl	77	54-120
Terphenyl-d14	63	21-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3520C
Project#:	0363086	Analysis:	EPA 8270C
Matrix:	Water	Batch#:	240250
Units:	ug/L	Prepared:	10/17/16
Diln Fac:	1.000	Analyzed:	10/18/16

Type: BS Lab ID: QC856056

Analyte	Spiked	Result	%REC	Limits
Phenol	80.00	67.96	85	46-120
2-Chlorophenol	80.00	68.27	85	48-120
1,4-Dichlorobenzene	80.00	52.64	66	52-120
N-Nitroso-di-n-propylamine	80.00	70.42	88	46-120
1,2,4-Trichlorobenzene	80.00	51.96	65	53-120
4-Chloro-3-methylphenol	80.00	61.10	76	40-120
Acenaphthene	30.00	26.83	89	61-120
4-Nitrophenol	80.00	45.38	57	40-120
2,4-Dinitrotoluene	80.00	68.47	86	64-120
Pentachlorophenol	80.00	63.43	79	47-120
Pyrene	30.00	30.45	101	62-120

Surrogate	%REC	Limits
2-Fluorophenol	80	38-120
Phenol-d5	84	38-120
2,4,6-Tribromophenol	78	46-120
Nitrobenzene-d5	73	51-120
2-Fluorobiphenyl	83	54-120
Terphenyl-d14	93	21-120

Type: BSD Lab ID: QC856057

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Phenol	80.00	56.65	71	46-120	18	55
2-Chlorophenol	80.00	57.47	72	48-120	17	54
1,4-Dichlorobenzene	80.00	44.20	55	52-120	17	30
N-Nitroso-di-n-propylamine	80.00	59.70	75	46-120	16	25
1,2,4-Trichlorobenzene	80.00	44.09	55	53-120	16	26
4-Chloro-3-methylphenol	80.00	53.36	67	40-120	14	54
Acenaphthene	30.00	23.35	78	61-120	14	25
4-Nitrophenol	80.00	39.16	49	40-120	15	45
2,4-Dinitrotoluene	80.00	60.66	76	64-120	12	32
Pentachlorophenol	80.00	54.90	69	47-120	14	48
Pyrene	30.00	26.80	89	62-120	13	26

Surrogate	%REC	Limits
2-Fluorophenol	68	38-120
Phenol-d5	71	38-120
2,4,6-Tribromophenol	69	46-120
Nitrobenzene-d5	62	51-120
2-Fluorobiphenyl	72	54-120
Terphenyl-d14	83	21-120

RPD= Relative Percent Difference

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-5-1	Batch#:	240222
Lab ID:	282196-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	3.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	1,000	140
Phenol	ND	1,000	30
bis(2-Chloroethyl)ether	ND	1,000	180
2-Chlorophenol	ND	1,000	30
1,3-Dichlorobenzene	ND	1,000	170
1,4-Dichlorobenzene	ND	1,000	30
Benzyl alcohol	ND	1,000	33
1,2-Dichlorobenzene	ND	1,000	30
2-Methylphenol	ND	1,000	41
bis(2-Chloroisopropyl) ether	ND	1,000	30
4-Methylphenol	ND	1,000	30
N-Nitroso-di-n-propylamine	ND	1,000	30
Hexachloroethane	ND	1,000	30
Nitrobenzene	ND	1,000	33
Isophorone	ND	1,000	30
2-Nitrophenol	ND	2,000	30
2,4-Dimethylphenol	ND	1,000	42
Benzoic acid	ND	5,000	1,300
bis(2-Chloroethoxy)methane	ND	1,000	30
2,4-Dichlorophenol	ND	1,000	30
1,2,4-Trichlorobenzene	ND	1,000	30
Naphthalene	ND	200	30
4-Chloroaniline	ND	1,000	28
Hexachlorobutadiene	ND	1,000	27
4-Chloro-3-methylphenol	ND	1,000	25
2-Methylnaphthalene	ND	200	30
Hexachlorocyclopentadiene	ND	2,000	41
2,4,6-Trichlorophenol	ND	1,000	38
2,4,5-Trichlorophenol	ND	1,000	25
2-Chloronaphthalene	ND	1,000	27
2-Nitroaniline	ND	2,000	33
Dimethylphthalate	ND	1,000	30
Acenaphthylene	ND	200	27
2,6-Dinitrotoluene	ND	1,000	27
3-Nitroaniline	ND	2,000	30
Acenaphthene	ND	200	30
2,4-Dinitrophenol	ND	2,000	190
4-Nitrophenol	ND	2,000	220
Dibenzofuran	ND	1,000	31
2,4-Dinitrotoluene	ND	1,000	29
Diethylphthalate	ND	1,000	34
Fluorene	ND	200	30
4-Chlorophenyl-phenylether	ND	1,000	29
4-Nitroaniline	ND	2,000	30
4,6-Dinitro-2-methylphenol	ND	2,000	230
N-Nitrosodiphenylamine	ND	1,000	32
Azobenzene	ND	1,000	26
4-Bromophenyl-phenylether	ND	1,000	32
Hexachlorobenzene	ND	1,000	32
Pentachlorophenol	ND	2,000	390
Phenanthrene	ND	200	32

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-5-1	Batch#:	240222
Lab ID:	282196-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	3.000		

Analyte	Result	RL	MDL
Anthracene	ND	200	34
Di-n-butylphthalate	ND	1,000	37
Fluoranthene	38 J	200	31
Pyrene	51 J	200	33
Butylbenzylphthalate	ND	1,000	30
3,3'-Dichlorobenzidine	ND	2,000	30
Benzo(a)anthracene	37 J	200	31
Chrysene	45 J	200	34
bis(2-Ethylhexyl)phthalate	ND	1,000	39
Di-n-octylphthalate	ND	1,000	30
Benzo(b)fluoranthene	40 J	200	27
Benzo(k)fluoranthene	ND	200	29
Benzo(a)pyrene	32 J	200	26
Indeno(1,2,3-cd)pyrene	ND	200	27
Dibenz(a,h)anthracene	ND	200	28
Benzo(g,h,i)perylene	ND	200	31

Surrogate	%REC	Limits
2-Fluorophenol	67	25-120
Phenol-d5	66	36-120
2,4,6-Tribromophenol	77	27-120
Nitrobenzene-d5	59	44-120
2-Fluorobiphenyl	76	47-120
Terphenyl-d14	84	49-120

J= Estimated value
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-5-5	Batch#:	240222
Lab ID:	282196-002	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	33,000	4,700
Phenol	ND	33,000	990
bis(2-Chloroethyl)ether	ND	33,000	5,900
2-Chlorophenol	ND	33,000	990
1,3-Dichlorobenzene	ND	33,000	5,600
1,4-Dichlorobenzene	ND	33,000	990
Benzyl alcohol	ND	33,000	1,100
1,2-Dichlorobenzene	ND	33,000	990
2-Methylphenol	ND	33,000	1,400
bis(2-Chloroisopropyl) ether	ND	33,000	990
4-Methylphenol	ND	33,000	990
N-Nitroso-di-n-propylamine	ND	33,000	990
Hexachloroethane	ND	33,000	990
Nitrobenzene	ND	33,000	1,100
Isophorone	ND	33,000	990
2-Nitrophenol	ND	66,000	990
2,4-Dimethylphenol	ND	33,000	1,400
Benzoic acid	ND	170,000	43,000
bis(2-Chloroethoxy)methane	ND	33,000	990
2,4-Dichlorophenol	ND	33,000	990
1,2,4-Trichlorobenzene	ND	33,000	990
Naphthalene	ND	6,600	990
4-Chloroaniline	ND	33,000	930
Hexachlorobutadiene	ND	33,000	880
4-Chloro-3-methylphenol	ND	33,000	830
2-Methylnaphthalene	ND	6,600	990
Hexachlorocyclopentadiene	ND	66,000	1,400
2,4,6-Trichlorophenol	ND	33,000	1,200
2,4,5-Trichlorophenol	ND	33,000	830
2-Chloronaphthalene	ND	33,000	890
2-Nitroaniline	ND	66,000	1,100
Dimethylphthalate	ND	33,000	1,000
Acenaphthylene	ND	6,600	890
2,6-Dinitrotoluene	ND	33,000	890
3-Nitroaniline	ND	66,000	990
Acenaphthene	ND	6,600	990
2,4-Dinitrophenol	ND	66,000	6,400
4-Nitrophenol	ND	66,000	7,100
Dibenzofuran	ND	33,000	1,000
2,4-Dinitrotoluene	ND	33,000	960
Diethylphthalate	ND	33,000	1,100
Fluorene	ND	6,600	980
4-Chlorophenyl-phenylether	ND	33,000	960
4-Nitroaniline	ND	66,000	990
4,6-Dinitro-2-methylphenol	ND	66,000	7,600
N-Nitrosodiphenylamine	ND	33,000	1,100
Azobenzene	ND	33,000	850
4-Bromophenyl-phenylether	ND	33,000	1,000
Hexachlorobenzene	ND	33,000	1,100
Pentachlorophenol	ND	66,000	13,000
Phenanthrene	ND	6,600	1,000

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-5-5	Batch#:	240222
Lab ID:	282196-002	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
Anthracene	ND	6,600	1,100
Di-n-butylphthalate	ND	33,000	1,200
Fluoranthene	ND	6,600	1,000
Pyrene	ND	6,600	1,100
Butylbenzylphthalate	ND	33,000	1,000
3,3'-Dichlorobenzidine	ND	66,000	990
Benzo(a)anthracene	ND	6,600	1,000
Chrysene	ND	6,600	1,100
bis(2-Ethylhexyl)phthalate	ND	33,000	1,300
Di-n-octylphthalate	ND	33,000	990
Benzo(b)fluoranthene	ND	6,600	890
Benzo(k)fluoranthene	ND	6,600	940
Benzo(a)pyrene	ND	6,600	870
Indeno(1,2,3-cd)pyrene	ND	6,600	880
Dibenz(a,h)anthracene	ND	6,600	930
Benzo(g,h,i)perylene	ND	6,600	1,000

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-2-1	Batch#:	240222
Lab ID:	282196-005	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	50.00		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	33,000	4,700
Phenol	ND	33,000	990
bis(2-Chloroethyl)ether	ND	33,000	5,900
2-Chlorophenol	ND	33,000	990
1,3-Dichlorobenzene	ND	33,000	5,600
1,4-Dichlorobenzene	ND	33,000	990
Benzyl alcohol	ND	33,000	1,100
1,2-Dichlorobenzene	ND	33,000	990
2-Methylphenol	ND	33,000	1,400
bis(2-Chloroisopropyl) ether	ND	33,000	990
4-Methylphenol	ND	33,000	990
N-Nitroso-di-n-propylamine	ND	33,000	990
Hexachloroethane	ND	33,000	990
Nitrobenzene	ND	33,000	1,100
Isophorone	ND	33,000	990
2-Nitrophenol	ND	66,000	990
2,4-Dimethylphenol	ND	33,000	1,400
Benzoic acid	ND	170,000	43,000
bis(2-Chloroethoxy)methane	ND	33,000	990
2,4-Dichlorophenol	ND	33,000	990
1,2,4-Trichlorobenzene	ND	33,000	990
Naphthalene	ND	6,600	990
4-Chloroaniline	ND	33,000	930
Hexachlorobutadiene	ND	33,000	880
4-Chloro-3-methylphenol	ND	33,000	830
2-Methylnaphthalene	ND	6,600	990
Hexachlorocyclopentadiene	ND	66,000	1,400
2,4,6-Trichlorophenol	ND	33,000	1,200
2,4,5-Trichlorophenol	ND	33,000	830
2-Chloronaphthalene	ND	33,000	890
2-Nitroaniline	ND	66,000	1,100
Dimethylphthalate	ND	33,000	1,000
Acenaphthylene	ND	6,600	890
2,6-Dinitrotoluene	ND	33,000	890
3-Nitroaniline	ND	66,000	990
Acenaphthene	ND	6,600	990
2,4-Dinitrophenol	ND	66,000	6,400
4-Nitrophenol	ND	66,000	7,100
Dibenzofuran	ND	33,000	1,000
2,4-Dinitrotoluene	ND	33,000	960
Diethylphthalate	ND	33,000	1,100
Fluorene	ND	6,600	980
4-Chlorophenyl-phenylether	ND	33,000	960
4-Nitroaniline	ND	66,000	990
4,6-Dinitro-2-methylphenol	ND	66,000	7,600
N-Nitrosodiphenylamine	ND	33,000	1,100
Azobenzene	ND	33,000	850
4-Bromophenyl-phenylether	ND	33,000	1,000
Hexachlorobenzene	ND	33,000	1,100
Pentachlorophenol	ND	66,000	13,000

J= Estimated value
 DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-2-1	Batch#:	240222
Lab ID:	282196-005	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/17/16
Diln Fac:	50.00		

Analyte	Result	RL	MDL
Phenanthrene	ND	6,600	1,000
Anthracene	ND	6,600	1,100
Di-n-butylphthalate	ND	33,000	1,200
Fluoranthene	ND	6,600	1,000
Pyrene	ND	6,600	1,100
Butylbenzylphthalate	ND	33,000	1,000
3,3'-Dichlorobenzidine	ND	66,000	990
Benzo(a)anthracene	1,200 J	6,600	1,000
Chrysene	ND	6,600	1,100
bis(2-Ethylhexyl)phthalate	ND	33,000	1,300
Di-n-octylphthalate	ND	33,000	990
Benzo(b)fluoranthene	950 J	6,600	890
Benzo(k)fluoranthene	ND	6,600	940
Benzo(a)pyrene	ND	6,600	870
Indeno(1,2,3-cd)pyrene	ND	6,600	880
Dibenz(a,h)anthracene	ND	6,600	930
Benzo(g,h,i)perylene	ND	6,600	1,000

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

J= Estimated value
 DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-2-3	Batch#:	240222
Lab ID:	282196-006	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	12.50		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	4,100	590
Phenol	ND	4,100	120
bis(2-Chloroethyl)ether	ND	4,100	740
2-Chlorophenol	ND	4,100	120
1,3-Dichlorobenzene	ND	4,100	700
1,4-Dichlorobenzene	ND	4,100	120
Benzyl alcohol	ND	4,100	140
1,2-Dichlorobenzene	ND	4,100	120
2-Methylphenol	ND	4,100	170
bis(2-Chloroisopropyl) ether	ND	4,100	120
4-Methylphenol	ND	4,100	120
N-Nitroso-di-n-propylamine	ND	4,100	120
Hexachloroethane	ND	4,100	120
Nitrobenzene	ND	4,100	140
Isophorone	ND	4,100	120
2-Nitrophenol	ND	8,300	120
2,4-Dimethylphenol	ND	4,100	170
Benzoic acid	ND	21,000	5,400
bis(2-Chloroethoxy)methane	ND	4,100	120
2,4-Dichlorophenol	ND	4,100	120
1,2,4-Trichlorobenzene	ND	4,100	120
Naphthalene	ND	830	120
4-Chloroaniline	ND	4,100	120
Hexachlorobutadiene	ND	4,100	110
4-Chloro-3-methylphenol	ND	4,100	100
2-Methylnaphthalene	ND	830	120
Hexachlorocyclopentadiene	ND	8,300	170
2,4,6-Trichlorophenol	ND	4,100	160
2,4,5-Trichlorophenol	ND	4,100	100
2-Chloronaphthalene	ND	4,100	110
2-Nitroaniline	ND	8,300	130
Dimethylphthalate	ND	4,100	120
Acenaphthylene	ND	830	110
2,6-Dinitrotoluene	ND	4,100	110
3-Nitroaniline	ND	8,300	120
Acenaphthene	ND	830	120
2,4-Dinitrophenol	ND	8,300	800
4-Nitrophenol	ND	8,300	890
Dibenzofuran	ND	4,100	130
2,4-Dinitrotoluene	ND	4,100	120
Diethylphthalate	ND	4,100	140
Fluorene	ND	830	120
4-Chlorophenyl-phenylether	ND	4,100	120
4-Nitroaniline	ND	8,300	120
4,6-Dinitro-2-methylphenol	ND	8,300	960
N-Nitrosodiphenylamine	ND	4,100	130
Azobenzene	ND	4,100	110
4-Bromophenyl-phenylether	ND	4,100	130
Hexachlorobenzene	ND	4,100	130
Pentachlorophenol	ND	8,300	1,600
Phenanthrene	ND	830	130

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-2-3	Batch#:	240222
Lab ID:	282196-006	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/20/16
Diln Fac:	12.50		

Analyte	Result	RL	MDL
Anthracene	ND	830	140
Di-n-butylphthalate	ND	4,100	150
Fluoranthene	ND	830	130
Pyrene	ND	830	140
Butylbenzylphthalate	ND	4,100	120
3,3'-Dichlorobenzidine	ND	8,300	120
Benzo(a)anthracene	ND	830	130
Chrysene	ND	830	140
bis(2-Ethylhexyl)phthalate	ND	4,100	160
Di-n-octylphthalate	ND	4,100	120
Benzo(b)fluoranthene	ND	830	110
Benzo(k)fluoranthene	ND	830	120
Benzo(a)pyrene	ND	830	110
Indeno(1,2,3-cd)pyrene	ND	830	110
Dibenz(a,h)anthracene	ND	830	120
Benzo(g,h,i)perylene	ND	830	130

Surrogate	%REC	Limits
2-Fluorophenol	DO	25-120
Phenol-d5	DO	36-120
2,4,6-Tribromophenol	DO	27-120
Nitrobenzene-d5	DO	44-120
2-Fluorobiphenyl	DO	47-120
Terphenyl-d14	DO	49-120

DO= Diluted Out
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855937	Batch#:	240222
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/17/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	330	47
Phenol	ND	330	9.9
bis(2-Chloroethyl)ether	ND	330	59
2-Chlorophenol	ND	330	9.9
1,3-Dichlorobenzene	ND	330	56
1,4-Dichlorobenzene	ND	330	9.9
Benzyl alcohol	ND	330	11
1,2-Dichlorobenzene	ND	330	9.9
2-Methylphenol	ND	330	14
bis(2-Chloroisopropyl) ether	ND	330	9.9
4-Methylphenol	ND	330	9.9
N-Nitroso-di-n-propylamine	ND	330	9.9
Hexachloroethane	ND	330	9.9
Nitrobenzene	ND	330	11
Isophorone	ND	330	9.9
2-Nitrophenol	ND	660	9.9
2,4-Dimethylphenol	ND	330	14
Benzoic acid	ND	1,700	430
bis(2-Chloroethoxy)methane	ND	330	9.9
2,4-Dichlorophenol	ND	330	9.9
1,2,4-Trichlorobenzene	ND	330	9.9
Naphthalene	ND	66	9.9
4-Chloroaniline	ND	330	9.3
Hexachlorobutadiene	ND	330	8.8
4-Chloro-3-methylphenol	ND	330	8.3
2-Methylnaphthalene	ND	66	9.9
Hexachlorocyclopentadiene	ND	660	14
2,4,6-Trichlorophenol	ND	330	12
2,4,5-Trichlorophenol	ND	330	8.3
2-Chloronaphthalene	ND	330	8.9
2-Nitroaniline	ND	660	11
Dimethylphthalate	ND	330	9.9
Acenaphthylene	ND	66	8.9
2,6-Dinitrotoluene	ND	330	8.9
3-Nitroaniline	ND	660	9.9
Acenaphthene	ND	66	9.9
2,4-Dinitrophenol	ND	660	64
4-Nitrophenol	ND	660	71
Dibenzofuran	ND	330	10
2,4-Dinitrotoluene	ND	330	9.5
Diethylphthalate	ND	330	11
Fluorene	ND	66	9.8
4-Chlorophenyl-phenylether	ND	330	9.6
4-Nitroaniline	ND	660	9.9
4,6-Dinitro-2-methylphenol	ND	660	76
N-Nitrosodiphenylamine	ND	330	10
Azobenzene	ND	330	8.5
4-Bromophenyl-phenylether	ND	330	10
Hexachlorobenzene	ND	330	11
Pentachlorophenol	ND	660	130
Phenanthrene	ND	66	10
Anthracene	ND	66	11
Di-n-butylphthalate	ND	330	12

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855937	Batch#:	240222
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/17/16

Analyte	Result	RL	MDL
Fluoranthene	ND	66	10
Pyrene	ND	66	11
Butylbenzylphthalate	ND	330	9.9
3,3'-Dichlorobenzidine	ND	660	9.9
Benzo(a)anthracene	ND	66	10
Chrysene	ND	66	11
bis(2-Ethylhexyl)phthalate	ND	330	13
Di-n-octylphthalate	ND	330	9.9
Benzo(b)fluoranthene	ND	66	8.9
Benzo(k)fluoranthene	ND	66	9.4
Benzo(a)pyrene	ND	66	8.7
Indeno(1,2,3-cd)pyrene	ND	66	8.7
Dibenz(a,h)anthracene	ND	66	9.2
Benzo(g,h,i)perylene	ND	66	10

Surrogate	%REC	Limits
2-Fluorophenol	69	25-120
Phenol-d5	67	36-120
2,4,6-Tribromophenol	75	27-120
Nitrobenzene-d5	63	44-120
2-Fluorobiphenyl	73	47-120
Terphenyl-d14	75	49-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855938	Batch#:	240222
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/17/16

Analyte	Spiked	Result	%REC	Limits
Phenol	2,685	2,159	80	42-120
2-Chlorophenol	2,685	2,164	81	45-120
1,4-Dichlorobenzene	2,685	1,843	69	48-120
N-Nitroso-di-n-propylamine	2,685	2,224	83	27-123
1,2,4-Trichlorobenzene	2,685	1,798	67	50-120
4-Chloro-3-methylphenol	2,685	2,143	80	59-120
Acenaphthene	1,007	948.4	94	53-120
4-Nitrophenol	2,685	1,693	63	47-120
2,4-Dinitrotoluene	2,685	2,432	91	55-120
Pentachlorophenol	2,685	2,249	84	32-120
Pyrene	1,007	1,041	103	52-120

Surrogate	%REC	Limits
2-Fluorophenol	76	25-120
Phenol-d5	81	36-120
2,4,6-Tribromophenol	82	27-120
Nitrobenzene-d5	71	44-120
2-Fluorobiphenyl	82	47-120
Terphenyl-d14	98	49-120

Organochlorine Pesticides			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Field ID:	SB-5-1	Batch#:	240225
Lab ID:	282196-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/24/16
Diln Fac:	50.00		

Analyte	Result	RL	MDL
alpha-BHC	ND	85	9.9
beta-BHC	ND	85	20
gamma-BHC	ND	85	11
delta-BHC	ND	85	14
Heptachlor	ND	85	9.5
Aldrin	ND	85	10
Heptachlor epoxide	ND	85	11
Endosulfan I	ND	85	8.7
Dieldrin	ND	85	20
4,4'-DDE	510	160	29
Endrin	ND	160	28
Endosulfan II	ND	160	25
Endosulfan sulfate	ND	160	26
4,4'-DDD	130 C J	160	36
Endrin aldehyde	ND	160	17
4,4'-DDT	240	160	23
alpha-Chlordane	ND	85	10
gamma-Chlordane	26 C J	85	12
Methoxychlor	ND	850	160
Toxaphene	ND	3,000	450

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

C= Presence confirmed, but RPD between columns exceeds 40%

J= Estimated value

DO= Diluted Out

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Organochlorine Pesticides

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Field ID:	SB-2-1	Batch#:	240225
Lab ID:	282196-005	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/24/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
alpha-BHC	ND	170	20
beta-BHC	ND	170	41
gamma-BHC	ND	170	22
delta-BHC	ND	170	28
Heptachlor	ND	170	19
Aldrin	ND	170	20
Heptachlor epoxide	ND	170	22
Endosulfan I	ND	170	18
Dieldrin	ND	170	40
4,4'-DDE	ND	330	59
Endrin	ND	330	56
Endosulfan II	ND	330	50
Endosulfan sulfate	ND	330	51
4,4'-DDD	ND	330	73
Endrin aldehyde	ND	330	34
4,4'-DDT	ND	330	47
alpha-Chlordane	ND	170	21
gamma-Chlordane	ND	170	25
Methoxychlor	ND	1,700	310
Toxaphene	ND	6,000	910

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

DO= Diluted Out

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Organochlorine Pesticides

Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Field ID:	SB-2-3	Batch#:	240225
Lab ID:	282196-006	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/24/16
Diln Fac:	100.0		

Analyte	Result	RL	MDL
alpha-BHC	ND	170	20
beta-BHC	ND	170	41
gamma-BHC	ND	170	21
delta-BHC	ND	170	28
Heptachlor	ND	170	19
Aldrin	ND	170	20
Heptachlor epoxide	ND	170	22
Endosulfan I	ND	170	17
Dieldrin	ND	170	39
4,4'-DDE	ND	330	58
Endrin	ND	330	55
Endosulfan II	ND	330	50
Endosulfan sulfate	ND	330	51
4,4'-DDD	ND	330	72
Endrin aldehyde	ND	330	33
4,4'-DDT	ND	330	47
alpha-Chlordane	ND	170	20
gamma-Chlordane	ND	170	24
Methoxychlor	ND	1,700	310
Toxaphene	ND	5,900	910

Surrogate	%REC	Limits
TCMX	DO	44-125
Decachlorobiphenyl	DO	39-121

DO= Diluted Out

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Organochlorine Pesticides			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC855947	Batch#:	240225
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/18/16

Analyte	Result	RL	MDL
alpha-BHC	ND	1.7	0.20
beta-BHC	ND	1.7	0.41
gamma-BHC	ND	1.7	0.22
delta-BHC	ND	1.7	0.28
Heptachlor	ND	1.7	0.19
Aldrin	ND	1.7	0.20
Heptachlor epoxide	ND	1.7	0.22
Endosulfan I	ND	1.7	0.18
Dieldrin	ND	1.7	0.40
4,4'-DDE	ND	3.3	0.59
Endrin	ND	3.3	0.56
Endosulfan II	ND	3.3	0.50
Endosulfan sulfate	ND	3.3	0.51
4,4'-DDD	ND	3.3	0.73
Endrin aldehyde	ND	3.3	0.34
4,4'-DDT	ND	3.3	0.47
alpha-Chlordane	ND	1.7	0.21
gamma-Chlordane	ND	1.7	0.24
Methoxychlor	ND	17	3.1
Toxaphene	ND	60	9.1

Surrogate	%REC	Limits
TCMX	83	44-125
Decachlorobiphenyl	83	39-121

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Organochlorine Pesticides			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8081A
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC855948	Batch#:	240225
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/18/16

Analyte	Spiked	Result	%REC	Limits
gamma-BHC	13.36	9.077	68	44-121
Heptachlor	13.36	9.161 #	69	45-129
Aldrin	13.36	9.266	69	45-120
Dieldrin	13.36	10.53	79	49-131
Endrin	13.36	10.72 #	80	43-135
4,4'-DDT	13.36	10.80 #	81	37-141

Surrogate	%REC	Limits
TCMX	61	44-125
Decachlorobiphenyl	75	39-121

#= CCV drift outside limits; average CCV drift within limits per method requirements

Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8082
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC856045	Batch#:	240247
Matrix:	Soil	Prepared:	10/17/16
Units:	ug/Kg	Analyzed:	10/18/16

Analyte	Spiked	Result	%REC	Limits
Aroclor-1016	163.9	183.4	112	64-140
Aroclor-1260	163.9	185.8	113	65-146

Surrogate	%REC	Limits
Decachlorobiphenyl	99	25-135

Batch QC Report

Polychlorinated Biphenyls (PCBs)			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8082
Field ID:	SB-2-3	Batch#:	240247
MSS Lab ID:	282196-006	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	10/17/16
Basis:	as received	Analyzed:	10/18/16
Diln Fac:	1.000		

Type: MS Lab ID: QC856046

Analyte	MSS Result	Spiked	Result	%REC	Limits
Aroclor-1016	<2.912	168.2	218.2	130	60-161
Aroclor-1260	86.58	168.2	307.9	132	42-166

Surrogate	%REC	Limits
Decachlorobiphenyl	95	25-135

Type: MSD Lab ID: QC856047

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Aroclor-1016	168.0	256.8	153	60-161	16	43
Aroclor-1260	168.0	290.1	121	42-166	6	51

Surrogate	%REC	Limits
Decachlorobiphenyl	91	25-135

RPD= Relative Percent Difference

California Title 22 Metals			
Lab #:	282196	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-5-GW	Diln Fac:	1.000
Lab ID:	282196-004	Sampled:	10/13/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	ND	10	2.0	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Arsenic	32	5.0	1.3	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Barium	570	5.0	1.0	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Beryllium	2.0	2.0	0.20	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Cadmium	3.2 J	5.0	0.40	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Chromium	600	5.0	1.0	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Cobalt	110	5.0	1.0	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Copper	51	5.0	1.0	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Lead	72	5.0	1.0	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Mercury	0.19 J	0.20	0.040	240535	10/25/16	10/25/16	METHOD	EPA 7470A
Molybdenum	17	5.0	1.0	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Nickel	500	5.0	0.50	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Selenium	ND	10	2.2	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Silver	ND	5.0	1.1	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Thallium	5.1 J	10	1.9	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Vanadium	440	5.0	0.57	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B
Zinc	320	20	5.0	240319	10/19/16	10/20/16	EPA 3010A	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282196	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-2-GW	Diln Fac:	1.000
Lab ID:	282196-010	Sampled:	10/14/16
Matrix:	Water	Received:	10/14/16
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	14	10	2.0	240319	10/19/16	10/27/16	EPA 3010A	EPA 6010B
Arsenic	12	5.0	1.3	240319	10/19/16	10/27/16	EPA 3010A	EPA 6010B
Barium	290	5.0	1.0	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Beryllium	1.0 J	2.0	0.20	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Cadmium	ND	5.0	0.40	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Chromium	660	5.0	1.0	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Cobalt	33	5.0	1.0	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Copper	37	5.0	1.0	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Lead	56	5.0	1.0	240319	10/19/16	10/27/16	EPA 3010A	EPA 6010B
Mercury	0.33	0.20	0.040	240535	10/25/16	10/25/16	METHOD	EPA 7470A
Molybdenum	19	5.0	1.0	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Nickel	150	5.0	0.50	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Selenium	ND	10	2.2	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Silver	ND	5.0	1.1	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Thallium	3.4 J	10	1.9	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Vanadium	310	5.0	0.57	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B
Zinc	170	20	5.0	240319	10/19/16	10/21/16	EPA 3010A	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3010A
Project#:	0363086	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856341	Batch#:	240319
Matrix:	Water	Prepared:	10/19/16
Units:	ug/L	Analyzed:	10/20/16

Analyte	Result	RL	MDL
Antimony	ND	10	2.0
Arsenic	ND	5.0	1.3
Barium	ND	5.0	1.0
Beryllium	ND	2.0	0.20
Cadmium	ND	5.0	0.40
Chromium	ND	5.0	1.0
Cobalt	ND	5.0	1.0
Copper	ND	5.0	1.0
Lead	ND	5.0	1.0
Molybdenum	ND	5.0	1.0
Nickel	ND	5.0	0.50
Selenium	ND	10	2.2
Silver	ND	5.0	1.1
Thallium	ND	10	1.9
Vanadium	ND	5.0	0.57
Zinc	ND	20	5.0

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3010A
Project#:	0363086	Analysis:	EPA 6010B
Matrix:	Water	Batch#:	240319
Units:	ug/L	Prepared:	10/19/16
Diln Fac:	1.000	Analyzed:	10/20/16

Type: BS Lab ID: QC856342

Analyte	Spiked	Result	%REC	Limits
Antimony	100.0	94.09	94	79-120
Arsenic	100.0	94.70	95	80-120
Barium	100.0	98.86	99	80-120
Beryllium	100.0	99.01	99	80-120
Cadmium	100.0	99.40	99	80-120
Chromium	100.0	99.52	100	80-120
Cobalt	100.0	99.12	99	80-120
Copper	100.0	97.08	97	80-120
Lead	100.0	95.90	96	80-120
Molybdenum	100.0	105.7	106	80-120
Nickel	100.0	99.00	99	80-120
Selenium	100.0	90.88	91	80-120
Silver	100.0	97.45	97	77-120
Thallium	50.00	50.80	102	80-121
Vanadium	100.0	99.54	100	80-120
Zinc	100.0	98.33	98	80-120

Type: BSD Lab ID: QC856343

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	92.60	93	79-120	2	20
Arsenic	100.0	99.65	100	80-120	5	20
Barium	100.0	98.88	99	80-120	0	20
Beryllium	100.0	100.6	101	80-120	2	20
Cadmium	100.0	99.69	100	80-120	0	20
Chromium	100.0	102.2	102	80-120	3	20
Cobalt	100.0	99.36	99	80-120	0	20
Copper	100.0	98.95	99	80-120	2	20
Lead	100.0	95.71	96	80-120	0	20
Molybdenum	100.0	104.6	105	80-120	1	20
Nickel	100.0	99.80	100	80-120	1	20
Selenium	100.0	96.35	96	80-120	6	20
Silver	100.0	97.92	98	77-120	0	20
Thallium	50.00	49.16	98	80-121	3	20
Vanadium	100.0	101.6	102	80-120	2	20
Zinc	100.0	99.53	100	80-120	1	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3010A
Project#:	0363086	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	240319
MSS Lab ID:	282303-001	Sampled:	10/18/16
Matrix:	Water	Received:	10/18/16
Units:	ug/L	Prepared:	10/19/16
Diln Fac:	1.000	Analyzed:	10/20/16

Type: MS Lab ID: QC856344

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	<2.000	100.0	89.68	90	74-120
Arsenic	2.452	100.0	96.99	95	80-127
Barium	23.37	100.0	119.1	96	80-120
Beryllium	<0.2000	100.0	100.2	100	80-120
Cadmium	<0.3976	100.0	96.93	97	80-120
Chromium	3.912	100.0	104.1	100	80-120
Cobalt	<1.000	100.0	96.87	97	80-120
Copper	12.53	100.0	109.6	97	80-120
Lead	<1.028	100.0	91.29	91	67-120
Molybdenum	19.49	100.0	122.1	103	80-120
Nickel	1.342	100.0	99.47	98	80-120
Selenium	<2.215	100.0	96.24	96	73-132
Silver	<1.083	100.0	98.48	98	67-120
Thallium	<1.905	50.00	50.65	101	76-121
Vanadium	31.49	100.0	132.3	101	80-120
Zinc	<5.000	100.0	100.3	100	80-122

Type: MSD Lab ID: QC856345

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	100.0	93.66	94	74-120	4	24
Arsenic	100.0	105.1	103	80-127	8	25
Barium	100.0	125.2	102	80-120	5	20
Beryllium	100.0	107.1	107	80-120	7	20
Cadmium	100.0	102.4	102	80-120	5	20
Chromium	100.0	110.2	106	80-120	6	20
Cobalt	100.0	102.2	102	80-120	5	20
Copper	100.0	116.8	104	80-120	6	20
Lead	100.0	95.98	96	67-120	5	23
Molybdenum	100.0	126.7	107	80-120	4	20
Nickel	100.0	105.8	104	80-120	6	20
Selenium	100.0	99.96	100	73-132	4	30
Silver	100.0	102.3	102	67-120	4	22
Thallium	50.00	52.58	105	76-121	4	20
Vanadium	100.0	139.9	108	80-120	6	20
Zinc	100.0	104.0	104	80-122	4	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240535
Lab ID:	QC857192	Prepared:	10/25/16
Matrix:	Filtrate	Analyzed:	10/25/16
Units:	ug/L		

Result	RL	MDL
ND	0.20	0.040

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	240535
Matrix:	Filtrate	Prepared:	10/25/16
Units:	ug/L	Analyzed:	10/25/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC857193	2.500	2.586	103	80-120		
BSD	QC857194	2.500	2.499	100	80-120	3	24

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	240535
Field ID:	ZZZZZZZZZZ	Sampled:	10/21/16
MSS Lab ID:	282470-001	Received:	10/21/16
Matrix:	Filtrate	Prepared:	10/25/16
Units:	ug/L	Analyzed:	10/25/16
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC857195	<0.04000	2.500	2.566	103	60-130		
MSD	QC857196		2.500	2.629	105	60-130	2	34

RPD= Relative Percent Difference

California Title 22 Metals			
Lab #:	282196	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-5-1	Basis:	as received
Lab ID:	282196-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	mg/Kg		

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	21	1.9	0.15	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Arsenic	12	0.24	0.071	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Barium	290	0.24	0.052	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Beryllium	0.35	0.097	0.012	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Cadmium	1.9	0.24	0.025	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Chromium	99	0.24	0.061	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Cobalt	8.4	0.24	0.029	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Copper	130	0.24	0.081	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Lead	790	24	6.8	100.0	240331	10/19/16	10/20/16	EPA 3050B	EPA 6010B
Mercury	4.2	0.16	0.029	10.00	240714	10/28/16	10/28/16	METHOD	EPA 7471A
Molybdenum	0.57	0.24	0.047	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Nickel	22	0.24	0.064	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Selenium	ND	1.9	0.16	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Silver	ND	0.24	0.039	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Thallium	ND	0.49	0.14	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Vanadium	55	0.24	0.055	1.000	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Zinc	860	97	19	100.0	240331	10/19/16	10/20/16	EPA 3050B	EPA 6010B

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282196	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-5-5	Basis:	as received
Lab ID:	282196-002	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/14/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	1.9 J	2.0	0.16	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Arsenic	6.2	0.27	0.077	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Barium	62	0.27	0.057	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Beryllium	0.21	0.11	0.013	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Cadmium	0.36	0.27	0.027	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Chromium	40	0.27	0.067	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Cobalt	28	0.27	0.032	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Copper	12	0.27	0.089	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Lead	14	0.27	0.074	240331	10/19/16	10/21/16	EPA 3050B	EPA 6010B
Mercury	0.098	0.017	0.0030	240714	10/28/16	10/28/16	METHOD	EPA 7471A
Molybdenum	0.54	0.27	0.052	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Nickel	21	0.27	0.070	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Selenium	ND	2.0	0.17	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Silver	2.7	0.27	0.042	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Thallium	0.33 J	0.53	0.15	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Vanadium	40	0.27	0.061	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Zinc	33	1.1	0.21	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282196	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-2-1	Basis:	as received
Lab ID:	282196-005	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/14/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	1.2 J	2.0	0.16	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Arsenic	3.3	0.27	0.078	240331	10/19/16	10/21/16	EPA 3050B	EPA 6010B
Barium	150	0.27	0.058	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Beryllium	0.29	0.11	0.013	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Cadmium	0.56	0.27	0.027	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Chromium	120	0.27	0.068	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Cobalt	8.1	0.27	0.032	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Copper	25	0.27	0.090	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Lead	31	0.27	0.075	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Mercury	0.15	0.017	0.0030	240775	10/31/16	10/31/16	METHOD	EPA 7471A
Molybdenum	0.86	0.27	0.053	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Nickel	32	0.27	0.071	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Selenium	ND	2.0	0.17	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Silver	ND	0.27	0.043	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Thallium	0.39 J	0.54	0.15	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Vanadium	42	0.27	0.061	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Zinc	86	1.1	0.22	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282196	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-2-3	Basis:	as received
Lab ID:	282196-006	Diln Fac:	1.000
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/14/16

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	4.4	2.0	0.15	240331	10/19/16	10/21/16	EPA 3050B	EPA 6010B
Arsenic	4.1	0.26	0.075	240331	10/19/16	10/21/16	EPA 3050B	EPA 6010B
Barium	110	0.26	0.055	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Beryllium	0.23	0.10	0.013	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Cadmium	0.93	0.26	0.026	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Chromium	100	0.26	0.065	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Cobalt	9.0	0.26	0.031	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Copper	71	0.26	0.086	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Lead	110	0.26	0.072	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Mercury	0.17	0.016	0.0030	240775	10/31/16	10/31/16	METHOD	EPA 7471A
Molybdenum	0.77	0.26	0.050	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Nickel	26	0.26	0.068	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Selenium	ND	2.0	0.16	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Silver	ND	0.26	0.041	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Thallium	ND	0.52	0.14	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Vanadium	49	0.26	0.059	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B
Zinc	170	1.0	0.21	240331	10/19/16	10/19/16	EPA 3050B	EPA 6010B

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3050B
Project#:	0363086	Analysis:	EPA 6010B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC856386	Batch#:	240331
Matrix:	Soil	Prepared:	10/19/16
Units:	mg/Kg	Analyzed:	10/19/16

Analyte	Result	RL	MDL
Antimony	ND	2.0	0.16
Arsenic	ND	0.26	0.076
Barium	ND	0.26	0.056
Beryllium	ND	0.10	0.013
Cadmium	ND	0.26	0.027
Chromium	ND	0.26	0.066
Cobalt	ND	0.26	0.031
Copper	ND	0.26	0.087
Lead	ND	0.26	0.073
Molybdenum	ND	0.26	0.051
Nickel	0.081 J	0.26	0.069
Selenium	ND	2.0	0.17
Silver	0.051 J	0.26	0.042
Thallium	ND	0.52	0.15
Vanadium	ND	0.26	0.059
Zinc	1.1 b	1.0	0.21

J= Estimated value

b= See narrative

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3050B
Project#:	0363086	Analysis:	EPA 6010B
Matrix:	Soil	Batch#:	240331
Units:	mg/Kg	Prepared:	10/19/16
Diln Fac:	1.000	Analyzed:	10/19/16

Type: BS Lab ID: QC856387

Analyte	Spiked	Result	%REC	Limits
Antimony	53.19	47.99	90	80-120
Arsenic	53.19	48.90	92	80-120
Barium	53.19	54.28	102	80-120
Beryllium	26.60	27.68	104	80-120
Cadmium	53.19	52.58	99	80-120
Chromium	53.19	54.08	102	80-120
Cobalt	53.19	51.87	98	80-120
Copper	53.19	52.66	99	80-120
Lead	53.19	49.90	94	80-120
Molybdenum	53.19	48.62	91	80-120
Nickel	53.19	53.05	100	80-120
Selenium	53.19	48.36	91	80-120
Silver	5.319	4.949	93	80-120
Thallium	53.19	49.41	93	80-120
Vanadium	53.19	53.51	101	80-120
Zinc	53.19	51.27	96	80-120

Type: BSD Lab ID: QC856388

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	52.63	48.35	92	80-120	2	20
Arsenic	52.63	49.74	95	80-120	3	20
Barium	52.63	54.21	103	80-120	1	20
Beryllium	26.32	27.52	105	80-120	0	20
Cadmium	52.63	52.58	100	80-120	1	20
Chromium	52.63	54.18	103	80-120	1	20
Cobalt	52.63	51.95	99	80-120	1	20
Copper	52.63	52.65	100	80-120	1	20
Lead	52.63	50.04	95	80-120	1	20
Molybdenum	52.63	48.75	93	80-120	1	20
Nickel	52.63	53.03	101	80-120	1	20
Selenium	52.63	49.14	93	80-120	3	20
Silver	5.263	5.000	95	80-120	2	20
Thallium	52.63	49.84	95	80-120	2	20
Vanadium	52.63	53.60	102	80-120	1	20
Zinc	52.63	51.08	97	80-120	1	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3050B
Project#:	0363086	Analysis:	EPA 6010B
Field ID:	SB-5-1	Batch#:	240331
MSS Lab ID:	282196-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	mg/Kg	Prepared:	10/19/16
Basis:	as received	Analyzed:	10/19/16
Diln Fac:	1.000		

Type: MS Lab ID: QC856389

Analyte	MSS Result	Spiked	Result	%REC	Limits
Antimony	20.91	48.08	75.40	113	15-120
Arsenic	11.88	48.08	55.32	90	69-120
Barium	290.9	48.08	375.9	177 NM	35-154
Beryllium	0.3485	24.04	24.21	99	75-120
Cadmium	1.857	48.08	46.97	94	71-120
Chromium	99.17	48.08	141.9	89	57-133
Cobalt	8.383	48.08	53.04	93	56-125
Copper	131.2	48.08	196.6	136	54-144
Lead	786.5	48.08	943.7 >LR	327 NM	53-125
Molybdenum	0.5726	48.08	39.31	81	66-120
Nickel	22.23	48.08	68.75	97	44-141
Selenium	<0.1551	48.08	40.59	84	61-120
Silver	<0.03871	4.808	4.192	87	69-120
Thallium	<0.1363	48.08	40.67	85	59-120
Vanadium	55.38	48.08	87.56	67	52-144
Zinc	857.2	48.08	1,250 >LR	817 NM	45-145

Type: MSD Lab ID: QC856390

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Antimony	54.35	46.38	47	15-120	56 *	41
Arsenic	54.35	68.84	105	69-120	12	35
Barium	54.35	318.5	51 NM	35-154	18	36
Beryllium	27.17	28.27	103	75-120	3	20
Cadmium	54.35	53.85	96	71-120	2	25
Chromium	54.35	141.5	78	57-133	4	33
Cobalt	54.35	59.62	94	56-125	1	36
Copper	54.35	220.5	164 *	54-144	8	38
Lead	54.35	901.6 >LR	212 NM	53-125	NC	42
Molybdenum	54.35	46.90	85	66-120	6	20
Nickel	54.35	82.04	110	44-141	9	39
Selenium	54.35	47.94	88	61-120	4	33
Silver	5.435	4.888	90	69-120	3	22
Thallium	54.35	48.63	89	59-120	6	27
Vanadium	54.35	91.76	67	52-144	1	29
Zinc	54.35	917.5 >LR	111 NM	45-145	NC	39

*= Value outside of QC limits; see narrative
 NC= Not Calculated
 NM= Not Meaningful: Sample concentration > 4X spike concentration
 >LR= Response exceeds instrument's linear range
 RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240714
Lab ID:	QC857912	Prepared:	10/28/16
Matrix:	Soil	Analyzed:	10/28/16
Units:	mg/Kg		

Result	RL	MDL
ND	0.016	0.0030

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	240714
Matrix:	Soil	Prepared:	10/28/16
Units:	mg/Kg	Analyzed:	10/28/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC857913	0.1953	0.2337	120	80-120		
BSD	QC857914	0.2119	0.2515	119	80-120	1	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	240714
MSS Lab ID:	282536-012	Sampled:	10/24/16
Matrix:	Soil	Received:	10/24/16
Units:	mg/Kg	Prepared:	10/28/16
Basis:	as received	Analyzed:	10/28/16

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC857915	0.08220	0.1984	0.3084	114	69-142		
MSD	QC857916		0.2016	0.3142	115	69-142	1	36

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240775
Lab ID:	QC858208	Prepared:	10/31/16
Matrix:	Soil	Analyzed:	10/31/16
Units:	mg/Kg		

Result	RL	MDL
ND	0.017	0.0030

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Batch#:	240775
Matrix:	Soil	Prepared:	10/31/16
Units:	mg/Kg	Analyzed:	10/31/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC858209	0.2119	0.2045	97	80-120		
BSD	QC858210	0.2155	0.2141	99	80-120	3	20

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282196	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7471A
Analyte:	Mercury	Diln Fac:	1.000
Field ID:	SB-1-1	Batch#:	240775
MSS Lab ID:	282148-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/13/16
Units:	mg/Kg	Prepared:	10/31/16
Basis:	as received	Analyzed:	10/31/16

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC858211	0.4301	0.2083	0.5708	68 *	69-142		
MSD	QC858212		0.1984	0.6447	108	69-142	14	36

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference



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 282764
ANALYTICAL REPORT**

ERM
1277 Treat Blvd.
Walnut Creek, CA 94597

Project : 0363086
Location : Martin Extension
Level : II

Sample ID
SB-5-9

Lab ID
282764-001

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: _____

Dina Ali
Project Manager
dina.ali@ctberk.com

Date: 11/04/2016

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 282764
Client: ERM
Project: 0363086
Location: Martin Extension
Request Date: 10/28/16
Samples Received: 10/14/16

This data package contains sample and QC results for one soil sample, requested for the above referenced project on 10/28/16. The sample was received on ice and intact.

TPH-Extractables by GC (EPA 8015B):

282764-001 was prepared outside of hold time; affected data was qualified with "b". No other analytical problems were encountered.

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

Matrix spikes QC858366, QC858367 (batch 240829) were not reported because the parent sample required a dilution that would have diluted out the spikes. 282764-001 was prepared outside of hold time; affected data was qualified with "b". No other analytical problems were encountered.

Subject: RE: 0363086 - C&T Updated Partial Reports (282196) 282764
From: Shannon Martin <Shannon.Martin@erm.com>
Date: 10/28/2016 7:43 AM
To: Dina Ali <dina.ali@ctberk.com>
CC: John Lucio <John.Lucio@erm.com>, Chimi Yi <Chimi.Yi@erm.com>, Doug Moberg <Doug.Moberg@erm.com>

Hi Dina,

We would like to request that SB-5-9 also be run for SVOCs by 8270C.

Thanks,

Shannon Martin, P.G.

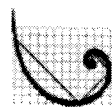
Senior Project Geologist

ERM

114 Sansome Street, Suite 750 | San Francisco, California | 94104

T 628 221 7823 | M 510 508 9129

E shannon.martin@erm.com | W www.erm.com



ERM *The business of sustainability*

Subject: RE: 0363086 - C&T Updated Partial Reports (282196)
From: Shannon Martin <Shannon.Martin@erm.com>
Date: 10/28/2016 8:07 AM
To: Dina Ali <dina.ali@ctberk.com>
CC: John Lucio <John.Lucio@erm.com>, Chimi Yi <Chimi.Yi@erm.com>, Doug Moberg <Doug.Moberg@erm.com>

Dina,

Please also run SB-5-9 for extractable TPH.

Thanks,

Shannon

From: Shannon Martin
Sent: Friday, October 28, 2016 7:43 AM
To: 'Dina Ali'
Cc: John Lucio; Chimi Yi; Doug Moberg
Subject: RE: 0363086 - C&T Updated Partial Reports (282196)

Hi Dina,

We would like to request that SB-5-9 also be run for SVOCs by 8270C.

Thanks,

Shannon Martin, P.G.

Senior Project Geologist

CHAIN OF CUSTODY



2323 Fifth Street
Berkeley, CA 94710
Phone (510) 486-0900
Fax (510) 486-0532

Project No: 0363086
Project Name: Martin Extension
Project P. O. No.: S. Martin
Sampler: Chimi Yi / John Lucio
Report To: ERM
Company: ERM
Telephone: 925-946-0455
Email: john.lucio@erm.com
Report Level: I II III IV
Standard: Standard
Turnaround Time: RUSH

Page 1 of 1
Chain of Custody # _____

C&T LOGIN # 282196

ANALYTICAL REQUEST	
TPH-d TPH m 805m	X
VXS / TPH-g 8260	X
SVCS 8270C	X
TIH 22 Metals	X
PCBs 8082	X
Pesticides 8081	X
Field	X

Lab No.	Sample ID.	SAMPLING		MATRIX	# of Containers	CHEMICAL PRESERVATIVE								
		Date Collected	Time Collected			Water	Solid	HCl	H2SO4	HNO3	NaOH	None		
1	SB-5-1	10/13/16	1453	X	1						X			
2	SB-5-5		1520	X	1						X			
3	SB-5-9		1550	X	1						X			
4	SB-5-GW		1600	X	1					X				
5	SB-2-1		1645	X	1					X				
6	SB-2-3		1705	X	1						X			
7	SB-2-5		1710	X	1						X			
8	SB-2-8		1728	X	1						X			
9	SB-2-9		1730	X	1						X			
10	SB-2-GW	10/14/16	0810	X	1						X			
4	SB-Trip Blank	10/13/16	1630	X	3						X			

Notes:
 Metals samples for gw no receipt
 field filtered, please present upon receipt.
 No SGCu on TPH-d-mo
 Intact
 Cold
 On ice
 Ambient

RELINQUISHED BY: [Signature] DATE: 10/14/16 TIME: 0913

RECEIVED BY: [Signature] DATE: 10/14/16 TIME: 0913

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 282196 Date Received 10/14/16 Number of coolers 1
 Client ERM Project Martin Extension

Date Opened 10/14 By (print) CB (sign) [Signature]
 Date Logged in ↓ By (print) DTN (sign) [Signature]
 Date Labeled ↓ By (print) CB (sign) [Signature]

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) 4.1

Temperature blank(s) included? Thermometer# _____ IR Gun# B

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? (pH strip lot# 80BDH1461) 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

20 1/3 Voa For Sample 011 Record with bubbles > 6mm
added HNO3 to sample 002, 0101 to pH < 2 @ 10/14/16 20:00

Curtis & Tompkins Sample Preservation for 282196

Sample	pH: <2	>9	>12	Other
-004a	[]	[]	[]	_____
b	[]	[]	[]	_____
c	[]	[]	[]	_____
d	[X]	[]	[]	_____
e	[]	[]	[]	_____
f	[]	[]	[]	_____
g	[]	[]	[]	_____
h	[]	[]	[]	_____
i	[]	[]	[]	_____
j	[]	[]	[]	_____
k	[]	[]	[]	_____
-010a	[]	[]	[]	_____
b	[]	[]	[]	_____
c	[]	[]	[]	_____
d	[X]	[]	[]	_____
e	[]	[]	[]	_____
f	[]	[]	[]	_____
g	[]	[]	[]	_____
h	[]	[]	[]	_____
i	[]	[]	[]	_____
j	[]	[]	[]	_____
k	[]	[]	[]	_____

Analyst: CB
 Date: 10/19/16
 Page 1 of 1

Detections Summary for 282764

Results for any subcontracted analyses are not included in this summary.

Client : ERM
Project : 0363086
Location : Martin Extension

Client Sample ID : SB-5-9

Laboratory Sample ID :

282764-001

No Detections

Total Extractable Hydrocarbons			
Lab #:	282764	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Field ID:	SB-5-9	Batch#:	240842
Matrix:	Soil	Sampled:	10/13/16
Units:	mg/Kg	Received:	10/14/16
Basis:	as received	Prepared:	11/01/16
Diln Fac:	1.000		

Type: SAMPLE Analyzed: 11/03/16
 Lab ID: 282764-001

Analyte	Result	RL	MDL
Diesel C10-C24	ND b	1.0	0.31
Motor Oil C24-C36	ND b	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	99 b	59-140

Type: BLANK Analyzed: 11/02/16
 Lab ID: QC858417

Analyte	Result	RL	MDL
Diesel C10-C24	ND	1.0	0.31
Motor Oil C24-C36	ND	5.0	1.5

Surrogate	%REC	Limits
o-Terphenyl	104	59-140

b= See narrative
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	282764	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC858418	Batch#:	240842
Matrix:	Soil	Prepared:	11/01/16
Units:	mg/Kg	Analyzed:	11/02/16

Cleanup Method: EPA 3630C

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	50.33	42.63	85	58-137

Surrogate	%REC	Limits
o-Terphenyl	90	59-140

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	282764	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	240842
MSS Lab ID:	282872-001	Sampled:	10/31/16
Matrix:	Soil	Received:	11/01/16
Units:	mg/Kg	Prepared:	11/01/16
Basis:	as received	Analyzed:	11/02/16
Diln Fac:	1.000		

Type: MS Lab ID: QC858419

Analyte	MSS Result	Spiked	Result	%REC	Limits
Diesel C10-C24	3.889	50.40	57.45	106	46-154

Surrogate	%REC	Limits
o-Terphenyl	114	59-140

Type: MSD Lab ID: QC858420

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	49.86	68.54	130	46-154	19	50

Surrogate	%REC	Limits
o-Terphenyl	116	59-140

RPD= Relative Percent Difference

Semivolatile Organics by GC/MS			
Lab #:	282764	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-5-9	Batch#:	240829
Lab ID:	282764-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	11/01/16
Basis:	as received	Analyzed:	11/01/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND b	330	47
Phenol	ND b	330	10
bis(2-Chloroethyl)ether	ND b	330	60
2-Chlorophenol	ND b	330	10
1,3-Dichlorobenzene	ND b	330	57
1,4-Dichlorobenzene	ND b	330	10
Benzyl alcohol	ND b	330	11
1,2-Dichlorobenzene	ND b	330	10
2-Methylphenol	ND b	330	14
bis(2-Chloroisopropyl) ether	ND b	330	10
4-Methylphenol	ND b	330	10
N-Nitroso-di-n-propylamine	ND b	330	10
Hexachloroethane	ND b	330	10
Nitrobenzene	ND b	330	11
Isophorone	ND b	330	10
2-Nitrophenol	ND b	670	10
2,4-Dimethylphenol	ND b	330	14
Benzoic acid	ND b	1,700	440
bis(2-Chloroethoxy)methane	ND b	330	10
2,4-Dichlorophenol	ND b	330	10
1,2,4-Trichlorobenzene	ND b	330	10
Naphthalene	ND b	67	10
4-Chloroaniline	ND b	330	9.4
Hexachlorobutadiene	ND b	330	8.9
4-Chloro-3-methylphenol	ND b	330	8.4
2-Methylnaphthalene	ND b	67	10
Hexachlorocyclopentadiene	ND b	670	14
2,4,6-Trichlorophenol	ND b	330	13
2,4,5-Trichlorophenol	ND b	330	8.4
2-Chloronaphthalene	ND b	330	9.0
2-Nitroaniline	ND b	670	11
Dimethylphthalate	ND b	330	10
Acenaphthylene	ND b	67	9.0
2,6-Dinitrotoluene	ND b	330	9.0
3-Nitroaniline	ND b	670	10
Acenaphthene	ND b	67	10
2,4-Dinitrophenol	ND b	670	64
4-Nitrophenol	ND b	670	71
Dibenzofuran	ND b	330	10
2,4-Dinitrotoluene	ND b	330	9.7
Diethylphthalate	ND b	330	11
Fluorene	ND b	67	9.9
4-Chlorophenyl-phenylether	ND b	330	9.7
4-Nitroaniline	ND b	670	10
4,6-Dinitro-2-methylphenol	ND b	670	77
N-Nitrosodiphenylamine	ND b	330	11
Azobenzene	ND b	330	8.6
4-Bromophenyl-phenylether	ND b	330	11
Hexachlorobenzene	ND b	330	11
Pentachlorophenol	ND b	670	130
Phenanthrene	ND b	67	11

b= See narrative
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Semivolatile Organics by GC/MS

Lab #:	282764	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Field ID:	SB-5-9	Batch#:	240829
Lab ID:	282764-001	Sampled:	10/13/16
Matrix:	Soil	Received:	10/14/16
Units:	ug/Kg	Prepared:	11/01/16
Basis:	as received	Analyzed:	11/01/16
Diln Fac:	1.000		

Analyte	Result	RL	MDL
Anthracene	ND b	67	11
Di-n-butylphthalate	ND b	330	12
Fluoranthene	ND b	67	10
Pyrene	ND b	67	11
Butylbenzylphthalate	ND b	330	10
3,3'-Dichlorobenzidine	ND b	670	10
Benzo(a)anthracene	ND b	67	10
Chrysene	ND b	67	11
bis(2-Ethylhexyl)phthalate	ND b	330	13
Di-n-octylphthalate	ND b	330	10
Benzo(b)fluoranthene	ND b	67	9.0
Benzo(k)fluoranthene	ND b	67	9.5
Benzo(a)pyrene	ND b	67	8.8
Indeno(1,2,3-cd)pyrene	ND b	67	8.8
Dibenz(a,h)anthracene	ND b	67	9.4
Benzo(g,h,i)perylene	ND b	67	10

Surrogate	%REC	Limits
2-Fluorophenol	67 b	25-120
Phenol-d5	64 b	36-120
2,4,6-Tribromophenol	71 b	27-120
Nitrobenzene-d5	59 b	44-120
2-Fluorobiphenyl	68 b	47-120
Terphenyl-d14	71 b	49-120

b= See narrative
 ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282764	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC858364	Batch#:	240829
Matrix:	Soil	Prepared:	11/01/16
Units:	ug/Kg	Analyzed:	11/01/16

Analyte	Result	RL	MDL
N-Nitrosodimethylamine	ND	340	48
Phenol	ND	340	10
bis(2-Chloroethyl)ether	ND	340	60
2-Chlorophenol	ND	340	10
1,3-Dichlorobenzene	ND	340	57
1,4-Dichlorobenzene	ND	340	10
Benzyl alcohol	ND	340	11
1,2-Dichlorobenzene	ND	340	10
2-Methylphenol	ND	340	14
bis(2-Chloroisopropyl) ether	ND	340	10
4-Methylphenol	ND	340	10
N-Nitroso-di-n-propylamine	ND	340	10
Hexachloroethane	ND	340	10
Nitrobenzene	ND	340	11
Isophorone	ND	340	10
2-Nitrophenol	ND	670	10
2,4-Dimethylphenol	ND	340	14
Benzoic acid	ND	1,700	440
bis(2-Chloroethoxy)methane	ND	340	10
2,4-Dichlorophenol	ND	340	10
1,2,4-Trichlorobenzene	ND	340	10
Naphthalene	ND	67	10
4-Chloroaniline	ND	340	9.5
Hexachlorobutadiene	ND	340	9.0
4-Chloro-3-methylphenol	ND	340	8.4
2-Methylnaphthalene	ND	67	10
Hexachlorocyclopentadiene	ND	670	14
2,4,6-Trichlorophenol	ND	340	13
2,4,5-Trichlorophenol	ND	340	8.4
2-Chloronaphthalene	ND	340	9.0
2-Nitroaniline	ND	670	11
Dimethylphthalate	ND	340	10
Acenaphthylene	ND	67	9.0
2,6-Dinitrotoluene	ND	340	9.0
3-Nitroaniline	ND	670	10
Acenaphthene	ND	67	10
2,4-Dinitrophenol	ND	670	65
4-Nitrophenol	ND	670	72
Dibenzofuran	ND	340	10
2,4-Dinitrotoluene	ND	340	9.7
Diethylphthalate	ND	340	11
Fluorene	ND	67	10
4-Chlorophenyl-phenylether	ND	340	9.7
4-Nitroaniline	ND	670	10
4,6-Dinitro-2-methylphenol	ND	670	77
N-Nitrosodiphenylamine	ND	340	11
Azobenzene	ND	340	8.6
4-Bromophenyl-phenylether	ND	340	11
Hexachlorobenzene	ND	340	11
Pentachlorophenol	ND	670	130
Phenanthrene	ND	67	11
Anthracene	ND	67	11
Di-n-butylphthalate	ND	340	12

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282764	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC858364	Batch#:	240829
Matrix:	Soil	Prepared:	11/01/16
Units:	ug/Kg	Analyzed:	11/01/16

Analyte	Result	RL	MDL
Fluoranthene	ND	67	10
Pyrene	ND	67	11
Butylbenzylphthalate	ND	340	10
3,3'-Dichlorobenzidine	ND	670	10
Benzo(a)anthracene	ND	67	10
Chrysene	ND	67	11
bis(2-Ethylhexyl)phthalate	ND	340	13
Di-n-octylphthalate	ND	340	10
Benzo(b)fluoranthene	ND	67	9.1
Benzo(k)fluoranthene	ND	67	9.6
Benzo(a)pyrene	ND	67	8.8
Indeno(1,2,3-cd)pyrene	ND	67	8.9
Dibenz(a,h)anthracene	ND	67	9.4
Benzo(g,h,i)perylene	ND	67	10

Surrogate	%REC	Limits
2-Fluorophenol	69	25-120
Phenol-d5	66	36-120
2,4,6-Tribromophenol	78	27-120
Nitrobenzene-d5	63	44-120
2-Fluorobiphenyl	76	47-120
Terphenyl-d14	72	49-120

ND= Not Detected at or above MDL
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Semivolatile Organics by GC/MS			
Lab #:	282764	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3550B
Project#:	0363086	Analysis:	EPA 8270C
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC858365	Batch#:	240829
Matrix:	Soil	Prepared:	11/01/16
Units:	ug/Kg	Analyzed:	11/02/16

Analyte	Spiked	Result	%REC	Limits
Phenol	2,685	1,801	67	42-120
2-Chlorophenol	2,685	1,904	71	45-120
1,4-Dichlorobenzene	2,685	1,879	70	48-120
N-Nitroso-di-n-propylamine	2,685	1,724	64	27-123
1,2,4-Trichlorobenzene	2,685	1,840	69	50-120
4-Chloro-3-methylphenol	2,685	1,948	73	59-120
Acenaphthene	1,007	682.3	68	53-120
4-Nitrophenol	2,685	2,084	78	47-120
2,4-Dinitrotoluene	2,685	1,883	70	55-120
Pentachlorophenol	2,685	1,265	47	32-120
Pyrene	1,007	598.5	59	52-120

Surrogate	%REC	Limits
2-Fluorophenol	64	25-120
Phenol-d5	67	36-120
2,4,6-Tribromophenol	73	27-120
Nitrobenzene-d5	64	44-120
2-Fluorobiphenyl	65	47-120
Terphenyl-d14	65	49-120



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

Laboratory Job Number 282898
ANALYTICAL REPORT

ERM
1277 Treat Blvd.
Walnut Creek, CA 94597

Project : 0363086
Location : Martin Extension
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
SB-1-GW	282898-001
SB-3-GW	282898-002
SB-4-GW	282898-003

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: _____

Date: 11/09/2016

Dina Ali
Project Manager
dina.ali@ctberk.com

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 282898
Client: ERM
Project: 0363086
Location: Martin Extension
Request Date: 11/01/16
Samples Received: 10/13/16

This data package contains sample and QC results for three water samples, requested for the above referenced project on 11/01/16. The samples were received on ice and intact.

Metals (EPA 6010B, EPA 6020, and EPA 7470A):

No analytical problems were encountered.

Subject: RE: Martin Extension--0363086 - C&T Final Data Package (282148)

From: Shannon Martin <Shannon.Martin@erm.com>

Date: 11/1/2016 3:31 PM

To: "dina.ali@ctberk.com" <dina.ali@ctberk.com>

282898

Hi Dina,

I don't know how I didn't see this until now, but SB-1-GW, SB-3-GW, and SB-4-GW should have also been analyzed for Title 22 metals. It looks like I made a mistake on the COC. Is it still possible to run these samples?

Thanks,

Shannon

From: Dina Ali [mailto:dina.ali@ctberk.com]

Sent: Tuesday, November 01, 2016 3:11 PM

To: Shannon Martin

Subject: Martin Extension--0363086 - C&T Final Data Package (282148)

Hi Shannon,

Please find attached the following files:

- Invoice
- PDF Deliverable
- EQUIS EFWEDD EDD (282148_equis_efwedd_ermw.zip)
- Standard format + MDL EDD (282148_standard-mdl.zip)

Email was also sent to: Doug.Moberg@erm.com, chimi.yi@erm.com, edd@erm.com, john.lucio@erm.com

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CHAIN OF CUSTODY



2323 Fifth Street
Berkeley, CA 94710
Phone (510) 486-0900
Fax (510) 486-0532

Page 1 of 2
Chain of Custody # _____

C&T LOGIN # 282144

Project No: 03630810 Sampler: S. Maxkin
 Project Name: Martin Extension Report To: Ch. M. Yi / John Lucio
 Project P. O. No: _____ Company: EFM
 EDD Format: Report Level II III IV
 Turnaround Time: RUSH Standard
 Telephone: 925-946-0455 Email: Ch. M. Yi @ efm.com, John. Lucio @ efm.com

ANALYTICAL REQUEST	
X	TPH-d, TPH-mo 8015m
X	VOCs, TPH-g, 8020
X	SOLs 8230 C
X	TTH 22 METALS
X	PCBs 8082
X	Pesticides 8081
	FOLD

Lab No.	Sample ID.	SAMPLING		MATRIX		# of Containers	CHEMICAL PRESERVATIVE							
		Date Collected	Time Collected	Water	Solid		HCl	H2SO4	HNO3	NaOH	None			
	SB-1-1	10/13/10	0811	X	X	1					X			
	SB-1-5		0900	X	X	1					X			
	SB-1-10		0920	X	X	1					X			
	SB-1-11.5		0935	X	X	1					X			
	SB-2-1		1240	X	X	1					X			
	SB-2-5		1316	X	X	1					X			
	SB-3-7		1345	X	X	1					X			
	SB-3-10		1320	X	X	1					X			
	SB-4-1		1048	X	X	1					X			
	SB-4-5		1100	X	X	1					X			
	SB-4-8		1111	X	X	1					X			
	SB-4-9.5		1110	X	X	1					X			
	SB-1-G-W		1000	X	X	1					X			

Notes: Metals samples field filtered. Please preserve for receipt!
Metals samples NOT field filtered. Please preserve for receipt!
* No SECUR TPAH-d/-mo

RELINQUISHED BY:		RECEIVED BY:	
<u>[Signature]</u>	DATE: <u>10/13/10</u> TIME: <u>1450</u>	<u>[Signature]</u>	DATE: <u>10/13/10</u> TIME: <u>1450</u>
<u>[Signature]</u>	DATE: <u>10/13/10</u> TIME: <u>1755</u>	<u>[Signature]</u>	DATE: <u>10/13/10</u> TIME: <u>1755</u>
DATE: _____ TIME: _____	DATE: _____ TIME: _____	DATE: _____ TIME: _____	DATE: _____ TIME: _____

COOLER RECEIPT CHECKLIST



Login # 282148 Date Received 10/13/16 Number of coolers 2
 Client ERM Project Martin Extension

Date Opened 10/13 By (print) DTN (sign) [Signature]
 Date Logged in ↓ By (print) ↓ (sign) ↓
 Date Labeled ↓ By (print) CB (sign) [Signature]

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) 5-8, 5.1

Temperature blank(s) included? Thermometer# _____ IR Gun# A

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? (pH strip lot# 80BDH1461) _____ 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

15. Added HNO₃ (# 140762) to pH < 2 on 10/13/16 @ 20:30 for sample 13, 14, 15

20. 3/6 VOAs received w/ bubble > 6mm for sample 13 16

Detections Summary for 282898

Results for any subcontracted analyses are not included in this summary.

Client : ERM
 Project : 0363086
 Location : Martin Extension

Client Sample ID : SB-1-GW Laboratory Sample ID : 282898-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Antimony	48		10	2.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Arsenic	32		5.0	1.3	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Barium	660		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Beryllium	4.5		2.0	0.25	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cadmium	4.5	J	5.0	0.60	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Chromium	1,100		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cobalt	120		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	99		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	90		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Mercury	1.5		0.20	0.040	ug/L	TOTAL	1.000	EPA 7470A	METHOD
Molybdenum	26		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Nickel	450		5.0	0.60	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Vanadium	810		5.0	0.57	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	670		20	5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A

Client Sample ID : SB-3-GW Laboratory Sample ID : 282898-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Antimony	6.0	J	10	2.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Arsenic	18		5.0	1.3	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Barium	270		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Beryllium	0.76	J	2.0	0.25	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cadmium	1.4	J	5.0	0.60	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Chromium	160		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cobalt	32		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	12		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	17		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Mercury	0.072	J	0.20	0.040	ug/L	TOTAL	1.000	EPA 7470A	METHOD
Molybdenum	23		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Nickel	150		5.0	0.60	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Vanadium	210		5.0	0.57	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	90		20	5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A

Client Sample ID : SB-4-GW

Laboratory Sample ID :

282898-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Antimony	16		10	2.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Arsenic	37		5.0	1.3	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Barium	440		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Beryllium	1.7	J	2.0	0.25	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cadmium	3.5	J	5.0	0.60	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Chromium	670		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Cobalt	95		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Copper	24		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Lead	17		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Mercury	0.28		0.20	0.040	ug/L	TOTAL	1.000	EPA 7470A	METHOD
Molybdenum	22		5.0	1.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Nickel	360		5.0	0.60	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Vanadium	520		5.0	0.57	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A
Zinc	330		20	5.0	ug/L	TOTAL	1.000	EPA 6010B	EPA 3010A

J = Estimated value

California Title 22 Metals

Lab #:	282898	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-1-GW	Units:	ug/L
Lab ID:	282898-001	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	48	10	2.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Arsenic	32	5.0	1.3	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Barium	660	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Beryllium	4.5	2.0	0.25	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Cadmium	4.5 J	5.0	0.60	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Chromium	1,100	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Cobalt	120	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Copper	99	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Lead	90	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Mercury	1.5	0.20	0.040	1.000	240988	11/04/16	11/04/16	METHOD	EPA 7470A
Molybdenum	26	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Nickel	450	5.0	0.60	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Selenium	ND	10	2.2	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Silver	ND	5.0	1.1	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Thallium	ND	1.0	0.18	10.00	240885	11/02/16	11/08/16	EPA 3010A	EPA 6020
Vanadium	810	5.0	0.57	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Zinc	670	20	5.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals			
Lab #:	282898	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-3-GW	Diln Fac:	1.000
Lab ID:	282898-002	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	6.0 J	10	2.0	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Arsenic	18	5.0	1.3	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Barium	270	5.0	1.0	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Beryllium	0.76 J	2.0	0.25	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Cadmium	1.4 J	5.0	0.60	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Chromium	160	5.0	1.0	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Cobalt	32	5.0	1.0	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Copper	12	5.0	1.0	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Lead	17	5.0	1.0	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Mercury	0.072 J	0.20	0.040	240988	11/04/16	11/04/16	METHOD	EPA 7470A
Molybdenum	23	5.0	1.0	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Nickel	150	5.0	0.60	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Selenium	ND	10	2.2	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Silver	ND	5.0	1.1	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Thallium	ND	10	1.9	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Vanadium	210	5.0	0.57	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Zinc	90	20	5.0	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

California Title 22 Metals

Lab #:	282898	Project#:	0363086
Client:	ERM	Location:	Martin Extension
Field ID:	SB-4-GW	Units:	ug/L
Lab ID:	282898-003	Sampled:	10/13/16
Matrix:	Water	Received:	10/13/16

Analyte	Result	RL	MDL	Diln Fac	Batch#	Prepared	Analyzed	Prep	Analysis
Antimony	16	10	2.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Arsenic	37	5.0	1.3	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Barium	440	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Beryllium	1.7 J	2.0	0.25	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Cadmium	3.5 J	5.0	0.60	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Chromium	670	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Cobalt	95	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Copper	24	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Lead	17	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Mercury	0.28	0.20	0.040	1.000	240988	11/04/16	11/04/16	METHOD	EPA 7470A
Molybdenum	22	5.0	1.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Nickel	360	5.0	0.60	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Selenium	ND	10	2.2	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Silver	ND	5.0	1.1	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Thallium	ND	1.0	0.094	10.00	240885	11/02/16	11/04/16	EPA 3010A	EPA 6020
Vanadium	520	5.0	0.57	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B
Zinc	330	20	5.0	1.000	240885	11/02/16	11/03/16	EPA 3010A	EPA 6010B

J= Estimated value

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282898	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3010A
Project#:	0363086		
Type:	BLANK	Batch#:	240885
Lab ID:	QC858567	Prepared:	11/02/16
Matrix:	Water	Analyzed:	11/03/16
Units:	ug/L		

Analyte	Result	RL	MDL	Diln Fac	Analysis
Antimony	ND	10	2.0	1.000	EPA 6010B
Arsenic	ND	5.0	1.3	1.000	EPA 6010B
Barium	ND	5.0	1.0	1.000	EPA 6010B
Beryllium	ND	2.0	0.25	1.000	EPA 6010B
Cadmium	ND	5.0	0.60	1.000	EPA 6010B
Chromium	ND	5.0	1.0	1.000	EPA 6010B
Cobalt	ND	5.0	1.0	1.000	EPA 6010B
Copper	ND	5.0	1.0	1.000	EPA 6010B
Lead	ND	5.0	1.0	1.000	EPA 6010B
Molybdenum	ND	5.0	1.0	1.000	EPA 6010B
Nickel	ND	5.0	0.60	1.000	EPA 6010B
Selenium	ND	10	2.2	1.000	EPA 6010B
Silver	ND	5.0	1.1	1.000	EPA 6010B
Thallium	ND	10	1.9	1.000	EPA 6010B
Thallium	ND	1.0	0.094	10.00	EPA 6020
Vanadium	ND	5.0	0.57	1.000	EPA 6010B
Zinc	ND	20	5.0	1.000	EPA 6010B

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282898	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3010A
Project#:	0363086		
Matrix:	Water	Prepared:	11/02/16
Units:	ug/L	Analyzed:	11/03/16
Batch#:	240885		

Type: BS Lab ID: QC858568

Analyte	Spiked	Result	%REC	Limits	Diln	Fac	Analysis
Antimony	100.0	88.02	88	79-120	1.000		EPA 6010B
Arsenic	100.0	92.63	93	80-120	1.000		EPA 6010B
Barium	100.0	99.22	99	80-120	1.000		EPA 6010B
Beryllium	100.0	104.3	104	80-120	1.000		EPA 6010B
Cadmium	100.0	97.11	97	80-120	1.000		EPA 6010B
Chromium	100.0	104.9	105	80-120	1.000		EPA 6010B
Cobalt	100.0	102.2	102	80-120	1.000		EPA 6010B
Copper	100.0	101.5	102	80-120	1.000		EPA 6010B
Lead	100.0	97.51	98	80-120	1.000		EPA 6010B
Molybdenum	100.0	96.16	96	80-120	1.000		EPA 6010B
Nickel	100.0	100.9	101	80-120	1.000		EPA 6010B
Selenium	100.0	88.20	88	80-120	1.000		EPA 6010B
Silver	100.0	100.5	100	77-120	1.000		EPA 6010B
Thallium	50.00	45.48	91	80-121	1.000		EPA 6010B
Thallium	50.00	49.11	98	80-120	10.00		EPA 6020
Vanadium	100.0	105.3	105	80-120	1.000		EPA 6010B
Zinc	100.0	94.47	94	80-120	1.000		EPA 6010B

Type: BSD Lab ID: QC858569

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Diln	Fac	Analysis
Antimony	100.0	89.22	89	79-120	1	20	1.000		EPA 6010B
Arsenic	100.0	90.44	90	80-120	2	20	1.000		EPA 6010B
Barium	100.0	97.80	98	80-120	1	20	1.000		EPA 6010B
Beryllium	100.0	100.8	101	80-120	3	20	1.000		EPA 6010B
Cadmium	100.0	95.63	96	80-120	2	20	1.000		EPA 6010B
Chromium	100.0	101.5	102	80-120	3	20	1.000		EPA 6010B
Cobalt	100.0	100.1	100	80-120	2	20	1.000		EPA 6010B
Copper	100.0	96.78	97	80-120	5	20	1.000		EPA 6010B
Lead	100.0	96.02	96	80-120	2	20	1.000		EPA 6010B
Molybdenum	100.0	94.81	95	80-120	1	20	1.000		EPA 6010B
Nickel	100.0	97.74	98	80-120	3	20	1.000		EPA 6010B
Selenium	100.0	89.91	90	80-120	2	20	1.000		EPA 6010B
Silver	100.0	97.36	97	77-120	3	20	1.000		EPA 6010B
Thallium	50.00	45.77	92	80-121	1	20	1.000		EPA 6010B
Thallium	50.00	51.09	102	80-120	4	20	10.00		EPA 6020
Vanadium	100.0	102.0	102	80-120	3	20	1.000		EPA 6010B
Zinc	100.0	88.38	88	80-120	7	20	1.000		EPA 6010B

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282898	Location:	Martin Extension
Client:	ERM	Prep:	EPA 3010A
Project#:	0363086	Analysis:	EPA 6010B
Field ID:	ZZZZZZZZZZ	Batch#:	240885
MSS Lab ID:	282763-006	Sampled:	10/28/16
Matrix:	Water	Received:	10/28/16
Units:	ug/L	Prepared:	11/02/16
Diln Fac:	1.000		

Type: MS Lab ID: QC858570

Analyte	MSS Result	Spiked	Result	%REC	Limits	Analyzed
Antimony	<2.000	100.0	88.52	89	74-120	11/03/16
Arsenic	<1.290	100.0	92.30	92	80-127	11/03/16
Barium	<1.000	100.0	97.91	98	80-120	11/03/16
Beryllium	<0.2500	100.0	103.1	103	80-120	11/03/16
Cadmium	<0.6000	100.0	95.79	96	80-120	11/03/16
Chromium	<1.000	100.0	103.2	103	80-120	11/03/16
Cobalt	<1.000	100.0	100.2	100	80-120	11/03/16
Copper	<1.000	100.0	98.42	98	80-120	11/03/16
Lead	1.308	100.0	95.86	95	67-120	11/03/16
Molybdenum	<1.000	100.0	94.08	94	80-120	11/03/16
Nickel	<0.6000	100.0	98.54	99	80-120	11/03/16
Selenium	5.511	100.0	99.13	94	73-132	11/04/16
Silver	<1.083	100.0	96.37	96	67-120	11/03/16
Thallium	<1.905	50.00	47.97	96	76-121	11/04/16
Vanadium	<0.5657	100.0	102.6	103	80-120	11/03/16
Zinc	<5.000	100.0	93.04	93	80-122	11/03/16

Type: MSD Lab ID: QC858571

Analyte	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
Antimony	100.0	87.55	88	74-120	1	24	11/03/16
Arsenic	100.0	91.50	91	80-127	1	25	11/03/16
Barium	100.0	98.92	99	80-120	1	20	11/03/16
Beryllium	100.0	103.6	104	80-120	0	20	11/03/16
Cadmium	100.0	96.66	97	80-120	1	20	11/03/16
Chromium	100.0	103.9	104	80-120	1	20	11/03/16
Cobalt	100.0	101.5	101	80-120	1	20	11/03/16
Copper	100.0	99.73	100	80-120	1	20	11/03/16
Lead	100.0	96.71	95	67-120	1	23	11/03/16
Molybdenum	100.0	96.26	96	80-120	2	20	11/03/16
Nickel	100.0	100.1	100	80-120	2	20	11/03/16
Selenium	100.0	88.62	83	73-132	11	30	11/04/16
Silver	100.0	99.17	99	67-120	3	22	11/03/16
Thallium	50.00	53.54	107	76-121	11	20	11/04/16
Vanadium	100.0	104.5	104	80-120	2	20	11/03/16
Zinc	100.0	92.76	93	80-122	0	20	11/03/16

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282898	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7470A
Analyte:	Mercury	Diln Fac:	1.000
Type:	BLANK	Batch#:	240988
Lab ID:	QC858987	Prepared:	11/04/16
Matrix:	Water	Analyzed:	11/04/16
Units:	ug/L		

Result	RL	MDL
ND	0.20	0.040

ND= Not Detected at or above MDL

RL= Reporting Limit

MDL= Method Detection Limit

Batch QC Report

California Title 22 Metals			
Lab #:	282898	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	240988
Matrix:	Water	Prepared:	11/04/16
Units:	ug/L	Analyzed:	11/04/16
Diln Fac:	1.000		

Type	Lab ID	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC858988	2.500	2.495	100	80-120		
BSD	QC858989	2.500	2.487	99	80-120	0	24

RPD= Relative Percent Difference

Batch QC Report

California Title 22 Metals			
Lab #:	282898	Location:	Martin Extension
Client:	ERM	Prep:	METHOD
Project#:	0363086	Analysis:	EPA 7470A
Analyte:	Mercury	Batch#:	240988
Field ID:	ZZZZZZZZZZ	Sampled:	10/31/16
MSS Lab ID:	282879-029	Received:	10/31/16
Matrix:	Water	Prepared:	11/04/16
Units:	ug/L	Analyzed:	11/04/16
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC858990	<0.04000	2.500	2.611	104	60-130		
MSD	QC858991		2.500	2.575	103	60-130	1	34

RPD= Relative Percent Difference