PELCO SALES AND SERVICE
A DIVISION OF APEX REFRIGERATION

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By Alameda County Environmental Health at 11:07 am, Jan 28, 2015

January 27, 2015

Mr. Mark E. Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Transmittal
December 2014 Groundwater Monitoring
Apex Refrigeration, Inc., Fuel Leak Case No. RO0003069, Emeryville, California

Dear Mr. Detterman:

Apex Refrigeration, Inc, (Apex) is pleased to submit this report to document December 2014 groundwater monitoring activities conducted at Apex, located at 1550 Park Avenue in Emeryville, California. This report was prepared by Engineering/Remediation Resources Group, Inc. (ERRG) on behalf of Apex in compliance with Alameda County Environmental Health directives related to Fuel Leak Case No. RO0003069.

> *I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.*

If you have any questions, please contact me at (510) 653-9850 or via e-mail at pelco1969@sbcglobal.com.

Sincerely,

Pennie Barger

Pennie Barger
Secretary-Treasure

enc: Data Transmittal, December 2014 Groundwater Monitoring, Apex Refrigeration, Inc., Fuel Leak Case No. RO0003069, Emeryville, California

cc: Brad Hall, ERRG
Pennie Barger, Apex Refrigeration, Inc.
Michael O. Lamphere, Lamphere Law Offices
ERRG Project File

ERRG
Engineering/Remediation Resources Group, Inc.
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January 27, 2015 Ref.: 2013-094

Mr. Mark E. Detterman
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Data Transmittal
December 2014 Groundwater Monitoring
Apex Refrigeration, Inc., Fuel Leak Case No. RO0003069, Emeryville, California

Dear Mr. Detterman:

Engineering/Remediation Resources Group, Inc. (ERRG) has prepared this data transmittal to summarize activities conducted in December 2014 to monitor groundwater at the Apex Refrigeration, Inc. facility (hereinafter referred to as "the Site"), located at 1550 Park Avenue in Emeryville, California (Enclosure 1, Figure 1). The data presented in this transmittal are intended to supplement and update results presented in the "Data Gaps Investigation Summary Report, Apex Refrigeration, Inc., 1550 Park Avenue, Emeryville, California," which ERRG submitted to Alameda County Environmental Health (ACEH) in July 2014.

On February 3, 2014, ACEH requested that quarterly groundwater monitoring be initiated upon installation of monitoring well MW-1 (Enclosure 1, Figure 2), which was installed in April 2014[1]. Quarterly groundwater monitoring, originally scheduled for June and September 2014, was delayed while Apex was securing necessary funding from the State of California's Underground Storage Tank Cleanup Fund. As a result, ERRG did not mobilize to the Site to perform groundwater monitoring until September 26, and December 29, 2014. Results from the September 2014 groundwater monitoring event were submitted to ACEH in a letter report dated October 31, 2014[2].

The purpose of the groundwater monitoring events was to collect groundwater samples from monitoring well MW-1 for analysis of total petroleum hydrocarbons (TPH) and total dissolved solids to verify previous results. TPH was previously identified at elevated concentrations in a grab groundwater sample collected from well S4, which is collocated with well MW-1.

On December 29, 2014, ERRG personnel gauged the monitoring well with an oil/water interface probe to verify that light nonaqueous-phase liquid was not present in the well as floating free product. No free product was detected in the well, and depth to water was measured at 2.13 feet below top of casing. Prior to sample collection, three well volumes were purged with a disposable bailer and water quality

[1] ACEH, 2014. Letter regarding Modified Data Gap Work Plan Approval: Fuel Leak Case No. RO0003069 and GeoTracker Global ID T1000002519, Pelligrini Refrigeration & Restaurant Equipment Company, 1550 Park Avenue, Emeryville, CA 94608. From Mark Detterman. To Pennie Barger. February 3.

[2] ERRG, 2014. "Data Transmittal, September 2014 Groundwater Monitoring, Apex Refrigeration, Inc., Fuel Leak Case No. RO0003069, Emeryville, California." October 31."

parameters (temperature, pH, and electrical conductivity) were measured using an YSI 556 water quality instrument. Samples were then collected from well MW-1.

Samples were submitted to Curtis & Tompkins Laboratories in Berkeley, California, for analysis of:

- TPH-extractables (TPH as diesel and TPH as motor oil) by U.S. Environmental Protection Agency (EPA) Method 8015B (with silica gel cleanup)
- TPH-purgeables (TPH as gasoline) by EPA Method 8015B
- TDS by Standard Method 2540C

Sample results were compared with the San Francisco Bay Regional Water Quality Control Board's (SFRWQCB) environmental screening levels (ESLs) for TPH[3] and the water quality objective for TDS[4], respectively. Comparison results indicated the following:

- TPH as diesel was detected at a concentration of 250 micrograms per liter (µg/L), which was less than the ESL of 640 µg/L (i.e., groundwater is not a potential drinking water resource) but greater than the ESL of 100 µg/L (i.e., groundwater is a potential drinking water resource)
- TPH as motor oil was not detected at a concentration greater than its reporting limit
- TPH as gasoline was detected at a concentration of 63 µg/L, which was less than the ESL of 500 µg/L (i.e., groundwater is not a potential drinking water resource) and less than the ESL of 100 µg/L (i.e., groundwater is a potential drinking water resource)
- TDS was detected at a concentration of 220 milligram per liter (mg/L), which was less than the water quality objective for TDS of 500 mg/L

The TPH results were significantly less than results for the grab groundwater sample collected at S4 (i.e., TPH-d at 83,000 µg/L, TPH-mo at 5,200 µg/L, and TPH-g at 7,100 µg/L) and less than the September 2014 groundwater samples collected at MW-1 (i.e., TPH-d at 350 µg/L, and TPH-g at 170 µg/L). The TPH concentrations at S4, which are skewed orders of magnitude higher than TPH concentrations at well MW-1, indicate that TPH contamination in groundwater at the site is significantly less than originally suspected. A decline in TDS concentration compared to September 2014 results suggests that Fall 2014 rain events in November and December provided fresh water infiltration into shallow groundwater beneath the site.

On January 8, 2015, Envirosource, Inc. removed one 55 gallon drum of investigation derived waste (IDW) soil and one 55 gallon drum of IDW purge water from the Site to be disposed of at licensed and appropriately classed disposal facilities.

Enclosure 2 includes the groundwater monitoring field logs. Enclosure 3, Tables 1 and 2, summarizes all of the site's historical analytical results for soil and groundwater samples. Enclosure 3, Table 3, presents an updated Conceptual Site Model, and Enclosure 4 provides the laboratory analytical report for the December 2014 groundwater monitoring event. Enclosure 5 includes manifests for the transportation and disposal of soil and water drums.

[3] SFRWQCB, 2013. Table F-1a, "Groundwater Screening Levels (groundwater is a current or potential drinking water resource)" and Table F-1b, "Groundwater Screening Levels (groundwater is not a current or potential drinking water resource)" found in the Detailed Lookup Tables at: <http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/esl.shtml>.

[4] SFRWQCB, 2013. Table 3-5: Water Quality Objectives for Municipal Supply in ""San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)." June 29 (incorporating all amendments approved by the Office of Administrative Law). Available Online at: http://www.waterboards.ca.gov/sanfranciscobay/basin_planning.shtml.

ERRG

Apex Refrigeration, Inc. has fulfilled all ACEH directives regarding Fuel Leak Case No. RO0003069 with the submittal of this report. Therefore, ERRG requests that ACEH review the case to determine if Site closure can be granted.

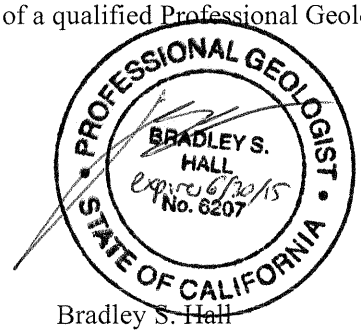
If you have any questions or comments regarding this data transmittal, please contact me at (925) 839-2274 or at erik.oehlschlager@errg.com.

Sincerely,

Erik Oehlschlager
Project Manager

CERTIFICATION

This document was prepared under the direction and supervision of a qualified Professional Geologist.

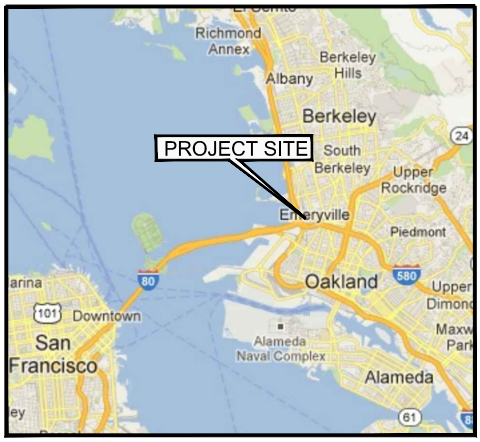


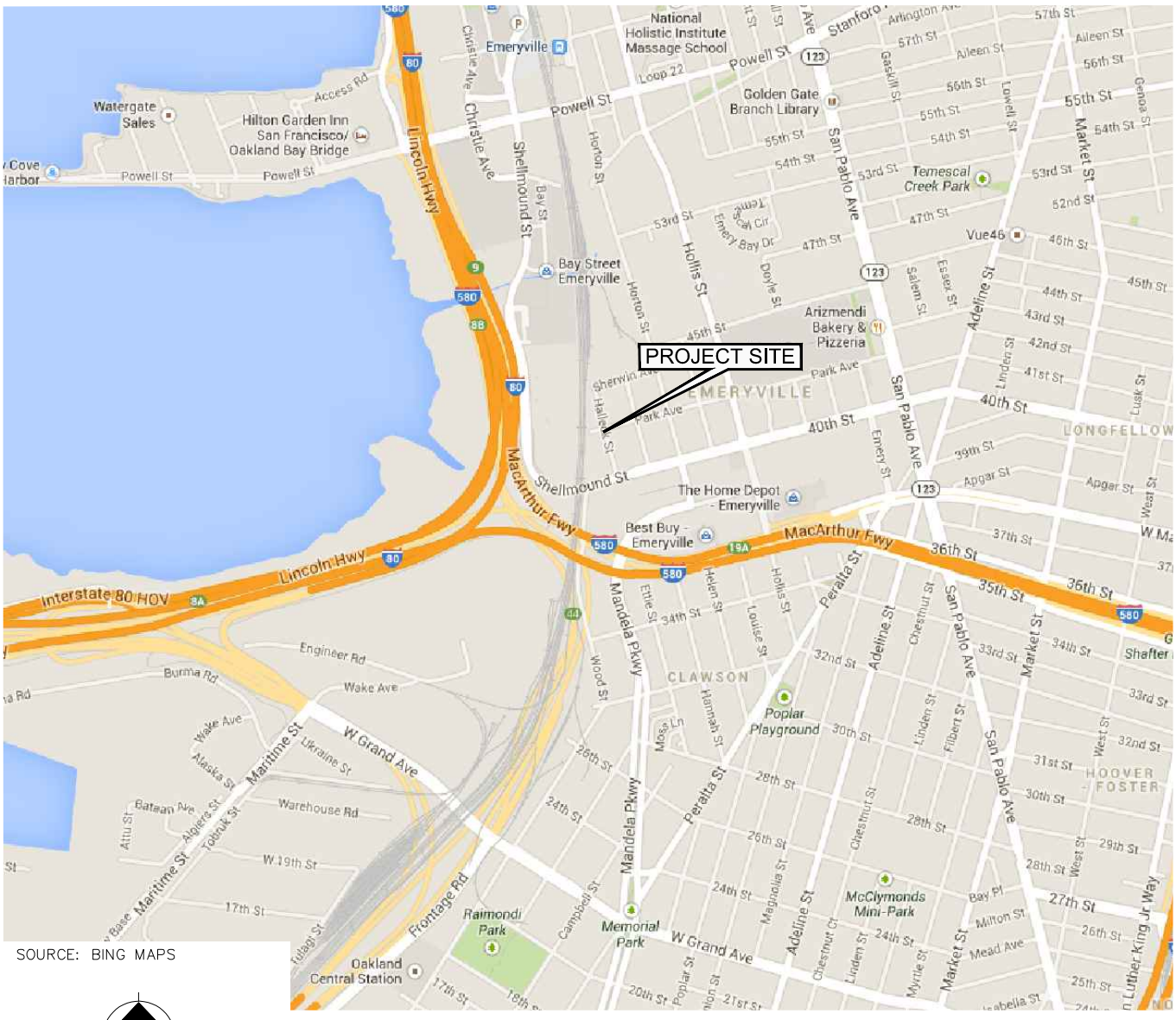
Bradley S. Hall
Professional Geologist No. 6207

Enclosure:
1 – Figures
2 – Field Logs
3 – Tables
4 – Laboratory Analytical Report (Job Number 263614)
5 – Manifests

cc:
Brad Hall, ERRG
Pennie Barger, Apex Refrigeration, Inc.
Michael O. Lamphere, Lamphere Law Offices
ERRG Project File

Enclosure 1. Figures





SOURCE: BING MAPS

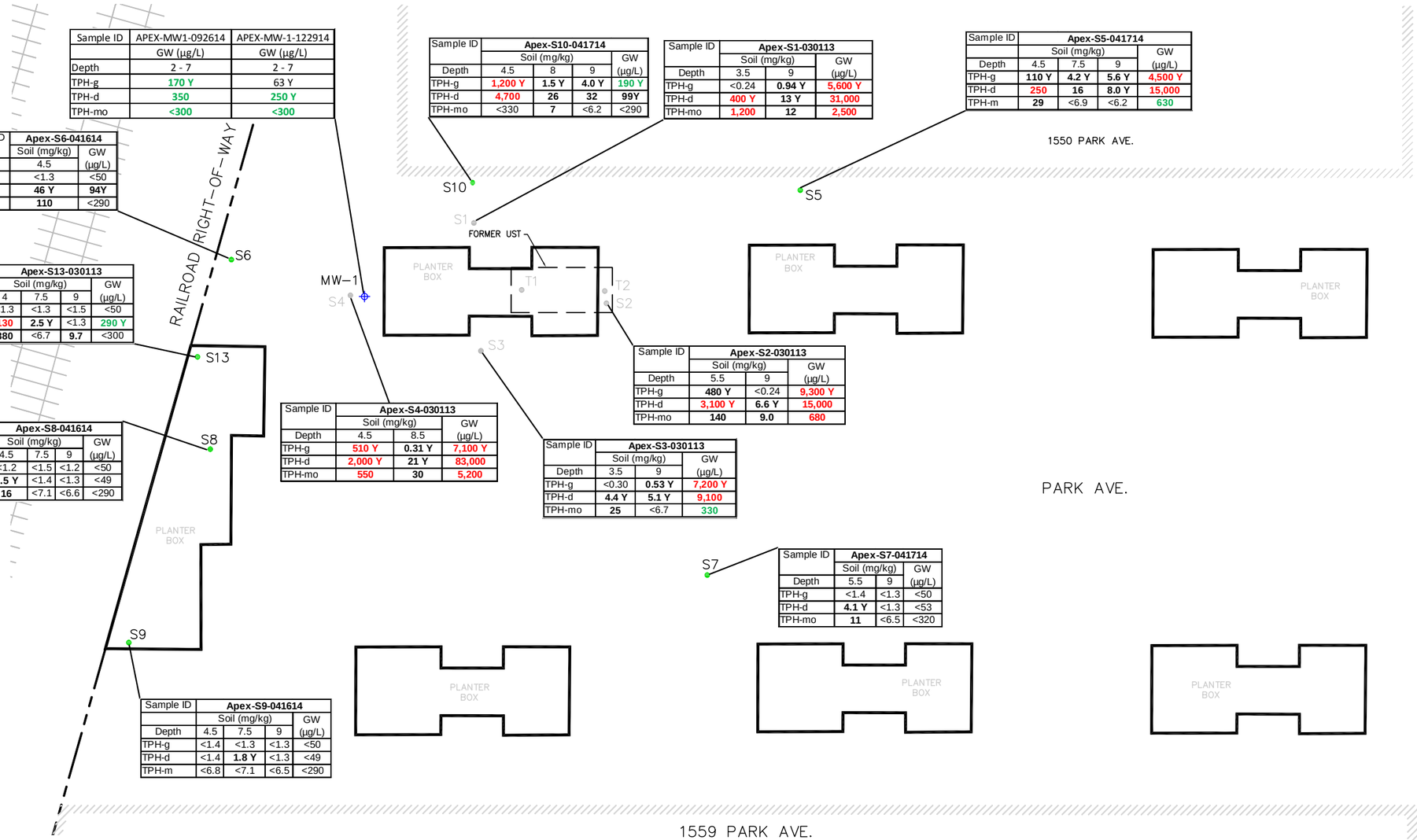
N

0' 1200'

APPROXIMATE SCALE: 1"=1200'

Engineering/Remediation Resources Group, Inc. 4585 Pacheco Blvd., Suite 200 Martinez, California 94553 (925) 969-0750	CLIENT: APEX REFRIGERATION, INC. EMERYVILLE, CALIFORNIA	SITE LOCATION MAP			
	LOCATION: 1550 PARK AVENUE EMERYVILLE, CALIFORNIA	DRAWN BY: RDB 10/27/14	CHECKED BY: EKO 10/27/14	PROJECT NO. 2013-094	FIG NO. 1

FILE NAME: N:\Graphics\2013\2013-094 APEX Emeryville\Fig1.dwg LAYOUT NAME: 1 PLOTTED: Monday, October 27, 2014 - 6:46am



Sample ID	APEX-MW1-092614	APEX-MW-1-122914
	GW (µg/L)	GW (µg/L)
Depth	2 - 7	2 - 7
TPH-g	170 Y	63 Y
TPH-d	350	250 Y
TPH-mo	<300	<300

Sample ID	Apex-S10-041714			
	Soil (mg/kg)			GW
Depth	4.5	8	9	(µg/L)
TPH-g	1,200 Y	1.5 Y	4.0 Y	190 Y
TPH-d	4,700	26	32	99Y
TPH-mo	<330	7	<6.2	<290

Sample ID	Apex-S1-030113		
	Soil (mg/kg)		GW
Depth	3.5	9	(µg/L)
TPH-g	<0.24	0.94 Y	5,600 Y
TPH-d	400 Y	13 Y	31,000
TPH-mo	1,200	12	2,500

Sample ID	Apex-S5-041714			
	Soil (mg/kg)			GW
Depth	4.5	7.5	9	(µg/L)
TPH-g	110 Y	4.2 Y	5.6 Y	4,500 Y
TPH-d	250	16	8.0 Y	15,000
TPH-m	29	<6.9	<6.2	630

Sample ID	Apex-S6-041614	
	Soil (mg/kg)	GW
Depth	4.5	(µg/L)
TPH-g	<1.3	<50
TPH-d	46 Y	94Y
TPH-mo	110	<290

Sample ID	Apex-S13-030113			
	Soil (mg/kg)			GW
Depth	4	7.5	9	(µg/L)
TPH-g	<1.3	<1.3	<1.5	<50
TPH-d	130	2.5 Y	<1.3	290 Y
TPH-mo	380	<6.7	9.7	<300

Sample ID	Apex-S2-030113		
	Soil (mg/kg)		GW
Depth	5.5	9	(µg/L)
TPH-g	480 Y	<0.24	9,300 Y
TPH-d	3,100 Y	6.6 Y	15,000
TPH-mo	140	9.0	680

Sample ID	Apex-S4-030113		
	Soil (mg/kg)		GW
Depth	4.5	8.5	(µg/L)
TPH-g	510 Y	0.31 Y	7,100 Y
TPH-d	2,000 Y	21 Y	83,000
TPH-mo	550	30	5,200

Sample ID	Apex-S3-030113		
	Soil (mg/kg)		GW
Depth	3.5	9	(µg/L)
TPH-g	<0.30	0.53 Y	7,200 Y
TPH-d	4.4 Y	5.1 Y	9,100
TPH-mo	25	<6.7	330

Sample ID	Apex-S8-041614			
	Soil (mg/kg)			GW
Depth	4.5	7.5	9	(µg/L)
TPH-g	<1.2	<1.5	<1.2	<50
TPH-d	2.5 Y	<1.4	<1.3	<49
TPH-mo	16	<7.1	<6.6	<290

Sample ID	Apex-S7-041714		
	Soil (mg/kg)		GW
Depth	5.5	9	(µg/L)
TPH-g	<1.4	<1.3	<50
TPH-d	4.1 Y	<1.3	<53
TPH-mo	11	<6.5	<320

Sample ID	Apex-S9-041614			
	Soil (mg/kg)			GW
Depth	4.5	7.5	9	(µg/L)
TPH-g	<1.4	<1.3	<1.3	<50
TPH-d	<1.4	1.8 Y	<1.3	<49
TPH-m	<6.8	<7.1	<6.5	<290

NOTES:

1 = SFRWQCB ESLs, Table B–2, Shallow Soil Screening Levels (≤3m bgs), Commercial/Industrial Land Use (groundwater is not a current or potential drinking water resource), December, 2013.

2 = SFRWQCB ESLs, Table A–2, Shallow Soil Screening Levels (≤3m bgs), Commercial/Industrial Land Use (groundwater is a current or potential drinking water resource), December, 2013.

d = diesel

Depth = feet below ground surface

ESLs = environmental screening levels

GW = groundwater

ID = identification

mg/kg = milligrams per kilogram

µg/L = micrograms per liter

SFRWQCB = San Francisco Bay Regional Water Quality Control Board

TPH = total petroleum hydrocarbons

TPH–g = total petroleum hydrocarbons as gasoline

TPH–d = total petroleum hydrocarbons as diesel

TPH–mo = total petroleum hydrocarbons as motor oil

Y = sample resembles chromatographic pattern, which does not resemble standard

25 = sample result exceeds the laboratory reporting limit

130 = sample result exceeds ESLs where groundwater is a current or potential drinking water resource

330 = sample results is less than ESLs for " is not a drinking water resource" but greater than for "is a drinking water source"

LEGEND:

S3 — PREVIOUS SOIL SAMPLE LOCATION

S5 — SOIL AND GROUNDWATER SAMPLE LOCATION

MW–1 — GROUNDWATER MONITORING WELL

Environmental Screening Levels				
	Soil (mg/kg)		Groundwater (µg/L)	
TPH-g	500 [1]	500 [2]	500 [1]	100 [2]
TPH-d	110 [1]	110 [2]	640 [1]	100 [2]
TPH-mo	500 [1]	500 [2]	640 [1]	100 [2]

N

0' 16'

APPROXIMATE SCALE: 1"=16'

ERRG
Engineering/Remediation Resources Group, Inc.
4585 Pacheco Blvd, Suite 200
Martinez, California 94553
(925) 969-0750

CLIENT: APEX REFRIGERATION, INC. EMERYVILLE, CALIFORNIA

LOCATION: 1550 PARK AVENUE EMERYVILLE, CALIFORNIA

TPH CONCENTRATIONS IN SOIL AND GROUNDWATER

DRAWN BY: SC 01/20/15

CHECKED BY: EKO 01/20/15

PROJECT NO. 2013–094

FIG NO. 2

FILE NAME: N:\Graphics\2013\2013-094 APEX Emeryville\Fig2-GW.dwg LAYOUT NAME: 2 PLOTTED: Tuesday, January 20, 2015 – 11:45am

Enclosure 2. Field Logs

DAILY FIELD ACTIVITY LOG

Prepared by: Joshua M. Osborne
Client: ~~DTSC~~ APEX
Day: Monday
Date: 12/29/14
Project Name: APEX
Project No.: 2013-094
Weather: Sunny
Page: 1 of 1
Site Visitors:

Description of Field Activities:

1300 - Arrived onsite at APEX Refrigeration
1303 - Introduced self to Penny and called Erik O. to notify him of my arrival
1310 - Setting up for sampling and conducting H+S meeting.
1330 - opening up well cap.
1345 - Depth measurements
PTP = No product
DTW = 2.13'
DTB = 6.93'
Calculated purge volume = 1.296 gal ≈ 4900 mL
1400 - Began taking 3 purge volumes
1430 - Took sample APEX-MW1-122914
1448 - Took sample APEX-MW1-122914-FD
1513 - Emptying purge waters into 55-gal drum onsite.
1515 - Packing up Equipment
1525 - Departing site.

Signed: Joshua Osborne Date: 12/29/14

ERRG

Depth-to-Water and Depth-to-Product Measurement

Apex Former UST Site
1550 Park Avenue
Emeryville, CA

Well I.D.	Date (MM/DD/YY)	Time (HHMM)	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Depth to Bottom (feet btoc)	Comments
S12/MW-1	12/29/14	1345	No Prod.	2.13	6.93	No sheen

Groundwater Purge and Sampling Form

ERRG

PROJECT NO:	2013-094	WELL ID:	APEX-MW-1 ~~4226~~
DATE:	12/29/14	SAMPLE ID:	APEX-MW-1-122914
CLIENT NAME	APEX	PURGED BY:	SMD
LOCATION:	Apex Refridgeration	SAMPLED BY:	SMD
ARRIVAL		DEPARTURE	

Casing Diameter (innder diameter) 1.5"
Casing Volume: (gal/foot of depth) 0.09

1 casing = 0.432 gal

Total Depth (feet) = 6.93' Depth to Water (feet): 2.13'

Purge Calc: 6.93' (TD) - 2.13' (DTW) = 4.8 (Column of water) x 0.09 (Casing volume) x 0.432 (Casing volume) x 3 (Three casing volumes) = 1.296 **Calculated Purge**

Time Started: 1400

Time (2400hr)	Volume (gal)	Temp. (°F)	Conductivity (µmhos/cm)	pH (units)	EC (µS/cm)	Depth to Water (ft)	Pumped Dry (Y/N)
1405	0.432	13.97	~~299~~	10.39	294	2.13'	slightly turbid
1415	0.864	13.13		10.28	300	2.13'	"
1425	1.296	13.13		10.40	305	2.13'	"

Total gallons purged: 1.296 Sample Time: 1430

PURGING EQUIPMENT

Active Extraction Well Pump ___ Bailer (Teflon) ✓
Portable Submersible Pump ___ Bailer (PVC) ___
Other ___ Bailer (Stain. Steel) ___
Pump Depth ___ Dedicated ___

SAMPLING EQUIPMENT

Sampling Port ___ Bailer (Teflon) ✓
Portable Submersible Pump ___ Bailer (PVC) ___
Peristaltic Pump ___ Bailer (Stain. Steel) ___
Other ___

Well Integrity: Good: ✓ Fair: ☐ Poor: ☐

Remarks:

Signature: [signature] Reviewed by 12/29/14

EQUIPCO RENTALS

YSI 556MPS RENTAL
CALIBRATION CERTIFICATE

SERVICE TECHNICIAN: WDG DATE: 12.26.14

INSTRUMENT INFORMATION

RENTAL I.D. NUMBER: YSI-556.32
SERIAL#:
CUSTOMER.

CALIBRATION INFORMATION

PARAMETERS:	STANDARDS:	PASS ( )	LOT#
1. CONDUCTIVITY	1000 µMhos	X	39512
2. pH ZERO	pH 7	X	39250
3. pH SLOPE	pH 4	X	39081
pH SLOPE	pH 10	X	39540
4. DISSOLVED OXYGEN	Air Calibration Barometric pressure = 760mmHg	X	N/A
5. REDOX (ORP)	232 mV (YSI Zobell solution)	X	121114

Enclosure 3. Tables

Table 1. Soil Boring Analytical Results

Location	Sample Date	Sample Name	Depth (feet bgs)	Total Petroleum Hydrocarbons (by EPA Method 8015B) (mg/kg)			Purgeable Aromatics (Select VOCs by EPA Method 8260B) (µg/kg)						Priority Pollutant Polycyclic Aromatic Hydrocarbons (EPA Method 8270 SIM) (µg/kg)															
				TPH-gasoline	TPH-diesel[1]	TPH-motor oil[1]	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylenes	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(a)anthracene	Chrysene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Benzo(a)pyrene	Indeno(1,2,3-cd)pyrene	Dibenz(a,h)anthracene	Benzo(g,h,i)perylene
		SFRWQCB ESLs [2]		*500*	*110*	*500*	*0.023*	*0.044*	*2.9*	*3.3*	*2.3*	*2.3*	*1.2*	*13*	*16*	*8.9*	*11*	*2.8*	*40*	*85*	*1.3*	*13*	*1.3*	*1.3*	*0.13*	*1.3*	*0.38*	*27*
		SFRWQCB ESLs [3]		*500*	*110*	*500*	*8.4*	*1.2*	*9.3*	*4.7*	*11*	*11*	*4.8*	*13*	*19*	*8.9*	*11*	*2.8*	*40*	*85*	*1.3*	*13*	*1.3*	*1.3*	*0.13*	*1.3*	*0.38*	*27*
S1	3/1/2013	Apex-S1-3.5-030113	3.5	<0.24	**400 Y**	**1,200**	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<29	<29	<29	<29	**240**	**42**	**490**	**570**	**180**	**310**	**270**	**81**	**170**	**57**	<29	**67**
S1	3/1/2013	Apex-S1-9.0-030113	9	**0.94 Y**	**13 Y**	**12**	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.4	<6.4	<6.4	<6.4	**18**	<6.4	**9.2**	**9.8**	<6.4	<6.4	<6.4	<6.4	<6.4	<6.4	<6.4	<6.4
S2	3/1/2013	Apex-S2-5.5-030113	5.5	**480 Y**	**3,100 Y**	**140**	<680	<680	<680	<680	<680	<680	<34	<34	**46**	<34	<34	<34	<34	<34	<34	<34	<34	<34	<34	<34	<34	<34
S2	3/1/2013	Apex-S2-9.0-030113	9	<0.24	**6.6 Y**	**9.0**	<6.2	<6.2	<6.2	<6.2	<6.2	<6.2	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5
S3	3/1/2013	Apex-S3-3.5-030113	3.5	<0.30	**4.4 Y**	**25**	<6.8	<6.8	<6.8	<6.8	<6.8	<6.8	<7.0	<7.0	<7.0	<7.0	**7.2**	<7.0	**11**	**15**	<7.0	**7**	**8.7**	<7.0	**8.1**	**7.2**	<7.0	**10**
S3	3/1/2013	Apex-S3-9.0-030113	9	**0.53 Y**	**5.1 Y**	<6.7	<6.2	<6.2	<6.2	<6.2	<6.2	<6.2	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7	<6.7
S4	3/1/2013	Apex-S4-4.5-030113	4.5	**510 Y**	**2,000 Y**	**550**	<330	<330	<330	<330	<330	<330	<26	<26	<26	<26	<26	**44**	<26	<26	<26	<26	<26	<26	<26	<26	<26	<26
S4	3/1/2013	Apex-S4-8.5-030113	9	**0.31 Y**	**21 Y**	**30**	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5	<6.5
S5	4/17/2014	APEX-S5-4.5-041714	4.5	**110 Y**	**250**	**29**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S5	4/17/2014	APEX-S5-7.5-041714	7.5	**4.2 Y**	**16**	<6.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S5	4/17/2014	APEX-S5-9.0-041714	9	**5.6 Y**	**8.0 Y**	<6.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S6	4/16/2014	APEX-S6-4.5-041614	4.5	<1.3	**46 Y**	**110**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S7	4/17/2014	APEX-S7-5.5-041714	5.5	<1.4	**4.1 Y**	**11**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S7	4/17/2014	APEX-S7-9.0-041714	9	<1.3	<1.3	<6.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S8	4/16/2014	APEX-S8-4.5-041614	4.5	<1.2	**2.5 Y**	**16**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S8	4/16/2014	APEX-S8-7.5-041614	7.5	<1.5	<1.4	<7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S8	4/16/2014	APEX-S8-9.0-041614	9	<1.2	<1.3	<6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S9	4/16/2014	APEX-S9-4.5-041614	4.5	<1.4	<1.4	<6.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S9	4/16/2014	APEX-S9-7.5-041614	7.5	<1.3	**1.8Y**	<7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S9	4/16/2014	APEX-S9-9.0-041614	9	<1.3	<1.3	<6.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S10-4.5-041714	4.5	**1,200 Y**	**4,700**	<330	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S10-8.0-041714	8	**1.5 Y**	**26**	**7.1**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S10-9.0-041714	9	**4.0 Y**	**32**	<6.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S13	4/17/2014	APEX-S13-4.0-041714	4	<1.3	**130**	**380**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S13	4/17/2014	APEX-S13-7.5-041714	7.5	<1.3	**2.5 Y**	<6.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S13	4/17/2014	APEX-S13-9.0-041714	9	<1.5	<1.3	**9.7**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1 = Analysis run with silica gel cleanup

2 = SFRWQCB ESLs, Table A-2, "Shallow Soil Screening Levels (≤3 m bgs), Commercial/Industrial Land Use (groundwater is a current or potential drinking water resource)," December 2013

3 = SFRWQCB ESLs, Table B-2, "Shallow Soil Screening Levels (≤3 m bgs), Commercial/Industrial Land Use (groundwater is **not** a current or potential drinking water resource)," December 2013

Bold = Sample result exceeds the laboratory reporting limit for the given analyte

Bold Red = Sample result exceeds the SFRWQCB ESLs

bgs = below ground surface

EPA = U.S. Environmental Protection Agency

ESLs = environmental screening levels

mg/kg = milligrams per kilogram

MTBE = methyl tert-butyl ether

NA = not analyzed

SFRWQCB = San Francisco Bay Regional Water Quality Control Board

TPH = total petroleum hydrocarbons

VOCs = volatile organic compounds

Y = sample resembles chromatographic pattern, which does not resemble standard

<0.30 = sample result is less than the laboratory reporting limit for the given analyte

µg/kg = micrograms per kilogram

Table 2. Grab Groundwater Analytical Results

Location	Sample Date	Sample Name	Depth (feet bgs)	Total Dissolved Solids (by SM 2540C) (mg/L)	Total Petroleum Hydrocarbons (by EPA Method 8015B) (µg/L)			Purgeable Aromatics (Select VOCs by EPA Method 8260B) (µg/L)						Priority Pollutant Polycyclic Aromatic Hydrocarbons (EPA Method 8270 SIM) (µg/L)															
				Total Dissolved Solids	TPH-gasoline	TPH-diesel[1]	TPH-motor oil[1]	MTBE	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylenes	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo (a) anthracene	Chrysene	Benzo (b) fluoranthene	Benzo (k) fluoranthene	Benzo (a) pyrene	Indeno (1,2,3-cd) pyrene	Dibenz (a,h) anthracene	Benzo (g,h,i) perylene
SFRWQCB ESLs [2]				*NL*	*100*	*100*	*100*	*5.0*	*1.0*	*40*	*30*	*20*	*20*	*6.1*	*30*	*20*	*3.9*	*4.6*	*0.73*	*8.0*	*2.0*	*0.027*	*0.35*	*0.056*	*0.056*	*0.014*	*0.056*	*0.016*	*0.10*
SFRWQCB ESLs [3]				*NL*	*500*	*640*	*640*	*1800*	*27*	*130*	*43*	*100*	*100*	*24*	*30*	*23*	*3.9*	*4.6*	*0.73*	*8.0*	*2.0*	*0.027*	*0.35*	*0.056*	*0.056*	*0.014*	*0.056*	*0.25*	*0.10*
Water Quality Objectives for Municipal Supply [4]				*500*	*NL*	*NL*	*NL*	*130/5.0*	*1.0*	*150*	*700*	*1,750*	*1,750*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*	*NL*
S1	3/1/2013	Apex-S1-GW-030113	3.5–9.0	NA	**5,600 Y**	**31,000**	**2,500**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.9**	<0.7	**0.8**	**1.9**	**5.8**	**2.2**	**1.2**	**1.3**	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7	<0.7
S2	3/1/2013	Apex-S2-GW-030113	3.5–9.0	NA	**9,300 Y**	**15,000**	**680**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.7	<0.7	**0.9**	<0.7	**2.4**	**1.3**	**1.6**	**1.7**	<0.7	**1.0**	**0.9**	<0.7	<0.7	<0.7	<0.7	<0.7
S3	3/1/2013	Apex-S3-GW-030113	4.0–9.0	NA	**7,200 Y**	**9,100**	**330**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
S4	3/1/2013	Apex-S4-GW-030113	4.0–9.0	NA	**7,100 Y**	**83,000**	**5,200**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
S5	4/17/2014	APEX-S5-GW-041714	4.5–7.0	NA	**4,500 Y**	**15,000**	**630**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S6	4/16/2014	APEX-S6-GW-041614	4.5–6.0	NA	<50	**94 Y**	<290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S7	4/17/2014	APEX-S7-GW-041714	5.5–7.0	NA	<50	<53	<320	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S8	4/16/2014	APEX-S8-GW-041614	4.5–6.0	NA	<50	<49	<290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S9	4/16/2014	APEX-S9-GW-041614	4.75–6.0	NA	<50	<49	<290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S10-GW-041714	4.0–6.0	NA	**190 Y**	<52	<310	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S10	4/17/2014	APEX-S14-GW-041714	4.0–6.0	NA	**180 Y**	**99 Y**	<290	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S13	4/17/2014	APEX-S13-GW-041714	4.25–6.0	NA	<50 [5]	**290 Y** [5]	<300 [5]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	9/26/2014	APEX-MW1-092614	2.0-7.0	**1,220**	**170 Y**	**350**	<300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	9/26/2014	APEX-MW1-092614-FD	2.0-7.0	**1,280**	**160 Y**	**350**	<300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	12/29/2014	APEX-MW1-122914	2.0-7.0	**220**	**63 Y**	**250 Y**	<300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW1	12/29/2014	APEX-MW1-122914-FD	2.0-7.0	**240**	**58 Y**	**250 Y**	<300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

1 = Analysis run with silica gel cleanup

2 = SFRWQCB ESL, Table F-1a, "Groundwater Screening Levels (groundwater is a current or potential drinking water resource)," December 2013.

3 = SFRWQCB ESL, Table F-1b, "Groundwater Screening Levels (groundwater is not a current or potential drinking water resource)," December 2013.

4 = SFRWQCB Basin Plan, Table 3-5: Water Quality Objectives for Municipal Supply

5 = prepared and analyzed outside of hold time

Bold = Result is greater than the laboratory reporting limits for the given parameter but does not exceed listed comparison value

Bold Blue = Result exceeds parameter objective in SFRWQCB Basin Plan, Table 3-5: Water Quality Objectives for Municipal Supply

Bold Green = Result is less than SFRWQCB ESL for "is **not** a drinking water resource" but greater than for "is a drinking water source"

Bold Red = Sample result exceeds the SFRWQCB ESL

bgs = below ground surface
EPA = U.S. Environmental Protection Agency
ESLs = environmental screening levels
MTBE = methyl tert-butyl ether
NA = not analyzed
NL = not listed
SFRWQCB = San Francisco Bay Regional Water Quality Control Board
TPH = total petroleum hydrocarbons
VOCs = volatile organic compounds
Y = sample resembles chromatographic pattern, which does not resemble standard
<0.30 = sample result is less than the laboratory reporting limit for the given analyte

Table 3. Site Conceptual Model

SCM Element	SCM Sub-Element	Description	Data Gap	How to Address
Geology and Hydrogeology	Regional	***Geology:*** The hills along Emeryville and along the San Francisco Peninsula, as well as the down-warped bay plain in between, are part of the central California Coast Range Province. The rock exposed in the hills and underlying the sedimentary deposits of the Bay plain consists of Tertiary-aged sediments and volcanic rock. The uplift of the hills resulted in erosion and deposition of thick alluvial fan deposits on the Bay plain, known as Alameda formation. Approximately 540 feet of tertiary to early quaternary sediments overlies bedrock beneath Emeryville. The unconsolidated sedimentary deposits include artificial fill, estuarine deposits known as Bay Mud, the Merritt sand, Yerba Buena Mud, and the Alameda Formation (Engineering-Science, 1988). The closest major fault, the Hayward Fault, is located about 3 miles east of the property. While the site is located in a seismically active area, it is not within an Alquist-Priolo Special Studies active fault zone, the legislatively defined zone of restricted land use 200 feet around an active fault due to the high probability of ground rupture. ***Hydrogeology:*** Freshwater aquifer beneath Emeryville includes most of the porous sands and gravels of the Alameda and Temescal alluvial deposits and the Merritt Sand. The aquifers are recharged by rainfall on exposed areas of the porous formations, primarily between the SP right-of-way and the Oakland Hills to the east. The water flows downgradient toward the bay. The fresh water contacts higher-density saltwater in the vicinity of the bay margin. The regional groundwater flow direction is westward toward the bay, although local variations may occur due to variations in topography and subsurface lithology. The depth to groundwater varies seasonally and has been measured historically in the site vicinity between 3 to 8 feet bgs (Engineering-Science, 1988).	None	N/A
	Site	***Geology:*** Based on boring logs completed during the initial investigation and this data gaps investigation, the uppermost soil is composed of various fill material, including loam, aggregate base, and gravelly matrices at depths ranging to approximately 1 and 5 feet bgs, with the deepest fill material occurring in the area of the former UST. Below fill material, the soil transitions into native dark-colored clays and extends to at least 9 feet bgs. ***Hydrogeology:*** Shallow groundwater has been encountered at depths of approximately 3 to 5.5 feet bgs. The hydraulic gradient and groundwater flow direction have not been specifically evaluated at the site but is presumed to be to the west in the direction of the bay. The groundwater gradient approximately 1,800 feet north of the site is reported to be 0.033 feet per foot in a westerly direction at the Pfizer Pigments site located at 4650 Shellmound in Emeryville, California (SWRCB, 2010).	None	N/A
Surface Water Bodies	Regional	The closest surface water body is San Francisco Bay, located approximately 1,500 feet to the west of the site.	None	NA
Nearby Wells	Regional	DWR and ACPWA well searches identified one well within a one mile radius of 1550 Park Avenue, Emeryville, California. The well is listed as an industrial use well and is located approximately 0.65 miles to the southeast (upgradient). One domestic well was identified approximately one mile north (sidegradient) of 1550 Park Avenue. Five wells, catagorized as either industrial or irrigation use, were found to be one mile or greater in distance from 1550 Park Avenue, Emeryville, California. No municipal wells were identified in the search.	None	NA
Unauthorized Release	Site	A unauthorized petroleum release was discovered adjacent to the building located at 1550 Park Avenue in Emeryville, California, when a UST was discovered in November 2009 during a street improvement project. The tank was measured to be approximately 10 feet long and 5 feet in diameter, with a calculated volume capacity of 1,500 gallons. The release was stopped when the UST was removed and approximately 20 tons of surrounding soil was excavated and 2,200 gallons of oily water was pumped from the tank and excavation. Results of subsequent soil and groundwater samples revealed the following chemicals of concern associated with the release: TPH-diesel, TPH-gasoline, TPH-motor oil, and benzo(b)fluoranthene.	None	NA
Free Product	Site	Previous data appear to suggest the presence of LNAPL. One shallow monitoring well was installed using hand auger drilling methods. The well is located where the highest total TPH concentrations were reported in a grab groundwater sample (TPH-d: 83,000 µg/L). The well is screened across the water table to allow any LNAPL that is present to infiltrate the well. LNAPL is not present in the well based on measurements with an oil/water interface probe in April, September, and December 2014. Groundwater sampling results from MW-1 in September and December 2014 show TPH-g and TPH-d concentrations of 170 & 63 µg/L and 350 & 250 µg/L, respectively. TPH-mo was not detected in groundwater at MW-1 (<300 µg/L).	None	NA
Secondary Source	Site	Soil and grab groundwater samples have been collected from 11 boring locations surrounding the former UST. Seven boring locations form an outer perimeter surrounding the former UST. Comparison of soil and groundwater results with ESLs indicate only three of the seven perimeter locations (S5 to the east, S10 to the north, and S13 to the west) have TPH concentrations exceeding the ESLs. TPH concentrations in soil are highly elevated at S10 and slightly exceed ESLs at S5 and S13. TPH concentrations in groundwater are highly elevated at S5 and slightly exceed ESLs at S10 and S13. No ESL exceedances are found in intermediate and deep soil samples from 7.5 to 9 feet bgs. Based on the soil data, the vertical contamination appears to be confined between approximately 3 to 7 feet bgs, primarily near the water table. TPH concentrations in Soil and groundwater slightly exceeded ESLs at S13, but TPH concentrations in soil and groundwater approximately 15 feet to the south and north of S13 and other locations southwest and southeast did not exceed ESLs. Monitoring well MW-1 groundwater sampling results from September and December 2014 show that grab groundwater concentrations in this location skew orders of magnitude higher than those obtained from S4. In September 2014 concentration of Total Dissolved Solids (TDS) at MW-1 was 1,220 mg/L and exceeds the objective concentration of 500 mg/L listed in SFRWQCB's Basin Plan Table 3-5: Water Quality Objective for Municipal Supply. In December 2014, TDS concentration decreased to 220 mg/L, presumably due to fresh water infiltration resulting from Fall 2014 rain events in November and December. Although, areal extent of soil and groundwater contamination is not fully defined east and north of the former UST, sufficient data exists west (down gradient) and south (side gradient) to conclude it is likely that secondary source soils are localized close to the former UST between 3 and 7 feet bgs and that groundwater contaminants are below appropriate ESLs. Comparison of September 2014 TDS results from MW-1 with the Basin Plan's water quality objectives for municipal supply indicate that shallow groundwater at the site is not a suitable municpal supply and that ESLs where groundwater is not a current or potential drinking water resource are appropriate for the site. Secondary source LNAPL is not present at the site based on measurements with an oil/water interface probe at MW-1 in April, September, and December 2014. Monitoring well MW-1 groundwater sampling results from September and December 2014 show that grab groundwater concentrations (TPH-g: 7,100 µg/L, TPH-d: 83,000 µg/L, TPH-mo: 5,200 µg/L) in this location skew orders of magnitude higher than those obtained from MW-1 (TPH-g: 170 & 63 µg/L, TPH-d: 350 & 250 µg/L, TPH-mo: <300 µg/L) and that groundwater concentrations are below appropriate ESLs. Secondary source soils are generally localized close to the former UST location which is overlain by numerous utiilities and cosmetic elements of the City of Emeryville's recent street improvemnts. These two factors make further soil removal impracticable beyond the soil removal activities undertaken by the City of Emeryville during their discovery and removal of the former UST during the street improvement project.	None	NA
Vapor Intrusion to Indoor Air	Site	The lack of volatile compounds in soil and groundwater beneath the site, in the vicinity of the release, at concentrations exceeding the vapor intrusion levels of concern suggest vapor intrusion is not a risk at the site.	None	N/A
Preferential Pathways	Site	Numerous utility lines were located in the vicinity of the former UST, generally at depths from 2 to 4.5 feet bgs. One soil boring (S7) was located along the main storm drain line, which drains in an upgradient direction of the former UST, to evaluate potential preferential pathways for contaminant migration. TPH concentrations in groundwater were non-detect, and concentrations in soil were either non-detect or less than ESLs.	None	N/A

Notes:

ACPWA = Alameda County Public Works Agency

bgs = ESLs

DWR = California Department of Water Resources

ESLs = environmental screening levels

LNAPL = light non-aqueous phase liquid

N/A = not applicable

SCM = site conceptual model

TPH-d = total petroleum hydrocarbons as diesel

TPH-g = total petroleum hydrocarbons as gasoline

TPH-total petroleum hydrocarbons as motor oil

TDS = total dissolved solids

UST = underground storage tank

µg/L = micrograms per liter

Enclosure 4. Laboratory Analytical Reports (Job Number 263614)

Level II Data Validation Report

Project: APEX Refrigeration, Inc.

Laboratory: Curtis & Tompkins, Ltd.

2323 Fifth Street
Berkeley, California 94710
CA ELAP# 2896; NELAP# 4044-001

Samples: APEX-MW-1-122914, APEX-MW-1-122914, TB-122914

Laboratory Report(s): 263614

Date of Sample Submission	Laboratory Reports
12/29/2014	263614

	Analysis		
Criteria	TPH-g EPA 8015B	TPH-d, mo EPA 8015B	TDS EPA SM2540C
BS/BSD	NA	X	NA
Holding Time	X	X	X
LCS	X	NA	X
Method Blank	X	X	X
MS/MSD	X	NA	NA
Trip Blank	X	NA	NA
RLs	X	X	X
SDUP	NA	NA	X
Surrogate Recovery	X	X	NA

Notes:

BS = Blank spike
BSD = Blank spike duplicate
EPA = U.S. Environmental Protection Agency
J = Estimated value
LCS = Laboratory control spike
MDLs = method detection limits
MS = Matrix spike
MSD = Matrix spike duplicate
NA = not applicable
RLs = Reporting limits
SDUP = an aliquot that is identical to another aliquot from the same sample that is analyzed to indicate precision of analytical results
TDS = total dissolved solids
VOCs = volatile organic compounds
X = quality control criteria were met
µg/L = micrograms per liter

Summary:

According to this Level II data validation, the data in the laboratory analytical reports provided by Curtis & Tompkins, Ltd. are usable for their intended purpose.


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 263614
ANALYTICAL REPORT

Engineering/Remediation Resource Grp	Project : 2013-094
4585 Pacheco Blvd.	Location : APEX
Martinez, CA 94553	Level : II

Sample ID	Lab ID
APEX-MW-1-122914	263614-001
APEX-MW-1-122914-FD	263614-002
TB-122914	263614-003

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: Tracy Babjar Date: 01/08/2015

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

CA ELAP# 2896, NELAP# 4044-001

Curtis & Tompkins, Ltd.

CASE NARRATIVE

Laboratory number:	**263614**
Client:	**Engineering/Remediation Resource Grp**
Project:	**2013-094**
Location:	**APEX**
Request Date:	**12/29/14**
Samples Received:	**12/29/14**

This data package contains sample and QC results for three water samples, requested for the above referenced project on 12/29/14. The samples were received cold and intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):
No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

CHAIN OF CUSTODY

263614

Laboratory: Curtis & Tompkins
Contact: Tracy Babjar
Phone: (510) 486-0900

Date: 12/29/2014
Page: 1
of: 1

4585 Pacheco Boulevard
Martinez, CA 94553
Phone: (925) 969-0750
ERRG

Project Manager: Erik Oehlschlager **Project Name:** APEX
FAX / EMAIL Results to: erik.oehlschlager@errg.com
Samplers: Josh Osborne **Project #:** 2013-094

Turn Around Time: 5 day

	Sample ID	Lab ID	Date/Time	Matrix	Preserv.	ANALYSES: TPH-g; EPA 8015B	TPH-d, mo; (EPA 8015B w/ silica gell cleanup	TDS	Number of Containers
1	APEX-MW-1-122914		12/29/14 1430	Water	HCl/None	X	X	X	6
2	APEX-MW-1-122914-FD		12/29/14 1445	Water	HCl/None	X	X	X	6
3	TB-122914		Lab Prepared			X			1

SPECIAL INSTRUCTIONS/COMMENTS

Relinquished by (Sampler)	Relinquished by (Sampler)	Relinquished by (Sampler)
(Signature) (Time): 3:55 pm	(Signature) (Time):	(Signature) (Time):
(Printed Name) (Date): Josh Osborne 12/29/14	(Printed Name) (Date):	(Printed Name) (Date):
(Company): ERRG	(Company):	(Company):
Received By: Tracy Babjar 3:55	**Received By:**	**Received By:**
(Signature) (Time): Tracy Babjar 12/29/14	(Signature) (Time):	(Signature) (Time):
(Printed Name) (Date): CET	(Printed Name) (Date):	(Printed Name) (Date):
(Company):	(Company):	(Company):

Total # Containers: 13

Head Space Y / N

Received in Good Condition (Cold)? Y / N

Conforms to Record? Y / N

intact & cold.

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 263614 Date Received 12/29/14 Number of coolers 1
Client ERDG Project 2013-094

Date Opened 12/29 By (print) MC (sign)
Date Logged in " By (print) " (sign) "

1. Did cooler come with a shipping slip (airbill, etc) YES (NO)
   Shipping info
2A. Were custody seals present? .... ☐ YES (circle) on cooler on samples ☒ NO
   How many Name Date
2B. Were custody seals intact upon arrival? YES NO (N/A)
3. Were custody papers dry and intact when received? (YES) NO
4. Were custody papers filled out properly (ink, signed, etc)? (YES) NO
5. Is the project identifiable from custody papers? (If so fill out top of form) (YES) NO
6. Indicate the packing in cooler: (if other, describe)

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

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 4.7

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

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

8. Were Method 5035 sampling containers present? YES (NO)
   If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? (YES) NO
10. Are there any missing / extra samples? YES (NO)
11. Are samples in the appropriate containers for indicated tests? (YES) NO
12. Are sample labels present, in good condition and complete? (YES) NO
13. Do the sample labels agree with custody papers? (YES) NO
14. Was sufficient amount of sample sent for tests requested? (YES) NO
15. Are the samples appropriately preserved? (YES) NO N/A
16. Did you check preservatives for all bottles for each sample? YES NO (N/A)
17. Did you document your preservative check? YES NO (N/A)
18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO (N/A)
19. Did you change the hold time in LIMS for preserved terracores? YES NO (N/A)
20. Are bubbles > 6mm absent in VOA samples? (YES) NO N/A
21. Was the client contacted concerning this sample delivery? YES (NO)
   If YES, Who was called? By Date:

COMMENTS

Rev 10, 9/12

Curtis & Tompkins, Ltd.

Detections Summary for 263614

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

Client : Engineering/Remediation Resource Grp
Project : 2013-094
Location : APEX

Client Sample ID : APEX-MW-1-122914 Laboratory Sample ID : 263614-001

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	63	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	250	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Total Dissolved Solids	220		10	mg/L	TOTAL	1.000	SM2540C	METHOD

Client Sample ID : APEX-MW-1-122914-FD Laboratory Sample ID : 263614-002

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	58	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 5030B
Diesel C10-C24	250	Y	50	ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Total Dissolved Solids	240		10	mg/L	TOTAL	1.000	SM2540C	METHOD

Client Sample ID : TB-122914 Laboratory Sample ID : 263614-003

No Detections

Y = Sample exhibits chromatographic pattern which does not resemble standard

Curtis & Tompkins, Ltd.

Total Volatile Hydrocarbons

Lab #:	263614	Location:	APEX
Client:	Engineering/Remediation Resource Grp	Prep:	EPA 5030B
Project#:	2013-094	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/29/14
Units:	ug/L	Received:	12/29/14
Diln Fac:	1.000	Analyzed:	01/05/15
Batch#:	219056		

Field ID: APEX-MW-1-122914 Lab ID: 263614-001
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	63 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	104	77-128

Field ID: APEX-MW-1-122914-FD Lab ID: 263614-002
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	58 Y	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	98	77-128

Field ID: TB-122914 Lab ID: 263614-003
Type: SAMPLE

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	90	77-128

Type: BLANK Lab ID: QC772080

Analyte	Result	RL
Gasoline C7-C12	ND	50

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	90	77-128

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

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	263614	Location:	APEX
Client:	Engineering/Remediation Resource Grp	Prep:	EPA 5030B
Project#:	2013-094	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC771919	Batch#:	219056
Matrix:	Water	Analyzed:	01/05/15
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,092	109	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	97	77-128

Curtis & Tompkins, Ltd.

Batch QC Report

Total Volatile Hydrocarbons

Lab #:	263614	Location:	APEX
Client:	Engineering/Remediation Resource Grp	Prep:	EPA 5030B
Project#:	2013-094	Analysis:	EPA 8015B
Field ID:	ZZZZZZZZZZ	Batch#:	219056
MSS Lab ID:	263637-001	Sampled:	12/30/14
Matrix:	Water	Received:	12/30/14
Units:	ug/L	Analyzed:	01/05/15
Diln Fac:	1.000		

Type: MS Lab ID: QC771921

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	<12.82	2,000	1,750	87	74-120

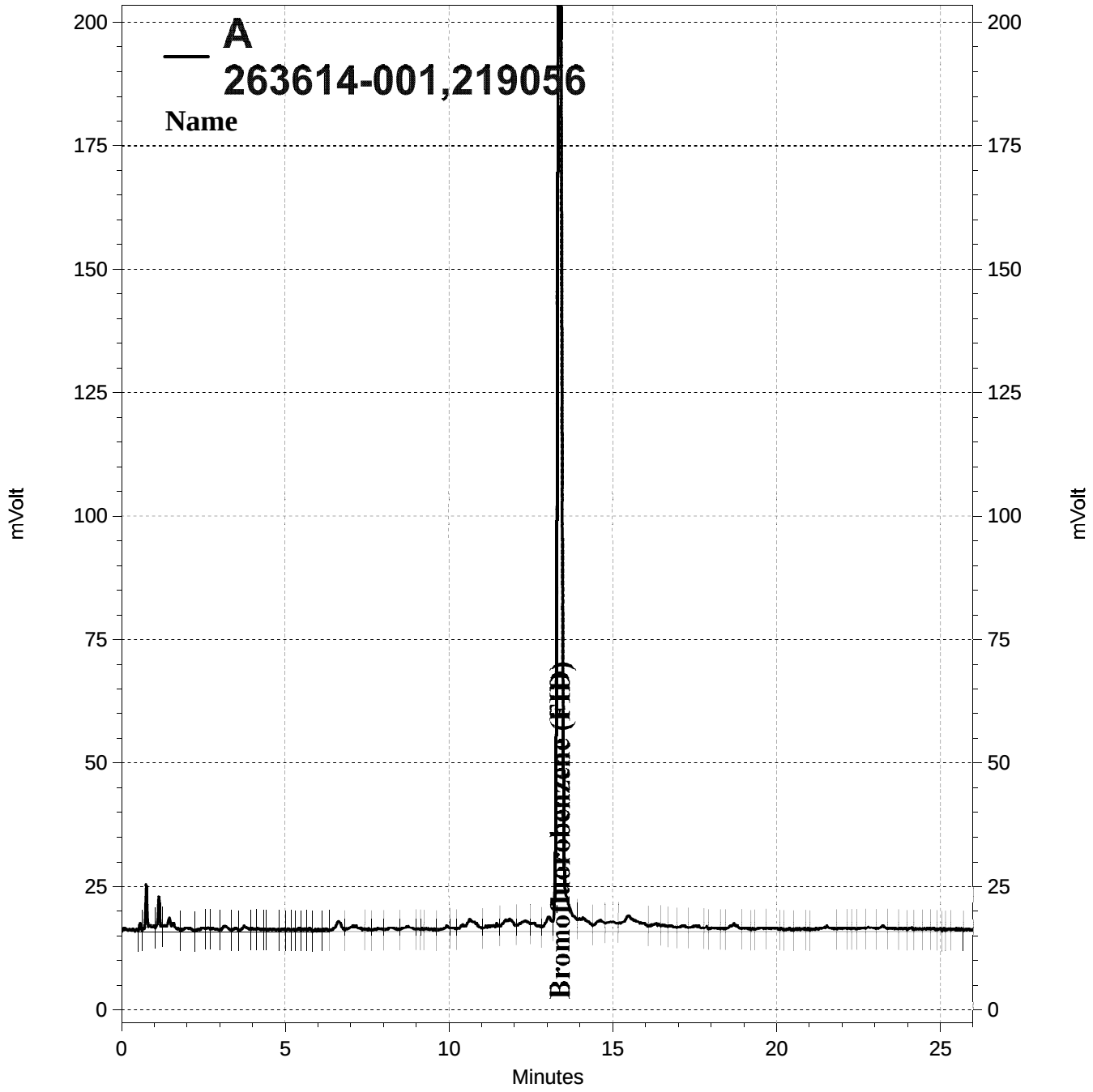
Surrogate	%REC	Limits
Bromofluorobenzene (FID)	107	77-128

Type: MSD Lab ID: QC771922

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	1,715	86	74-120	2	27

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	105	77-128

RPD= Relative Percent Difference



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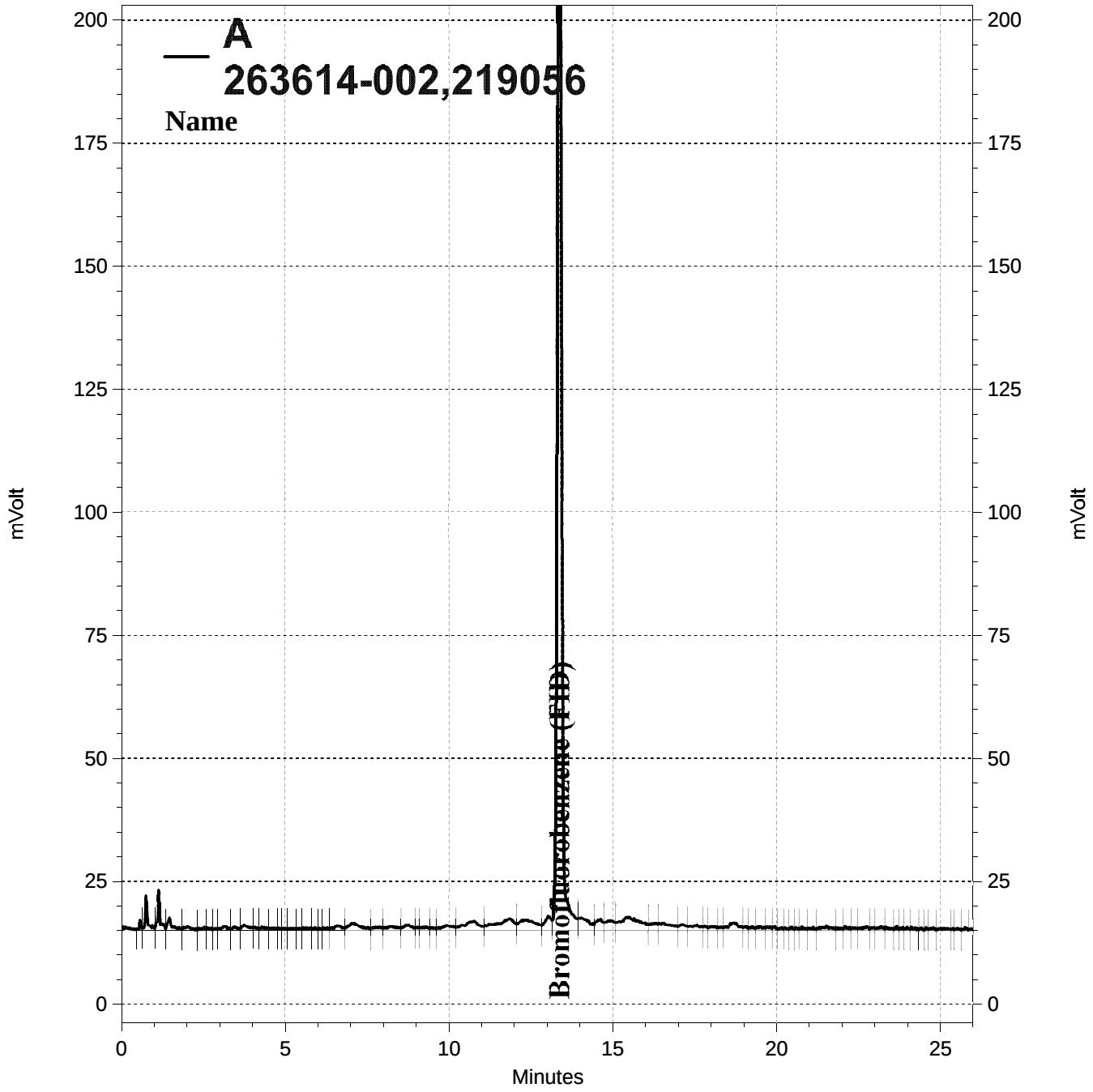
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263614-002,219056
Name
Bromofluorobenzene (FID)
mVolt
mVolt
Minutes
0
5
10
15
20
25
0
25
50
75
100
125
150
175
200
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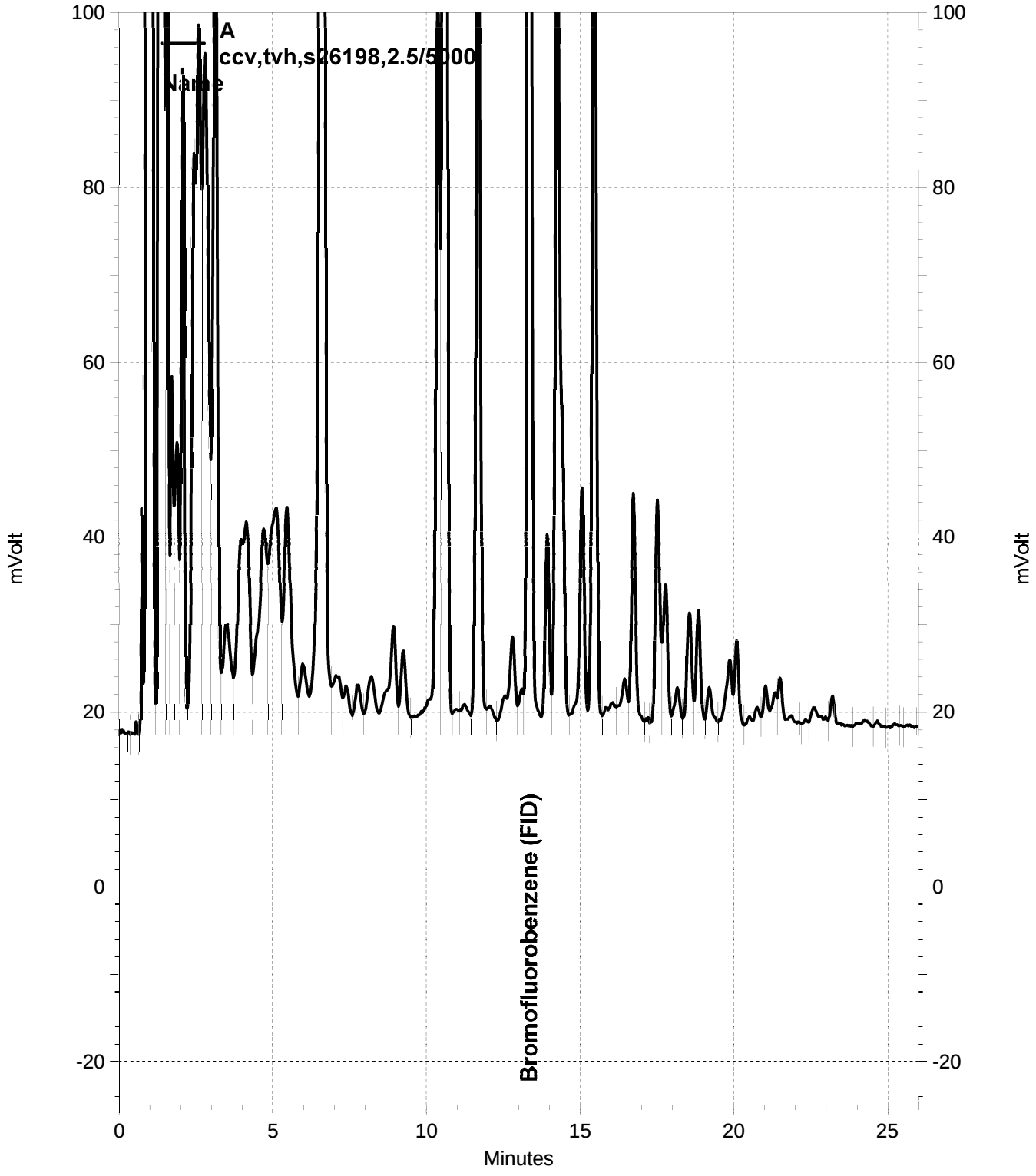

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Curtis & Tompkins, Ltd.

Total Extractable Hydrocarbons

Lab #:	263614	Location:	APEX
Client:	Engineering/Remediation Resource Grp	Prep:	EPA 3520C
Project#:	2013-094	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/29/14
Units:	ug/L	Received:	12/29/14
Diln Fac:	1.000	Prepared:	12/30/14
Batch#:	218969	Analyzed:	12/31/14

Field ID: APEX-MW-1-122914 Lab ID: 263614-001
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	250 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	105	66-129

Field ID: APEX-MW-1-122914-FD Lab ID: 263614-002
Type: SAMPLE Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	250 Y	50
Motor Oil C24-C36	ND	300

Surrogate	%REC	Limits
o-Terphenyl	102	66-129

Type: BLANK Cleanup Method: EPA 3630C
Lab ID: QC771572

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

Surrogate	%REC	Limits
o-Terphenyl	79	66-129

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

Curtis & Tompkins, Ltd.

Batch QC Report

Total Extractable Hydrocarbons

Lab #:	263614	Location:	APEX
Client:	Engineering/Remediation Resource Grp	Prep:	EPA 3520C
Project#:	2013-094	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	218969
Units:	ug/L	Prepared:	12/30/14
Diln Fac:	1.000	Analyzed:	12/31/14

Type: BS Cleanup Method: EPA 3630C
Lab ID: QC771573

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,001	80	61-120

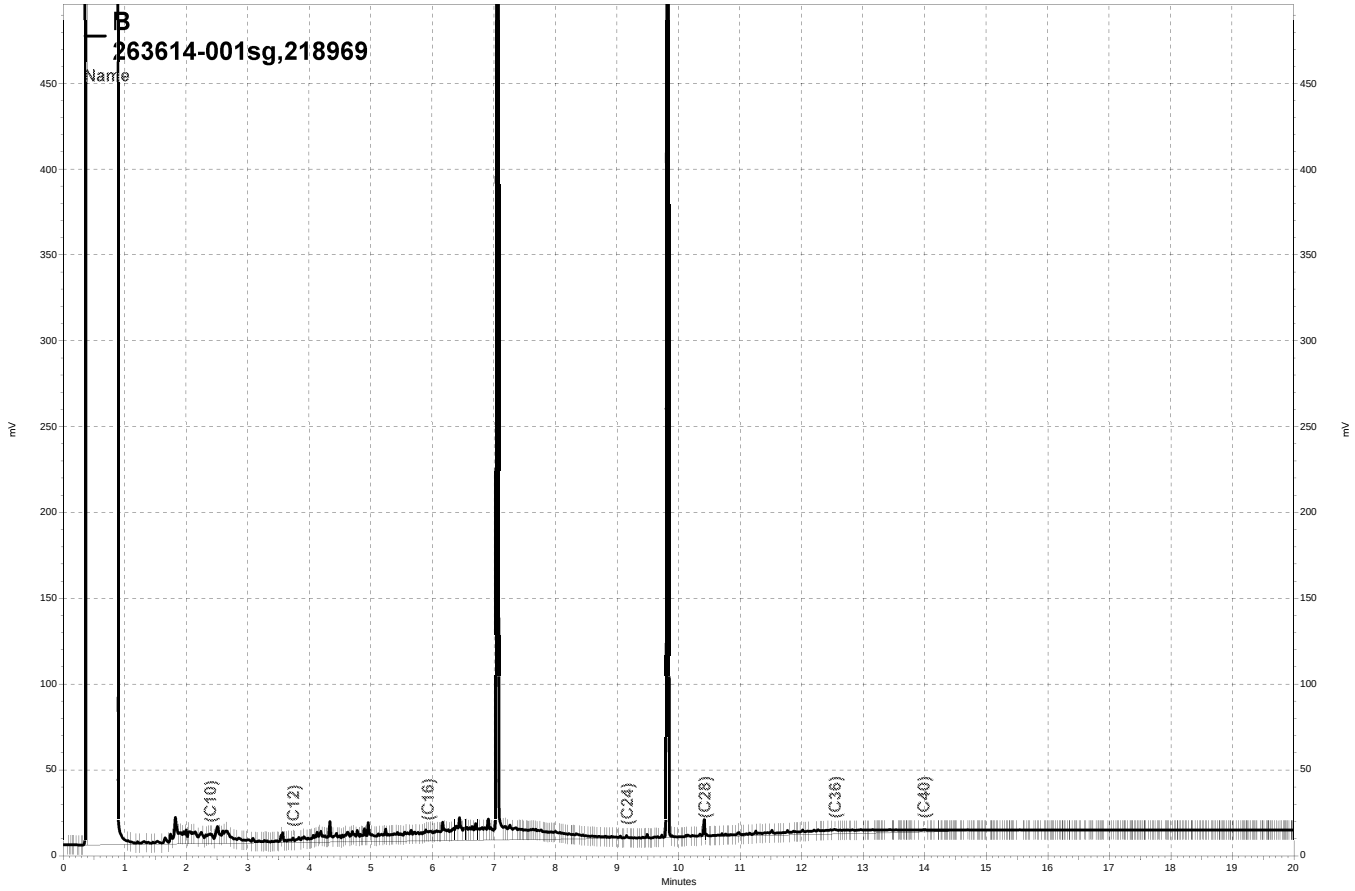
Surrogate	%REC	Limits
o-Terphenyl	108	66-129

Type: BSD Cleanup Method: EPA 3630C
Lab ID: QC771574

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,179	87	61-120	9	45

Surrogate	%REC	Limits
o-Terphenyl	110	66-129

RPD= Relative Percent Difference



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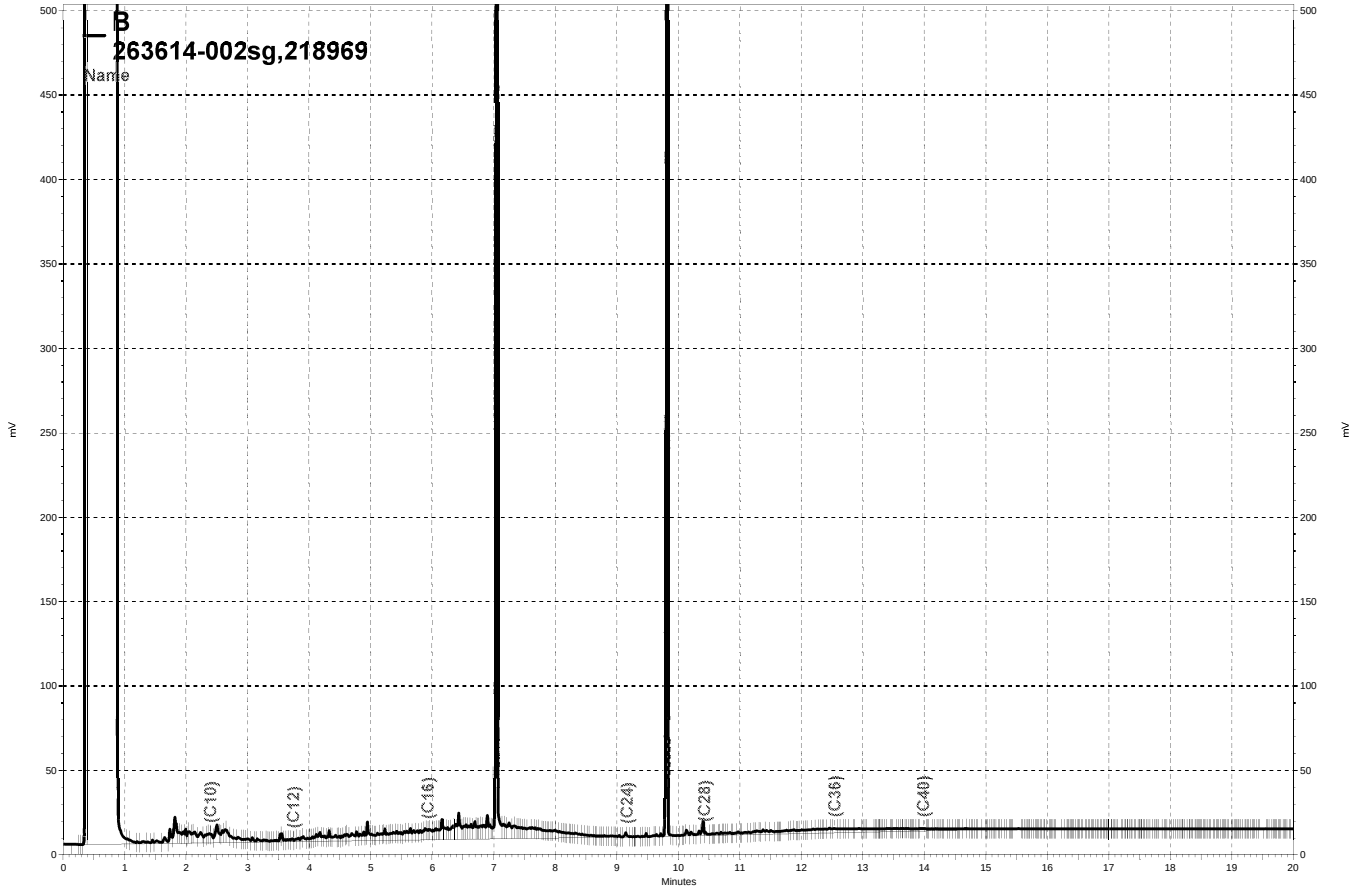

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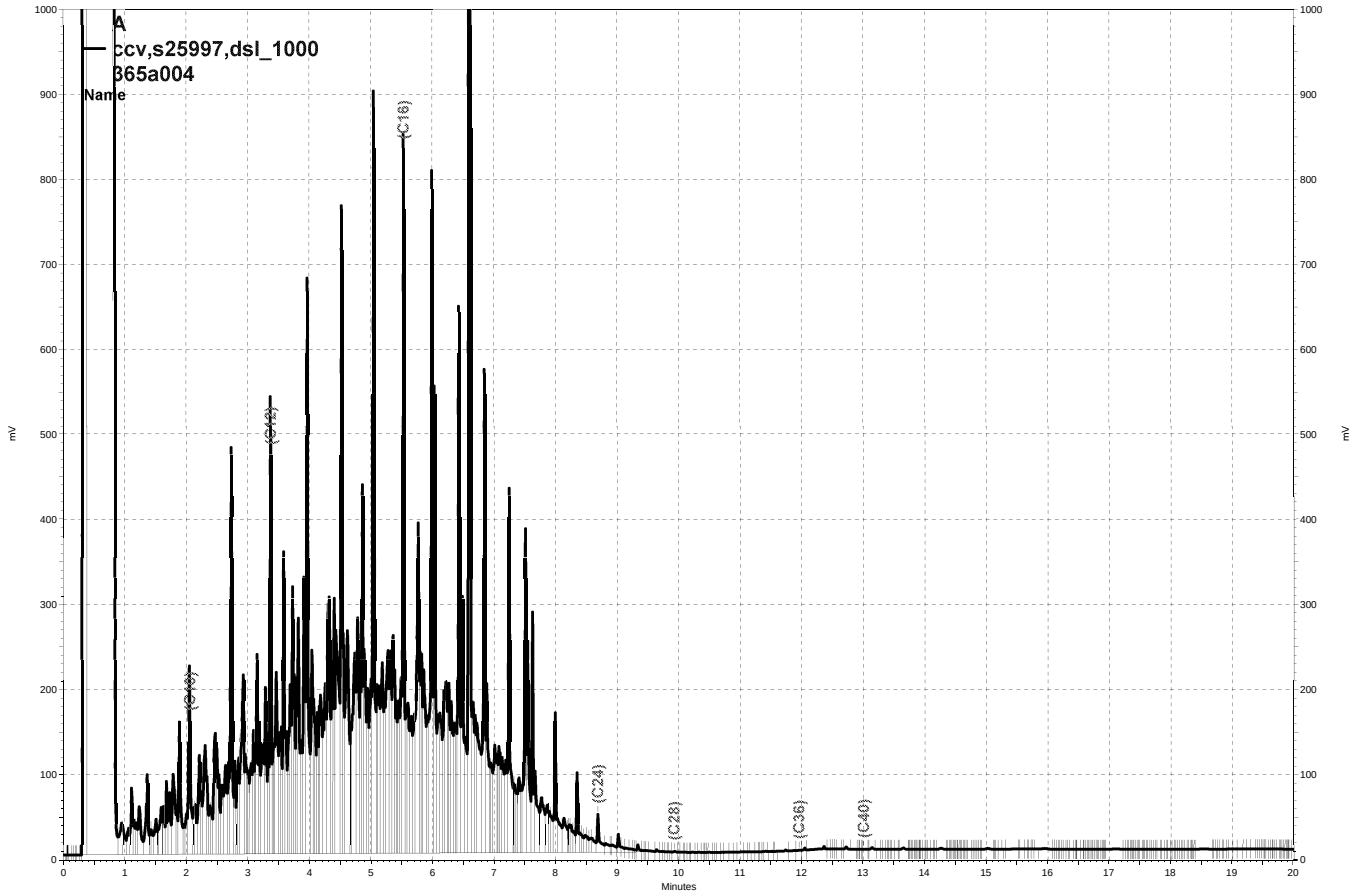

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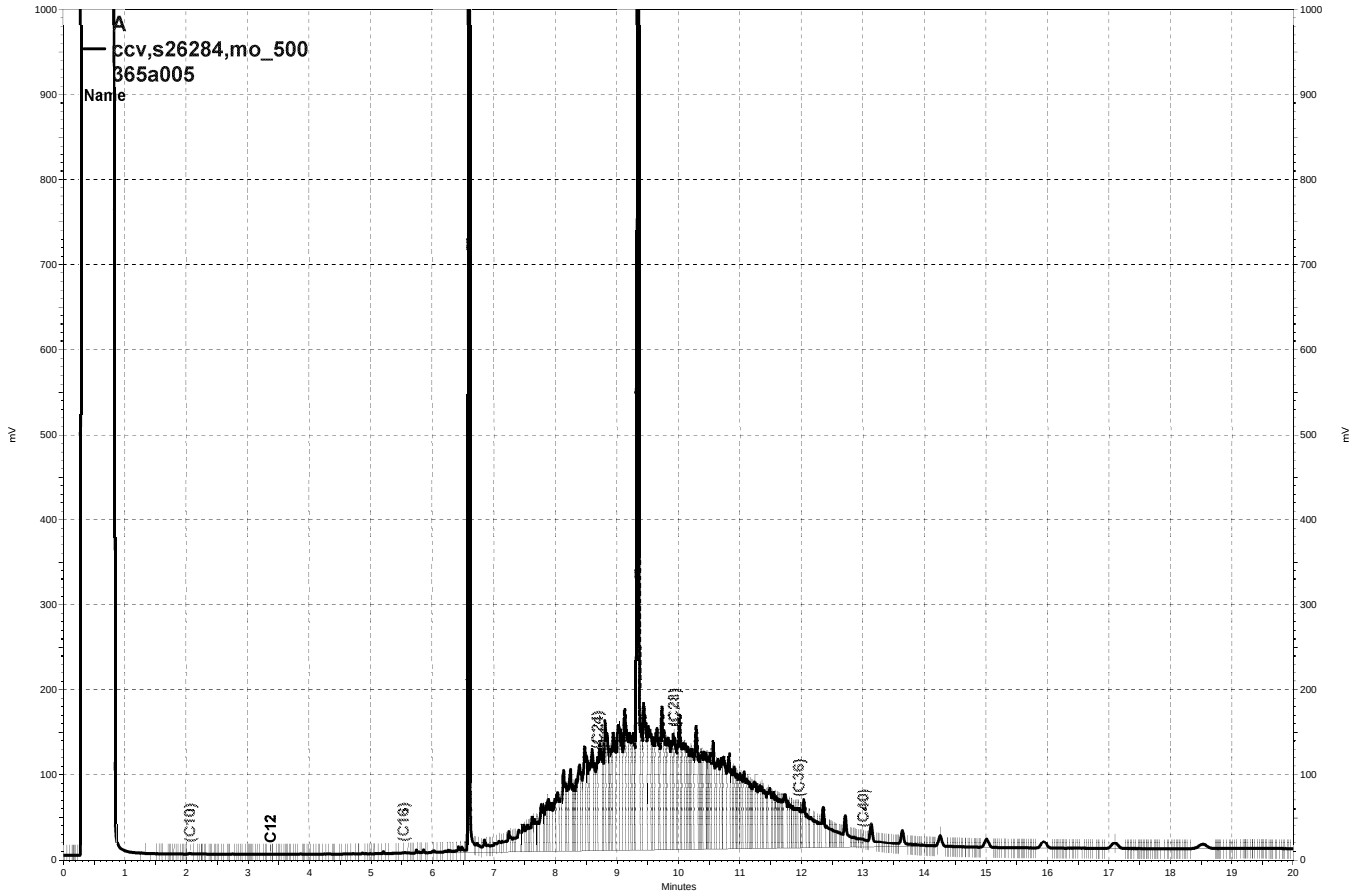

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Curtis & Tompkins, Ltd.

Total Dissolved Solids (TDS)

Lab #:	263614	Location:	APEX
Client:	Engineering/Remediation Resource Grp	Prep:	METHOD
Project#:	2013-094	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	219108
Matrix:	Water	Sampled:	12/29/14
Units:	mg/L	Received:	12/29/14
Diln Fac:	1.000	Analyzed:	01/05/15

Field ID	Type	Lab ID	Result	RL
APEX-MW-1-122914	SAMPLE	263614-001	220	10
APEX-MW-1-122914-FD	SAMPLE	263614-002	240	10
	BLANK	QC772128	ND	10

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins, Ltd.

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	263614	Location:	APEX
Client:	Engineering/Remediation Resource Grp	Prep:	METHOD
Project#:	2013-094	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	219108
MSS Lab ID:	263610-001	Sampled:	12/29/14
Matrix:	Water	Received:	12/29/14
Units:	mg/L	Analyzed:	01/05/15

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC772129		104.0	96.00		92	74-120		
SDUP	QC772130	708.0		746.0	10.00			5	5

RL= Reporting Limit
RPD= Relative Percent Difference

Enclosure 5. Manifests

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	1	(800) 368-4778	12311490

GENERATOR

5. Generator's Name and Mailing Address

APEX REFRIGERATION CORP DBA PELCO DISTRIBUTORS
1550 PARK AVE
EMERYVILLE CA 94608
Generator's Phone: 510 653-9850

Generator's Site Address (if different than mailing address)

1550 PARK AVENUE
EMERYVILLE CA 94608

6. Transporter 1 Company Name — U.S. EPA ID Number

ENVIRONMENTAL RECOVERY SERVICES, INC. — CAR000188201

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

DEMENNO KERDOON
2000 N. ALAMEDA ST
COMPTON CA 90222
Facility's Phone: 310 537-7100

CAT080013352

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS,LIQUID (MONITORING WATER)	1	DM	55	G	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

9811 15179-1850 - MONITORING WATER 1 X 55 DM ** ERS W.O.# 110104 - ECB * CONTRACTOR ERRG **

BILL TO ENVIROSERV ** WEAR PROPER PPE

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Pennie Barber — Signature: Pennie Barber — Month: 1 — Day: 8 — Year: 15

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Orlando Lopez — Signature — Month: 1 — Day: 8 — Year: 15

Transporter 2 Printed/Typed Name — Signature — Month — Day — Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month — Day — Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month — Day — Year

COPY

NON-HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of 1	3. Emergency Response Phone	4. Waste Tracking Number
		(800) 368-4778	12311491

GENERATOR

5. Generator's Name and Mailing Address

APEX REFRIGERATION CORP DBA PELCO DISTRIBUTORS
1550 PARK AVE
EMERYVILLE CA 94608
Generator's Phone: 510 653-9850

Generator's Site Address (if different than mailing address)

1550 PARK AVENUE
EMERYVILLE CA 94608

6. Transporter 1 Company Name — U.S. EPA ID Number

ENVIRONMENTAL RECOVERY SERVICES, INC. — CAR000188201

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

US ECOLOGY
HWY 95, 12 MILES SOUTH
BEATTY NV 89003
Facility's Phone: 775 553-2203

NVT330010000

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	NON HAZARDOUS, SOLID (SOIL)	1	DM	650	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information

9B11 A 07-0 - MONITORING SOIL 1YS50M ** ERS W.O.# 110104 - ECB * CONTRACTOR: ERRG **

BILL TO ENVIROSERV ** WEAR PROPER PPE

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name	Signature	Month	Day	Year
Pennie Baeser	Pennie Baeser	1	8	15

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name	Signature	Month	Day	Year
Orlando Lozano		1	8	15
Transporter 2 Printed/Typed Name	Signature	Month	Day	Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator)	Month	Day	Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name	Signature	Month	Day	Year