Eric Hetrick
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6491
ehetrick@chevron.com

July 27, 2015

RECEIVED
By Alameda County Environmental Health 9:44 am, Jul 28, 2015

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Chevron Service Station 95607
5269 Crow Canyon Road
Castro Valley, CA
ACEH Case #RO 0350

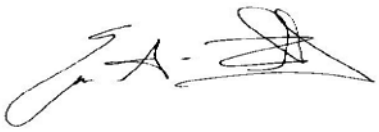
I have reviewed the attached Monthly Remedial Progress Report – May 2015.

The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by GHD (formerly Conestoga Rovers Associates), upon who assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,



Eric Hetrick
Project Manager

Attachment: Monthly Remedial Progress Report – May 2015

July 27, 2015 Reference No. 311950

Mr. Mark Detterman
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Alameda, California 94502

Re: Monthly Remedial Progress Report – May 2015
Former Chevron Station 95607
5269 Crow Canyon Road
Castro Valley, California
Fuel Leak Case RO0350

Dear Mr. Detterman:

GHD Services, Inc (GHD) (formerly Conestoga-Rovers & Associates), on behalf of Chevron Environmental Management Company (Chevron EMC), is providing this Monthly Remedial Progress Report – May 2015 (Report), for the site referenced above (Figure 1). This report was prepared in accordance with Alameda County Environmental Health Services (ACEHS) Approval of the Remedial Action Plan, dated December 11, 2013. This report includes a summary of the DPE system operations conducted in the month of May 2015 and cumulatively (Tables 1 through 4).

DPE system compliance testing and sampling was performed on May 14, 2015 in accordance with system operational permits. During the reporting period, approximately 175 pounds of total petroleum hydrocarbons as gasoline (TPHg), and 2.2 pounds of benzene were removed in vapor phase (Table 4), and approximately 0.6 pounds of TPHg and 0.1 pounds of benzene were removed in dissolved phase (Table 2). A summary of the DPE system operational performance for the month of May 2015 is presented below.

VAPOR-PHASE EXTRACTION DATA - MAY 2015

Soil Vapor Influent Flow Rate (avg scfm)	126 scfm
Soil Vapor Laboratory Influent Concentrations (TPHg ppmv)	160 ppmv
Soil Vapor Laboratory Influent Concentrations (Benzene ppmv)	2.8 ppmv
Soil Vapor Mass Removal (lb TPHg/period)	175 pounds
Soil Vapor Mass Removal (lb Benzene/period)	2.2 pounds
Soil Vapor Extraction Period Operating Uptime (hours)	518 hours
Soil Vapor Treatment Destruction Efficiency (%)	99.5 percent

ppmv – parts per million by volume

GHD Services Inc.
5900 Hollis Street Suite A Emeryville California 94608 USA
T 510 420 0700 F 510 420 9170 W www.ghd.com

DISSOLVED-PHASE EXTRACTION DATA - MAY 2015

Maximum Groundwater Extraction Rate (gpm)	2.4 gpm
Average Groundwater Extraction Rate (gpm)	1.0 gpm
Dissolved-Phase Mass Removal Rate (lb TPHg/period)	0.60 pounds
Dissolved-Phase Mass Removal Rate (lb Benzene/period)	0.10 pounds
Total Volume Groundwater Treated (gallons)	29,890 gallons
Groundwater Extraction Period Operating Uptime (hours)	616 hours*

* The DPE system operation was uncoupled on May 14, 2015, which allows the GWE to operate when the SVE system is down.

Please contact Judy Gilbert of GHD at (510) 420-3314, if you have any questions or comments.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Brandon S. Wilken, PG 7564

DS/mws/45

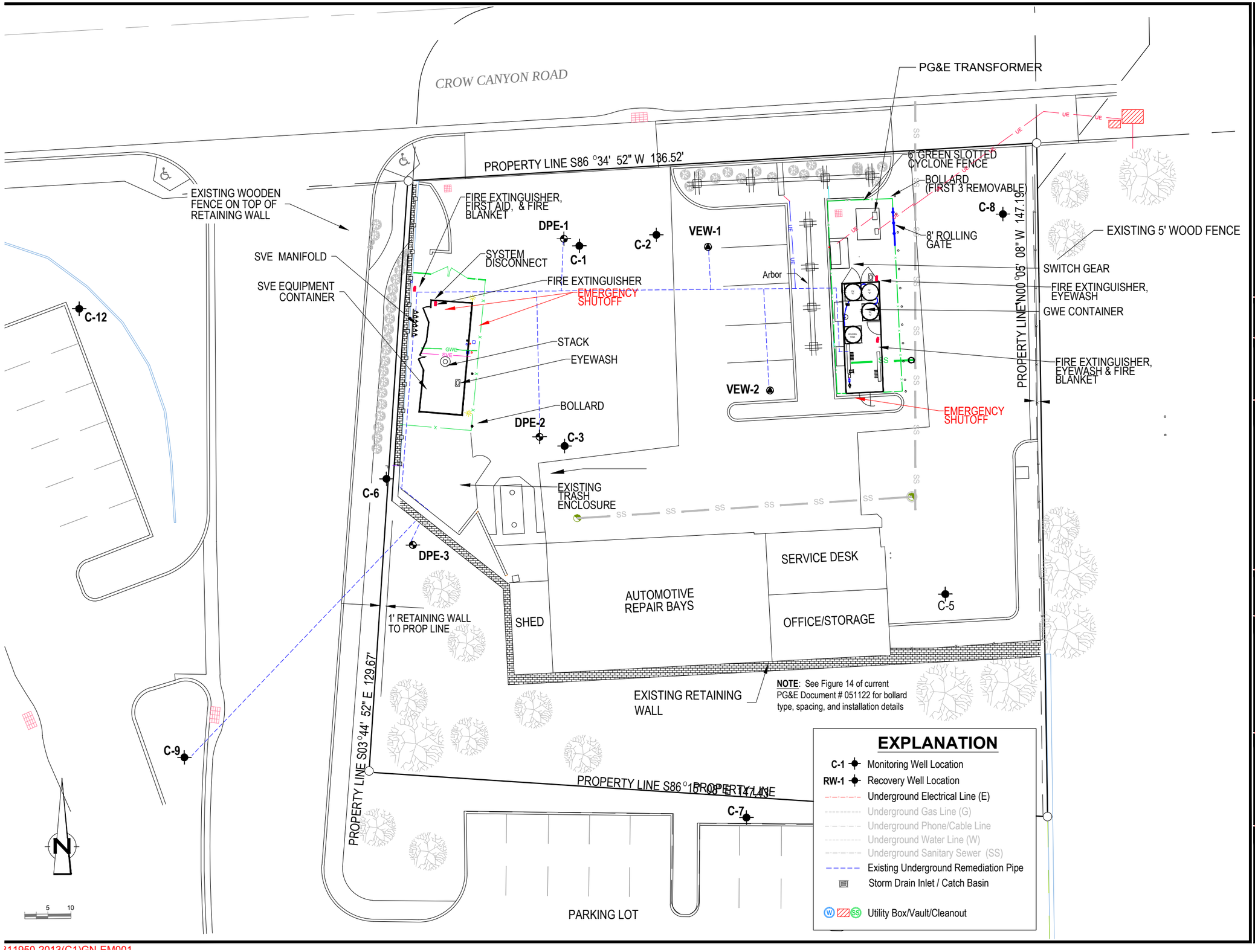
Figure 1 General Site Plan

Table 1 Groundwater Extraction & Treatment System - Hydrocarbon Analytical Data
Table 2 Groundwater Extraction & Treatment System - Operational Data & Dissolved Phase Hydrocarbon Mass Removal
Table 3 Soil Vapor Extraction System - Operational Data
Table 4 Soil Vapor Extraction System - Analytical Data & Mass Removal

Attachment A Air Toxics Laboratory Analytical Report
Attachment B Eurofins Lancaster Laboratory Analytical Report

c.c.: Mr. Eric Hetrick, Chevron EMC (electronic copy)
Mr. Kevin Hinkley, Property Owner
Ms. Diane Riggs, Forest Creek Townhomes Association

Figure



CLIENT

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY

PROJECT

FORMER CHEVRON STATION #9-5607
5269 CROW CANYON ROAD
CASTRO VALLEY, CA

TITLE

GENERAL SITE PLAN

PROJECT #311950

DRAWING STATUS

N°	Revision	Date	By
1	RELOCATE GWE TRAILER	10/12/13	DK
1	ADD SVE-1 AND SVE-2	10/23/13	DK
2	RELOCATE GWE TRAILER	3/25/14	DS
3	AS-BUILT	10/10/14	DS

SCALE VERIFICATION

THIS BAR MEASURES 1" ON ORIGINAL.

CONESTOGA-ROVERS & ASSOCIATES
5900 HOLLIS STREET, SUITE A
EMERYVILLE CA 94608
PHONE: 510.420.0700
FAX: 510.420.9170
WWW.CRAWORLD.COM

Source Reference:

Designed By: DS	Date: 10/10/2014	Drawing N°: FIG 1
Drafted By: DS	Date: 10/10/2014	
Reviewed By: DK	Date: 10/23/2014	
Scale: 1:10		

Tables

Table 1
Groundwater Extraction and Treatment System
Hydrocarbon Analytical Data
Former Chevron Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

	Influent						Midfluent 1						Midfluent 2						Effluent						
Sample Date (mm/dd/yy)	**TPHg Conc. (µg/L)**	**Benzene Conc. (µg/L)**	**Toluene Conc. (µg/L)**	**Ethylbenzene Conc. (µg/L)**	**Xylenes Conc. (µg/L)**	**MTBE Conc. (µg/L)**	**TPHg Conc. (µg/L)**	**Benzene Conc. (µg/L)**	**Toluene Conc. (µg/L)**	**Ethylbenzene Conc. (µg/L)**	**Xylenes Conc. (µg/L)**	**MTBE Conc. (µg/L)**	**TPHg Conc. (µg/L)**	**Benzene Conc. (µg/L)**	**Toluene Conc. (µg/L)**	**Ethylbenzene Conc. (µg/L)**	**Xylenes Conc. (µg/L)**	**MTBE Conc. (µg/L)**	**TPHg Conc. (µg/L)**	**Benzene Conc. (µg/L)**	**Toluene Conc. (µg/L)**	**Ethylbenzene Conc. (µg/L)**	**Xylenes Conc. (µg/L)**	**MTBE Conc. (µg/L)**	**pH[a]**
09/12/14	**6,000**	**1,800**	**19**	**120**	**94**	**4**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	7.4
10/13/14	**7,500**	**1,600**	**37**	**76**	**630**	**4**	<50	2	<0.5	<0.5	<0.5	<0.5	NM	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/06/14	**8,000**	**990**	**140**	**100**	**590**	<10	<50	2	<0.5	<0.5	<0.5	<0.5	NM	NM	NM	NM	NM	NM	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/02/14	**7,000**	**780**	**150**	**160**	**810**	**4**	<50	2	<0.5	<0.5	<0.5	<0.5	NM	NM	NM	NM	NM	NM	<50	<0.5	<0.5	<0.5	<0.5	<0.5	7.3
01/14/15	**3,700**	**290**	**36**	**33**	**390**	**3**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NM	NM	NM	NM	NM	NM	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/04/15	**4,100**	**190**	**14**	<0.5	**350**	**3**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NM	NM	NM	NM	NM	NM	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/03/15	**4,300**	**280**	**45**	**43**	**320**	**2**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NM	NM	NM	NM	NM	NM	<50	<0.5	<0.5	<0.5	<0.5	<0.5	6.8
04/16/15	**1,800**	**180**	**6**	**0.8**	**92**	**2**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NM	NM	NM	NM	NM	NM	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/14/15	**2,900**	**570**	**16**	**42**	**89**	**3**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NM	NM	NM	NM	NM	NM	<50	<0.5	<0.5	<0.5	<0.5	<0.5	

Notes and Abbreviations:

mm/dd/yy = month/day/year

Conc. = concentration

TPHg = total petroleum hydrocarbons quantified as gasoline

MTBE = methyl tertiary butyl ether

µg/L = micrograms per liter

<X.X = not detected at or below the detection limit indicated

NM = not measured

a = pH measured in the field

J = Estimated value ≥ the Method Detection Limit and < the Limit of Quantitation.

TPHg analyzed by EPA Method 8015M.

Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B.
MTBE analyzed by EPA Method 8260B.

Table 2
Groundwater Extraction and Treatment System
Operational Data and Dissolved Phase Hydrocarbons Mass Removal Data
Former Chevron Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Date							TPHg			Benzene			MTBE		
(mm/dd/yy)	Well IDs	Hour Meter[1] (hours)	Totalizer Reading (gallons)	Period Volume (gallons)	Period Operational Flow Rate (gpm)	Cumulative Volume (gallons)	TPHg Concentration (µg/L)	Period Removal[2] (pounds)	Cumulative Removal (pounds)	Benzene Concentration (µg/L)	Period Removal[2] (pounds)	Cumulative Removal (pounds)	MTBE Concentration (µg/L)	Period Removal[2] (pounds)	Cumulative Removal (pounds)
9/12/14 9:00	**DPE-1 - DPE-3, C-9**	4008.5	330,400	0	0.0	0	---	---	---	---	---	---	---	---	---
9/12/14 14:00	**DPE-1 - DPE-3, C-9**	4013.5	331,500	1,100	3.7	1,100	6,000	0.055	0.055	1,800	0.017	0.017	4	0.000	0.000
9/29/14 14:00	**DPE-1 - DPE-3, C-9**	4019.0	332,000	500	1.5	1,600	---	0.025	0.08	---	0.008	0.024	---	0.000	0.000
10/6/14 11:00	**DPE-1 - DPE-3, C-9**	4024.0	332,700	700	2.3	2,300	---	0.035	0.12	---	0.011	0.035	---	0.000	0.000
10/13/14 14:00	**DPE-1 - DPE-3, C-9**	4,130.0	341,085	8,385	1.3	10,685	7,500	0.525	0.64	1,600	0.112	0.146	4	0.000	0.000
10/20/14 11:30	**DPE-1 - DPE-3, C-9**	4,296.0	348,600	7,515	0.8	18,200	---	0.470	1.11	---	0.100	0.247	---	0.000	0.001
10/27/14 11:00	**DPE-1 - DPE-3, C-9**	4,413.0	354,200	5,600	0.8	23,800	---	0.350	1.46	---	0.075	0.322	---	0.000	0.001
11/6/14 13:15	**DPE-1 - DPE-3, C-9**	4,480.0	364,390	10,190	2.5	33,990	8,000	0.680	2.14	990	0.084	0.406	10	0.001	0.002
11/21/14 13:50	**DPE-1 - DPE-3, C-9**	4,668.6	373,033	8,643	0.8	42,633	---	0.577	2.72	---	0.071	0.477	---	0.001	0.002
12/2/14 15:15	**DPE-1 - DPE-3, C-9**	4,781.9	379,635	6,602	1.0	49,235	7,000	0.386	3.10	780	0.043	0.520	4	0.000	0.003
12/16/14 11:30	**DPE-1 - DPE-3, C-9**	5,030.7	399,600	19,965	1.3	69,200	---	1.166	4.27	---	0.130	0.650	---	0.001	0.003
12/31/14 10:30	**DPE-1 - DPE-3, C-9**	5,390.1	436,625	37,025	1.7	106,225	---	2.163	6.43	---	0.241	0.891	---	0.001	0.004
1/14/15 11:25	**DPE-1 - DPE-3, C-9**	5,726.6	461,160	24,535	1.2	130,760	3,700	0.757	7.19	290	0.059	0.950	3	0.001	0.005
1/23/15 14:35	**DPE-1 - DPE-3, C-9**	5,945.7	472,688	11,528	0.9	142,288	---	0.356	7.55	---	0.028	0.978	---	0.000	0.005
2/4/15 11:00	**DPE-1 - DPE-3, C-9**	6,226.7	486,220	13,532	0.8	155,820	4,100	0.463	8.01	190	0.021	1.000	3	0.000	0.006
2/17/15 14:30	**DPE-1 - DPE-3, C-9**	6,309.0	491,310	5,090	1.0	160,910	---	0.174	8.18	---	0.008	1.008	---	0.000	0.006
3/3/15 14:25	**DPE-1 - DPE-3, C-9**	6,476.0	504,915	13,605	1.4	174,515	4,300	0.488	8.67	280	0.032	1.040	2	0.000	0.006
3/11/15 11:45	**DPE-1 - DPE-3, C-9**	6,501.9	507,364	2,449	1.6	176,964	---	0.088	8.76	---	0.006	1.045	---	0.000	0.006
3/16/15 12:00	**DPE-1 - DPE-3, C-9**	6,530.6	509,837	2,473	1.4	179,437	---	0.089	8.85	---	0.006	1.051	---	0.000	0.006
4/2/15 9:30	**DPE-1 - DPE-3, C-9**	6,754.4	525,400	15,563	1.2	195,000	---	0.558	9.41	---	0.036	1.088	---	0.000	0.006
4/16/15 14:30	**DPE-1 - DPE-3, C-9**	7,095.2	546,110	20,710	1.0	215,710	1,800	0.311	9.72	180	0.031	1.119	2	0.000	0.007
4/30/15 10:20	**DPE-1 - DPE-3, C-9**	7,332.1	559,100	12,990	0.9	228,700	---	0.195	9.91	---	0.020	1.138	---	0.000	0.007
5/14/15 12:15	**DPE-1 - DPE-3, C-9**	7,353.3	562,200	3,100	2.4	231,800	2,900	0.075	9.99	570	0.015	1.153	3	0.000	0.007
5/29/15 9:30	**DPE-1 - DPE-3, C-9**	7,612.9	576,000	13,800	0.9	245,600	---	0.334	10.32	---	0.066	1.219	---	0.000	0.007
Agency Limits															
					Total Extracted Volume (gal):	**245,600**	**Pounds Removed:**	**0.60**	**10.32**	**Pounds Removed:**	**0.10**	**1.22**	**Pounds Removed:**	**0.00**	**0.01**
					Average Operational Flow Rate (gpm)[3]:	**1.14**	**Gallons Removed[4]:**	**0.10**	**1.69**	**Gallons Removed[4]:**	**0.01**	**0.17**	**Gallons Removed[4]:**	**0.00**	**0.00**

Reporting Period: 4/16/2015 -5/29/2015

Number of Days during Reporting Period	**43**	**days**
Gallons of Extracted Ground Water	**29,890**	**gal**
Average Flow Rate	**0.96**	**gpm**
Pounds of TPHg Removed	**0.604**	**lbs**
TPHg Removal Rate	**0.014**	**lbs/day**
Pounds of Benzene Removed	**0.100**	**lbs**
Benzene Removal Rate	**0.002**	**lbs/day**
Pounds of MTBE Removed	**0.000**	**lbs**
MTBE Removal Rate	**0.000**	**lbs/day**

Cumulative Results Since Start-up:

Number Days since Startup	**259**	**days**
Cumulative Total Gallons Extracted	**245,600**	**gal**
Average Flow Rate[3]	**1.14**	**gpm**
Cumulative Pounds of TPHg Removed	**10.32**	**lbs**
TPHg Removal Rate	**0.040**	**lbs/day**
Cumulative Pounds of Benzene Removed	**1.219**	**lbs**
Benzene Removal Rate	**0.005**	**lbs/day**
Cumulative Pounds of MTBE Removed	**0.007**	**lbs**
MTBE Removal Rate	**0.000**	**lbs/day**

Formulas and Assumptions:

1. Hour meter readings taken at the end of the site visit
2. Mass Removed During the Period = Volume of Water Extracted (gallons) x Concentration (µg/L) x (g/10^6 µg) x (lb/453.6g) x (3.785 L
3. Average Flow Rate = (Volume of Extracted Water (gal) / Number of Operational Days) * (60 minutes/hour) * (24 hours/day)
4. Gallons Removed = (Mass (lb) / Density (g/cc)) x 453.6 (g/lb) x (L/1000 cc) x (gal/3.785 L)

Density: = 0.73 g/cc TPHg
= 0.88 g/cc Benzene
= 0.74 g/cc MTBE

Abbreviations:

TPHg = total petroleum hydrocarbons as gasoline
MTBE = methyl tertiary butyl ether
L = liter
gal = gallon
gpm = gallon per minute
µg/L = micrograms per liter
g = grams
cc = cubic centimeter
--- = not measured
lb = pounds

Table 3
Soil Vapor Extraction System
Operational Data
Former Chevron Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Date (mm/dd/yy hh:mm)	Operating Wells (open)	Operating Time (hours)	Hour Meter (hours)	System Uptime (%)	Period Operation (hours)	Blower Vacuum (inHg)	INF-1 Vacuum (inHg)	INF-1 Temperature (^{o}F)	INF-1 Measured Flow (acfm)	INF-1 Calculated Flow (scfm)	INF-2 Pressure[1] (inH_2O)	INF-2 Temperature (^{o}F)	INF-2 Measured Flow[1] (acfm)	INF-2 Calculated Flow (scfm)	Effluent Flow Rate (scfm)	Dilution Air (% open)	Pre-Oxidizer Temp (^{o}F)	Post-Oxidizer Temp (^{o}F)	INF-2 OVA (ppmv)	Effluent PID (ppmv)	Mass Removal based on OVA (ppd)	Destruction Efficiency (%)
9/12/14 14:00	C9, DPE-1 - DPE3, VE-1, VE-2	0.00	4013.5	0%	0.0	NM	3.00	NM	NM	NM	10.0	155	294	259	259	20	747	NM	8000	20.0	663.8	99.8%
9/29/14 14:00	C9, DPE-1 - DPE3, VE-1, VE-2	5.50	4019.0	1.3%	5.5	15.0	2.81	93	165	143	11	189	255	213	213	20	880	NM	NM	0.0	NM	100.0%
10/6/14 11:00	C9, DPE-1 - DPE3, VE-1, VE-2	5.00	4024	3.0%	5.0	15.0	2.81	83	144	127	10	176	255	217	217	25	899	NM	560	0.2	39.0	100.0%
10/13/14 14:00	C9, DPE-1 - DPE-3	106.00	4130	62.0%	106.0	14.5	2.35	68	191	176	10.9	180	268	227	227	0	750	883	1100	5.0	80.1	99.5%
10/20/14 11:30	C9, DPE-1 - DPE-3	166.00	4296	100.3%	166.0	15.0	3.18	79	140	123	10.5	171	255	219	219	0	750	927	650	0.3	45.6	100.0%
10/27/14 11:00	C9, DPE-1, DPE-2	117.00	4413	69.9%	117.0	15.0	4.1	61	161	141	11.6	160	270	236	236	0	750	897	700	0.4	53.1	99.9%
11/6/14 13:15	C9, DPE-3, DPE-2	67.00	4480	27.7%	67.0	20.0	5.0	61	146	123	10.7	61	146	152	123	0	701	900	1250	0.0	60.9	100.0%
11/21/14 13:50	C9, DPE-3, DPE-2	188.60	4669	52.3%	188.6	20.0	5.3	68	132	109	11.1	174	176	151	109	0	698	809	558	0.4	27.0	99.9%
12/2/14 15:15	C9, DPE-3, DPE-2	113.30	4782	42.7%	113.3	20.0	7.4	63	103	78	3.3	169	157	133	78	0	697	785	1215	0.5	51.8	100.0%
12/16/14 11:30	C9, DPE-3, DPE-2	249.10	5031	75.0%	249.1	18.5	10.2	64	61	41	4.3	172	118	100	100	0	700	750	1650	3.0	52.7	99.8%
12/31/14 10:30	C9, DPE-3, DPE-2	359.10	5390	100.0%	359.1	22.0	10.0	72	133	88	7.2	179	133	112	112	0	698	707	425	5.0	15.2	98.8%
1/14/15 11:25	C9, DPE-3, DPE-2	336.50	5727	99.9%	336.5	23.0	8.1	71	148	107	9.8	176	148	126	126	0	700	752	1,000	0.5	40.4	100%
1/23/15 14:35	C9, DPE-3, DPE-2	219.10	5946	100.0%	219.1	23.0	7.1	76	157	118	9.6	174	157	134	134	0	700	764	915	3.5	39.3	99.6%
2/4/15 11:00	C9 DPE-2	281.00	6227	98.8%	281.0	22.0	8.3	75	137	98	5.9	183	137	114	114	0	698	738	715	0.7	26.2	99.9%
2/17/15 14:30	C9 DPE-2	82.30	6309	26.1%	82.3	21.5	10.1	62	136	91	6.9	170	136	116	116	0	698	682	515	0.1	19.2	100.0%
3/3/15 14:25	C9 DPE-1	167.00	6476	49.7%	167.0	23.0	11.1	79	118	73	4.0	185	118	98	98	0	690	698	295	0.4	9.2	99.9%
3/11/15 11:45	C9 DPE-3	25.90	6502	13.7%	25.9	23.0	10.9	67	118	75	7.2	151	118	104	104	0	710	740	480	0.2	16.0	100.0%
3/16/15 12:00	C9 DPE-3	28.70	6531	23.9%	28.7	23.0	10.2	67	121	80	7.1	175	121	102	102	0	700	689	235	0.0	7.7	100.0%
4/2/15 9:30	C9 DPE-3	223.80	6754	55.2%	223.8	23.0	8.4	73	146	104	10.0	177	146	124	124	0	698	688	125	0.4	5.0	99.7%
4/16/15 14:30	DPE-2, DPE-3	340.80	7095	99.9%	340.8	23.0	8.4	87	137	95	6.8	199	137	112	112	0	699	700	210	0.6	7.5	99.7%
4/30/15 10:20	DPE-1, DPE-2	236.90	7332	71.4%	236.9	23.0	8.2	86	137	96	4.6	193	137	112	112	0	701	699	140	0.8	5.0	99.4%
5/14/15 12:15	DPE-1, VE-2	21.20	7353	6.3%	21.2	23.0	13.0	81	98	54	1.9	187	223	183	183	40	698	693	75	0.0	4.4	100.0%
5/29/15 9:30	DPE-1, VE-2	259.60	7613	72.7%	259.6	23.0	11.8	79	44	26	4.2	180	118	98	98	50	699	724	190	2.3	6.0	98.8%
Reporting Period			**518**	**50.4%**	**518**										**126**							**99.5%**
Permit Conditions:										**<300**				**<300**			**>600**					**>98.5%**

Abbreviations and Notes:

Reporting period from April 14, 2015 through May 29,2015

mm/dd/yy = month/day/year
hh:mm = hour : minute
inHg = inches of mercury
inH_2O = inches of water
^{o}F = degrees Fahrenheit
acfm = actual cubic feet per minute
scfm = standard cubic feet per minute (flow in scfm = flow in acfm * [operating pressure{abs} / standard pressure {abs}] * [standard temperature {abs} / operating temperature {abs}])
% = percentage
INF-1 = pre-dilution system influent
INF-2 = post-dilution system influent
NM = not measured
ppmv = parts per million by volume
PID = photo-ionization detector
OVA = organic vapor analyzer
ppd = pounds per day
1. = INF-2 flow read from chart recorder. INF-2 pressure used to convert acfm to scfm.
2. = water in pipe; unable to measure accurate concentration/ LEL readings

Compliance:

BAAQMD Requirements:
Flow Rate < 300 scfm
Oxidizer Temperature > 600 degrees Fahrenheit in electric catalytic mode and > 1400 degrees in thermal catalytic mode
Benzene Emission Limit < 0.017ppd
Destruction Efficiency (measured as hexane)

98.50%	VOC >2,000 ppmv
97.00%	VOC >200 and <2,000 ppmv
90.00%	VOC < 200 ppmv

Note: If outlet VOC < 10 ppmv, destruction efficiency requirement is waived

Table 4
Soil Vapor Extraction System
Analytical Data Mass Removal
Former Chevron Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Date	Concentrations[1]									TPHg			Benzene			MTBE			VOC		
	INF-2					Effluent															
(mm/dd/yy hh:mm)	Operating Wells	TPHg (ppmv)	Benzene (ppmv)	MTBE (ppmv)	VOC (ppmv)	TPHg (ppmv)	Benzene (ppmv)	MTBE (ppmv)	VOC (ppmv)	Removal Rate[2, 6] (ppd)	Cumulative Removed[7] (pounds)	Emission Rate[2, 6] (ppd)	Removal Rate[3, 6] (ppd)	Cumulative Removed[7] (pounds)	Emission Rate[3, 6] (ppd)	Removal Rate[4, 6] (ppd)	Cumulative Removed[7] (pounds)	Emission Rate[4, 6] (ppd)	Removal Rate[5, 6] (ppd)	Emission Rate[5, 6] (ppd)	Destruction Efficiency (%)
9/12/14 14:00	C9, DPE-1 - DPE3, VE-1, VE-2	4,200	44	38	4,282	46	0.39	0.19	46.58	348.5	0.0	3.8	3.3	0.0	0.0	3.2	0.0	0.0	355.3	4.0	98.9%
9/29/14 14:00	C9, DPE-1 - DPE3, VE-1, VE-2	--	--	--	--	--	--	--	--	287.1	72.8	3.1	2.7	0.7	0.0	2.7	0.7	0.0	292.7	3.3	98.9%
10/6/14 11:00	C9, DPE-1 - DPE3, VE-1, VE-2	--	--	--	--	--	--	--	--	292.3	133.2	3.2	2.8	1.3	0.0	2.7	1.2	0.0	298.0	3.3	98.9%
10/13/14 11:00	C9, DPE-1 - DPE-3	1,500	10	< 20	1,530	<5	< 0.5	< 0.5	< 6.0	109.3	1019.9	0.4	0.7	8.9	0.0	1.5	10.5	0.0	111.4	0.4	99.6%
10/20/14 11:30	C9, DPE-1 - DPE-3	--	--	--	--	--	--	--	--	105.3	1762.0	0.4	0.6	13.3	0.0	1.4	20.6	0.0	107.4	0.4	99.6%
10/27/14 11:00	C9, DPE-1, DPE2	--	--	--	--	--	--	--	--	113.8	2296.2	0.4	0.7	16.6	0.0	1.6	27.9	0.0	116.1	0.5	99.6%
11/6/14 13:15	C9, DPE-2, DPE3	--	--	--	--	--	--	--	--	73.1	2557.0	0.2	0.4	18.2	0.0	1.0	31.5	0.0	74.5	0.2	99.6%
11/21/14 13:50	C9, DPE-2, DPE-3*	558	0.01	0.01	558	0.31	0.0020	< 0.002	0.31	27.0	2950.0	0.0	0.0	19.9	0.0	0.0	35.4	0.0	27.0	0.0	99.9%
12/2/14 15:15	C9, DPE-2, DPE-3	1,000	12	9	1,021	0.23	0.0012	< 0.001	0.23	42.6	3114.3	0.0	0.5	21.0	0.0	0.4	36.3	0.0	43.5	0.0	100.0%
12/16/14 11:30	C9, DPE-2, DPE-3	--	--	--	--	--	--	--	--	32.0	3501.4	0.0	0.3	25.2	0.0	0.3	39.8	0.0	32.6	0.0	100.0%
12/31/14 10:30	C9, DPE-2, DPE-3	--	--	--	--	--	--	--	--	35.9	4008.9	0.0	0.4	30.7	0.0	0.3	44.4	0.0	36.6	0.0	100.0%
1/14/15 11:25	C9, DPE-2, DPE-3	870	13.00	4.7	888	0.08	<0.001	<0.001	0.08	35.1	4506.7	0.0	0.5	36.8	0.0	0.2	48.0	0.0	35.8	0.0	100.0%
1/23/15 14:35	C9, DPE-2, DPE-3	--	--	--	--	--	--	--	--	37.4	4837.5	0.0	0.5	41.3	0.0	0.2	49.8	0.0	38.1	0.0	100.0%
2/4/15 11:00	C9 DPE-2	800	17	7	824	1.5	0.014	0.0012	1.52	29.3	5227.7	0.1	0.6	47.5	0.0	0.3	52.6	0.0	30.2	0.1	99.8%
2/17/15 14:30	C9 DPE-2	--	--	--	--	--	--	--	--	29.8	5328.9	0.1	0.6	49.5	0.0	0.3	53.6	0.0	30.7	0.1	99.8%
3/3/15 14:25	C9 DPE-1	320	5.4	2.5	328	0.076	<0.001	<0.001	0.078	10.0	5467.3	0.0	0.2	52.0	0.0	0.1	54.8	0.0	10.3	0.0	100.0%
3/11/15 11:45	C9 DPE-3	--	--	--	--	--	--	--	--	10.7	5478.4	0.0	0.2	52.2	0.0	0.1	54.9	0.0	10.9	0.0	100.0%
3/16/15 12:00	C9 DPE-3	--	--	--	--	--	--	--	--	10.5	5491.1	0.0	0.2	52.4	0.0	0.1	55.0	0.0	10.8	0.0	100.0%
4/2/15 9:30	C9 DPE-3	--	--	--	--	--	--	--	--	12.7	5599.5	0.0	0.2	54.1	0.0	0.1	55.9	0.0	13.1	0.0	100.0%
4/16/15 14:30	DPE-2, DPE-3	250	2.7	1.1	254	0.84	0.008	0.002	0.850	9.0	5753.5	0.0	0.1	56.1	0.0	0.0	56.9	0.0	9.1	0.0	99.7%
4/30/15 10:20	DPE-1, DPE-2	--	--	--	--	--	--	--	--	9.0	5842.0	0.0	0.1	56.9	0.0	0.0	57.3	0.0	9.1	0.0	99.7%
5/14/15 12:15	DPE-1, VE-2	160	2.8 M	0.71	164	0.11	<0.001	<0.001	0.112	9.4	5850.1	0.0	0.1	57.0	0.0	0.0	57.3	0.0	9.6	0.0	99.9%
5/29/15 9:30	DPE-1, VE-2	--	--	--	--	--	--	--	--	5.0	5928.2	0.0	0.1	58.3	0.0	0.0	57.7	0.0	5.2	0.0	99.9%
Permit conditions															<0.017 ppd						>98.5% for >2,000 ppm inlet >97% for >200-<2,000 ppm inlet >90% for <200 ppm inlet
									Period Pounds Removed[9]:	**TPHg =**	**175**		**Benzene =**	**2.2**		**MTBE =**	**0.8**			
									Total Pounds Removed:	**TPHg =**	**5,928**		**Benzene =**	**58.3**		**MTBE =**	**57.7**			

Notes:

1. TPHg, Benzene, and MTBE analyzed by EPA Method 8015/8020. Vapor samples were collected in 1-liter tedlar bags unless otherwise noted.
2. Molecular weight of TPHg assumed to be 86 lb/lb-mole as hexane.
3. Molecular weight of Benzene assumed to be 78 lb/lb-mole.
4. Molecular weight of MTBE assumed to be 88 lb/lb-mole.
5. Molecular weight of VOCs assumed to be 86 lb/lb-mole as hexane.
6. Removal/Emission Rate (ppd) = C (ppmv) x Q (scfm) x (1lb-mole/386ft^3) x MW (lb/lb-mole) x 60 min/hr x 24 hr/day x 10^{-6}
   C = concentration = concentration
   Q = flow = flow
   MW = molecular weigh = molecular weight
7. Cumulative TPHg / Benzene / MTBE removed = Previous Total + (Average of Previous and Current Removal Rates * Operation Interval)
8. Infllluent not measured due to water in vapor stream. Individual well samples were collected at a lower vacuum at this time.
9. Reporting period from April 16, 2015 through May 29, 2015

BAAQMD Requirements:

Flow Rate < 300 scfm

Oxidizer Temperature > 600 deg Fahrenheit in electric catalytic mode and > 1400 degrees in thermal catalytic mode

Benzene Emission Limit < 0.017 ppd

Destruction efficiency (measured as hexane)

98.50% VOC >2,000 ppmv
97.00% VOC >200 and <2,000 ppmv
90.00% VOC < 200 ppmv
Note: If outlet VOC < 10 ppmv, destruction efficiency requirement is waived

Abbreviations:

mm/dd/yy = month/day/year
hh:mm = hours : minutes
TPHg = total petroluem hydrocarbons as gasoline
MTBE = methyl tertiary butyl ether
VOC = volatile organic compounds
ppmv = parts per million by volume
ppd = pounds per day
NA = not applicable
NM = not measured
lb = pounds
ft^3 = cubic feet
scfm = standard cubic feet per minute
INF-1 = pre-dilution system influent
INF-2 = post-dilution system influent
M = reported value may be biased due to apparent matrix interferences.

Attachment A
Air Toxics Laboratory Analytical Report

eurofins | Air Toxics

5/28/2015
Ms. Judy Gilbert
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Castro Valley
Project #: 311950 2015.1 94.09
Workorder #: 1505246

Dear Ms. Judy Gilbert

The following report includes the data for the above referenced project for sample(s) received on 5/15/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-3 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kyle Vagadori at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kyle Vagadori

Project Manager

eurofins | Air Toxics

WORK ORDER #: 1505246

Work Order Summary

CLIENT:	Ms. Judy Gilbert Conestoga-Rovers Associates (CRA) 5900 Hollis Street Suite A Emeryville, CA 94608	**BILL TO:**	Accounts Payable Chevron U.S.A. Inc. 6001 Bollinger Canyon Road L4310 San Ramon, CA 94583
PHONE:	510-420-3314	**P.O. #**	311950 2015.1 94.09
FAX:	510-420-9170	**PROJECT #**	311950 2015.1 94.09 Castro Valley
DATE RECEIVED:	05/15/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	05/28/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	EFF	Modified TO-3	Tedlar Bag	Tedlar Bag
02A	INF	Modified TO-3	Tedlar Bag	Tedlar Bag
03A	Lab Blank	Modified TO-3	NA	NA
04A	LCS	Modified TO-3	NA	NA
04AA	LCSD	Modified TO-3	NA	NA
04B	LCS	Modified TO-3	NA	NA
04BB	LCSD	Modified TO-3	NA	NA

CERTIFIED BY: Heidi Mayo DATE: 05/28/15

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
Modified TO-3
Conestoga-Rovers Associates (CRA)
Workorder# 1505246

Two 1 Liter Tedlar Bag samples were received on May 15, 2015. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with photo ionization and flame ionization detection. The TPH results are calculated using the response of Gasoline. A molecular weight of 100 is used to convert the TPH ppmv result to ug/L. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications.

Requirement	***TO-3***	***ATL Modifications***
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch </= 20 samples.
Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
Moisture Control	Nafion system	Sorbent system
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture

Receiving Notes

The Chain of Custody (COC) information for sample INF did not match the entry on the sample tag with regard to sample identification. The information on the COC was used to process and report the sample.

Analytical Notes

The recovery of surrogate Fluorobenzene in sample INF was outside control limits due to high level hydrocarbon matrix interference.

Total Xylenes concentration is calculated by summing the individual concentrations of m,p-Xylene and

O-Xylene.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

eurofins | Air Toxics

Summary of Detected Compounds
MODIFIED EPA METHOD TO-3 GC/PID/FID

Client Sample ID: EFF

Lab ID#: 1505246-01A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Toluene	0.0010	0.0038	0.0033	0.012
TPH (Gasoline Range)	0.025	0.10	0.11	0.44

Client Sample ID: INF

Lab ID#: 1505246-02A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Benzene	0.012	0.040	2.8 M	8.9 M
Toluene	0.012	0.047	0.47	1.8
Ethyl Benzene	0.012	0.054	0.38	1.6
Total Xylenes	0.025	0.11	0.87	3.8
Methyl tert-butyl ether	0.012	0.045	0.71	2.6
TPH (Gasoline Range)	0.31	1.3	160	640

eurofins | Air Toxics

Client Sample ID: EFF

Lab ID#: 1505246-01A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d051511**	**Date of Collection: 5/14/15 1:05:00 PM**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/15 03:13 PM**	

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Benzene	0.0010	0.0032	Not Detected	Not Detected
Toluene	0.0010	0.0038	0.0033	0.012
Ethyl Benzene	0.0010	0.0043	Not Detected	Not Detected
Total Xylenes	0.0020	0.0087	Not Detected	Not Detected
Methyl tert-butyl ether	0.0010	0.0036	Not Detected	Not Detected
TPH (Gasoline Range)	0.025	0.10	0.11	0.44

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	116	75-150
Fluorobenzene (PID)	121	75-125

eurofins | Air Toxics

Client Sample ID: INF

Lab ID#: 1505246-02A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d051510**	**Date of Collection: 5/14/15 1:00:00 PM**	
Dil. Factor:	**12.5**	**Date of Analysis: 5/15/15 02:40 PM**	

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Benzene	0.012	0.040	2.8 M	8.9 M
Toluene	0.012	0.047	0.47	1.8
Ethyl Benzene	0.012	0.054	0.38	1.6
Total Xylenes	0.025	0.11	0.87	3.8
Methyl tert-butyl ether	0.012	0.045	0.71	2.6
TPH (Gasoline Range)	0.31	1.3	160	640

M = Reported value may be biased due to apparent matrix interferences.
Q = Exceeds Quality Control limits, possibly due to matrix effects.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	241 Q	75-150
Fluorobenzene (PID)	204 Q	75-125

eurofins | Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 1505246-03A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d051506**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/15 12:18 PM**	

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Benzene	0.0010	0.0032	Not Detected	Not Detected
Toluene	0.0010	0.0038	Not Detected	Not Detected
Ethyl Benzene	0.0010	0.0043	Not Detected	Not Detected
Total Xylenes	0.0020	0.0087	Not Detected	Not Detected
Methyl tert-butyl ether	0.0010	0.0036	Not Detected	Not Detected
TPH (Gasoline Range)	0.025	0.10	Not Detected	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	107	75-150
Fluorobenzene (PID)	112	75-125

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1505246-04A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d051502**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/15 09:09 AM**	

Compound	%Recovery	Method Limits
TPH (Gasoline Range)	82	75-125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	115	75-150

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1505246-04AA

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d051503**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/15 09:48 AM**	

Compound	%Recovery	Method Limits
TPH (Gasoline Range)	82	75-125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	114	75-150

eurofins | Air Toxics

Client Sample ID: LCS

Lab ID#: 1505246-04B

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d051519b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/15 08:18 PM**	

Compound	%Recovery	Method Limits
Benzene	80	75-125
Toluene	80	75-125
Ethyl Benzene	82	75-125
Total Xylenes	88	75-125
Methyl tert-butyl ether	79	75-125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (PID)	103	75-125

eurofins | Air Toxics

Client Sample ID: LCSD

Lab ID#: 1505246-04BB

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d051520b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 5/15/15 08:53 PM**	

Compound	%Recovery	Method Limits
Benzene	84	75-125
Toluene	82	75-125
Ethyl Benzene	86	75-125
Total Xylenes	91	75-125
Methyl tert-butyl ether	83	75-125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (PID)	107	75-125

Attachment B
Eurofins Lancaster Laboratory Analytical Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

June 03, 2015

Project: 95607

Submittal Date: 05/16/2015
Group Number: 1561841
PO Number: 0015164161
Release Number: HETRICK

State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
EFF-1-W-051415 Grab Groundwater	7892054
MID-1-W-051415 Grab Groundwater	7892056
INF-1-W-051415 Grab Groundwater	7892057

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ .

ELECTRONIC COPY TO	CRA	Attn: Judy Gilbert
ELECTRONIC COPY TO	Chevron	Attn: CRA EDD

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

Sample Description: EFF-1-W-051415 Grab Groundwater
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 7892054
LL Group # 1561841
Account # 10880

Project Name: 95607

Collected: 05/14/2015 12:00 by DS

Submitted: 05/16/2015 10:25
Reported: 06/03/2015 16:15

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

EFF1-

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

General Sample Comments

CA ELAP Lab Certification No. 2792
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F151432AA	05/23/2015 05:49	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F151432AA	05/23/2015 05:49	Anita M Dale	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15138A53A	05/18/2015 19:21	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15138A53A	05/18/2015 19:21	Marie D Beamenderfer	1

*=This limit was used in the evaluation of the final result

Sample Description: MID-1-W-051415 Grab Groundwater
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 7892056
LL Group # 1561841
Account # 10880

Project Name: 95607

Collected: 05/14/2015 12:10 by DS

Submitted: 05/16/2015 10:25
Reported: 06/03/2015 16:15

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

MID1-

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	N.D.	0.5	1	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
10945	Toluene	108-88-3	N.D.	0.5	1	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

General Sample Comments

CA ELAP Lab Certification No. 2792
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D151381AA	05/18/2015 11:45	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D151381AA	05/18/2015 11:45	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15138A53A	05/18/2015 13:46	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15138A53A	05/18/2015 13:46	Marie D Beamenderfer	1

*=This limit was used in the evaluation of the final result

Sample Description: INF-1-W-051415 Grab Groundwater
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 7892057
LL Group # 1561841
Account # 10880

Project Name: 95607

Collected: 05/14/2015 12:30 by DS

Submitted: 05/16/2015 10:25
Reported: 06/03/2015 16:15

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

INF1-

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
10945	Benzene	71-43-2	570	10	20	20
10945	Ethylbenzene	100-41-4	42	1	2	2
10945	Methyl Tertiary Butyl Ether	1634-04-4	3	1	2	2
10945	Toluene	108-88-3	16	1	2	2
10945	Xylene (Total)	1330-20-7	89	1	2	2
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	2,900	50	100	1

General Sample Comments

CA ELAP Lab Certification No. 2792
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D151435AA	05/23/2015 13:58	Daniel H Heller	2
10945	BTEX/MTBE	SW-846 8260B	1	D151435AA	05/23/2015 21:36	Daniel H Heller	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D151435AA	05/23/2015 13:58	Daniel H Heller	2
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D151435AA	05/23/2015 21:36	Daniel H Heller	20
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15138A53A	05/18/2015 20:16	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15138A53A	05/18/2015 20:16	Marie D Beamenderfer	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: ChevronTexaco Group Number: 1561841
Reported: 06/03/2015 16:15

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D151381AA	Sample number(s): 7892056								
Benzene	N.D.	0.5	1	ug/l	113		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	106		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	109		75-120		
Toluene	N.D.	0.5	1	ug/l	112		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	111		80-120		
Batch number: D151435AA	Sample number(s): 7892057								
Benzene	N.D.	0.5	1	ug/l	106		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	91		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	100		75-120		
Toluene	N.D.	0.5	1	ug/l	97		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	96		80-120		
Batch number: F151432AA	Sample number(s): 7892054								
Benzene	N.D.	0.5	1	ug/l	102		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	98		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	97		75-120		
Toluene	N.D.	0.5	1	ug/l	102		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	98		80-120		
Batch number: 15138A53A	Sample number(s): 7892054,7892056-7892057								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	100		80-139		

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: D151381AA	Sample number(s): 7892056 UNSPK: 7892056								
Benzene	94	97	72-134	3	30				
Ethylbenzene	88	91	71-134	3	30				
Methyl Tertiary Butyl Ether	87	89	72-126	2	30				
Toluene	92	95	80-125	4	30				
Xylene (Total)	90	94	79-125	4	30				
Batch number: D151435AA	Sample number(s): 7892057 UNSPK: P892125								
Benzene	115	113	72-134	2	30				
Ethylbenzene	98	106	71-134	8	30				

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco Group Number: 1561841
Reported: 06/03/2015 16:15

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Methyl Tertiary Butyl Ether	101	99	72-126	2	30				
Toluene	103	113	80-125	9	30				
Xylene (Total)	103	111	79-125	8	30				
Batch number: F151432AA	Sample number(s): 7892054 UNSPK: 7892054								
Benzene	105	107	72-134	1	30				
Ethylbenzene	100	105	71-134	5	30				
Methyl Tertiary Butyl Ether	94	95	72-126	0	30				
Toluene	103	105	80-125	2	30				
Xylene (Total)	100	103	79-125	3	30				
Batch number: 15138A53A	Sample number(s): 7892054,7892056-7892057 UNSPK: P887676								
TPH-GRO N. CA water C6-C12	103	99	92-144	4	30				

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE
Batch number: D151381AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7892056	95	100	95	96
Blank	97	98	97	97
LCS	95	101	96	98
MS	96	103	96	99
MSD	94	103	95	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: D151435AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7892057	97	99	98	96
Blank	99	100	92	93
LCS	98	102	92	98
MS	98	103	91	100
MSD	95	101	96	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: F151432AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7892054	97	100	97	88
Blank	99	102	97	88
LCS	97	103	97	94
MS	98	106	98	95
MSD	97	103	97	95
Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ChevronTexaco Group Number: 1561841
Reported: 06/03/2015 16:15

Surrogate Quality Control

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 15138A53A

	Trifluorotoluene-F
7892054	96
7892056	97
7892057	134
Blank	98
LCS	111
MS	108
MSD	109
Limits:	63-135

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Environmen l Analysis Request/Chain of (istody

eurofins | Lancaster Laboratories Environmental

051515-02 Acct. # 10880 Group # 1561841 Sample # 7892054-57

Client: Chevron EMC	
Project Name/#: Castro Valley	Site ID #: 95607
Project Manager: Judy Gilbert	P.O. #: Direct Bill To Chevro
Sampler: Darrell Smolko	PWSID #:
Phone #: 925 334 8617	Quote #:
State where sample(s) were collected:	GWE Effluent MID 1 MID 2 INF

Matrix: Sediment ☐ Soil ☐; Water: Ground ☑ Surface ☐ Potable ☐ NPDES ☐; Other:

Analyses Requested / Preservation Codes

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water	Other	Total # of Containers	TPH-g by 8015M	BTEX by 8260	MTBE by 8260	Remarks
EFF-1	5.14.15	1200				X		6	X	X	X	
MID-2	↓	1220				X		6	X	X	X	HOLD MID-2, SAMPLE ONLY IF MID-1 > N.D.
MID-1	↓	1210				X		6	X	X	X	24 TAT on MID-1
INF-1	↓	1230				X		6	X	X	X	

For Lab Use Only
SF #: ______
SCR #: ______

Preservation Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 P = H_3PO_4
O = Other

Turnaround Time Requested (TAT) (please check): Standard ☑ Rush ☑
(Rush TAT is subject to laboratory approval and surcharges.)

Date results are needed: MID-1 24 TAT

Rush results requested by (please check): E-Mail ☐ Phone ☐

E-mail Address: jgilbert@craworld.com dsmolko@craworld.com

Phone:

Data Package Options (please check if required)

Type I (Validation/non-CLP) ☐ MA MCP ☐
Type III (Reduced non-CLP) ☐ CT RCP ☐
Type IV (CLP SOW) ☐ TX TRRP-13 ☐
Type VI (Raw Data Only) ☐

EDD Required? Yes ☑ No ☐ If yes, format: Zip File

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	5.15.15	0530	[signature]	5/15/15	10—
[signature]	15MAY15	1630	FX		
			[signature]	5/16/15	1025

Relinquished by Commercial Carrier:
UPS ______ FedEx X ______ Other ______

Temperature upon receipt 1.2 °C

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
µg	microgram(s)	**mg**	milligram(s)
mL	milliliter(s)	**L**	liter(s)
m3	cubic meter(s)	**µL**	microliter(s)
		pg/L	picogram/liter

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank
C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and the < Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, ISO17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.