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

June 8, 2015

RECEIVED
By Alameda County Environmental Health 9:19 am, Jun 12, 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

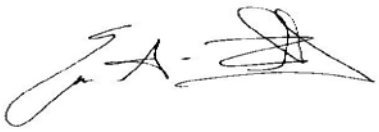
I have reviewed the attached Monthly Remedial Progress Report – April 2015.

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 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 – April 2015

CONESTOGA-ROVERS & ASSOCIATES

5900 Hollis Street, Suite A
Emeryville, California 94608
Telephone: (510) 420-0700 Fax: (510) 420-9170
http://www.craworld.com

June 8, 2015 Reference No. 311950

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

Re: Monthly Remedial Progress Report – April 2015
Former Chevron Station 9-5607
5269 Crow Canyon Road
Castro Valley, California
Fuel Leak Case RO0350

Dear Mr. Detterman:

Conestoga-Rovers & Associates (CRA), on behalf of Chevron Environmental Management Company (Chevron EMC), is providing this *Monthly Remedial Progress Report – April 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 April 2015 and cumulatively (Tables 1 through 4).

DPE system compliance testing and sampling was performed on April 16, 2015 in accordance with system operational permits. During the reporting period, approximately 262 pounds of total petroleum hydrocarbons as gasoline (TPHg), and 4 pounds of benzene were removed in vapor phase (Table 4), and approximately 0.9 pounds of TPHg and 0.07 pounds of benzene were removed in dissolved phase (Table 2). A summary of the DPE system operational performance for the month of April 2015 is presented below.

VAPOR-PHASE EXTRACTION DATA - APRIL 2015

Soil Vapor Influent Flow Rate (avg scfm)	113 scfm
Soil Vapor Laboratory Influent Concentrations (TPHg ppmv)	250 ppmv
Soil Vapor Laboratory Influent Concentrations (Benzene ppmv)	2.7 ppmv
Soil Vapor Mass Removal (lb TPHg/period)	262 pounds
Soil Vapor Mass Removal (lb Benzene/period)	4 pounds
Soil Vapor Extraction Period Operating Uptime (hours)	565 hours
Soil Vapor Treatment Destruction Efficiency (%)	99.8

ppmv – parts per million by volume

DISSOLVED-PHASE EXTRACTION DATA - APRIL 2015

Maximum Groundwater Extraction Rate (gpm)	1.2 gpm
Average Groundwater Extraction Rate (gpm)	1.1 gpm
Dissolved-Phase Mass Removal Rate (lb TPHg/period)	0.87 pounds
Dissolved-Phase Mass Removal Rate (lb Benzene/period)	0.07 pounds
Total Volume Groundwater Treated (gallons)	36,273 gallons
Groundwater Extraction Period Operating Uptime (hours)	565 hours

CONESTOGA-ROVERS & ASSOCIATES

June 8, 2015 Reference No. 311950

Please contact Darrell Smolko of CRA at (925) 334-8617 or Judy Gilbert of CRA at (510) 420-3314, if you have any questions or comments.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

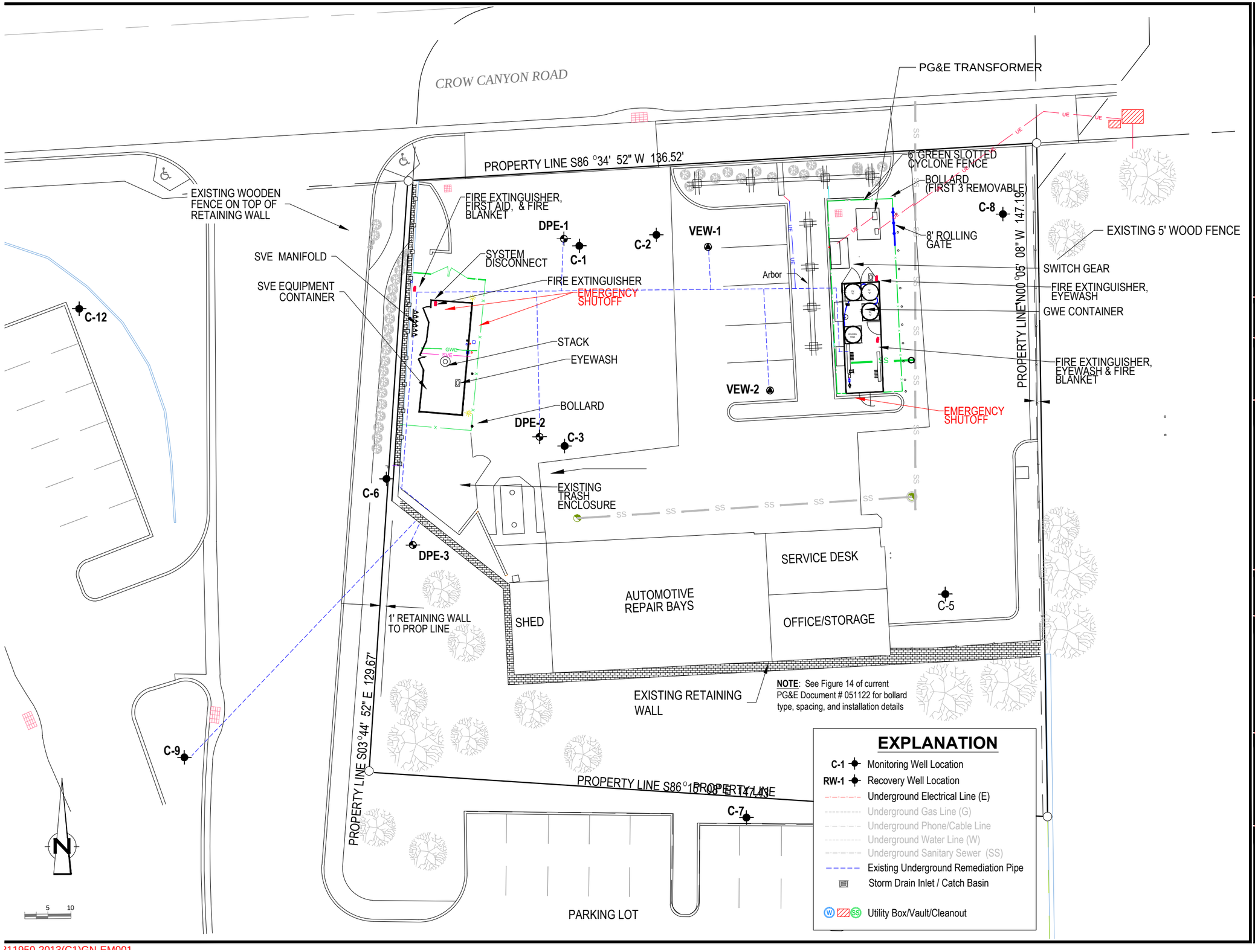
Darrell Smolko Brandon S. Wilken, PG 7564

DS/aa/43

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
Influent and Effluent Hydrocarbon Concentration Data
Former Chevron Station 95607
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 J**	<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 J**	**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	

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
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 95607
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
Agency Limits															
					Total Extracted Volume (gal):	**215,710**	**Pounds Removed:**	**0.87**	**9.72**	**Pounds Removed:**	**0.07**	**1.12**	**Pounds Removed:**	**0.001**	**0.01**
					Average Operational Flow Rate (gpm)[3]:	**1.16**	**Gallons Removed[4]:**	**0.14**	**1.60**	**Gallons Removed[4]:**	**0.01**	**0.15**	**Gallons Removed[4]:**	**0.0001**	**0.001**

Reporting Period: 3/16/2015 - 4/16/2015			**Cumulative Results Since Start-up:**		
Number of Days during Reporting Period	**31**	**days**	**Number Days since Startup**	**216**	**days**
Gallons of Extracted Ground Water	**36,273**	**gal**	**Cumulative Total Gallons Extracted**	**215,710**	**gal**
Average Flow Rate	**1.07**	**gpm**	**Average Flow Rate[4]**	**1.16**	**gpm**
Pounds of TPHg Removed	**0.869**	**lbs**	**Cumulative Pounds of TPHg Removed**	**9.72**	**lbs**
TPHg Removal Rate	**0.028**	**lbs/day**	**TPHg Removal Rate**	**0.045**	**lbs/day**
Pounds of Benzene Removed	**0.067**	**lbs**	**Cumulative Pounds of Benzene Removed**	**1.119**	**lbs**
Benzene Removal Rate	**0.002**	**lbs/day**	**Benzene Removal Rate**	**0.005**	**lbs/day**
Pounds of MTBE Removed	**0.001**	**lbs**	**Cumulative Pounds of MTBE Removed**	**0.007**	**lbs**
MTBE Removal Rate	**0.000**	**lbs/day**	**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^b µg) x (lb/453.6g) x (3.785 L
3. When concentration of individual parameters were not detected, the concentration was assumed to be half the detection limit for

   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
NM = not measured
lb = pounds

Table 3

Dual Phase Extraction System
Operational Data
Former Chevron Station 95607
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 (^oF)	INF-1 Measured Flow (acfm)	INF-1 Calculated Flow (scfm)	INF-2 Pressure[1] (inH_2O)	INF-2 Temperature (^oF)	INF-2 Measured Flow[1] (acfm)	INF-2 Calculated Flow (scfm)	Effluent Flow Rate (scfm)	Dilution Air (% open)	Pre-Oxidizer Temp (^oF)	Post-Oxidizer Temp (^oF)	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%
Reporting Period			**565**	**75.6%**	**565**										**113**							**99.8%**
Permit Conditions:										**<300**				**<300**			**>600**					**>98.5%**

Abbreviations and Notes:

Reporting period from March 16, 2015 through April 16,2015

mm/dd/yy = month/day/year
hh:mm = hour : minute
inHg = inches of mercury
inH_2O = inches of water
^oF = 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

Dual Phase Extraction System
Analytical Data
Former Chevron Station 95607
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	<0.0010	<0.0010	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 M	2.5	328	0.08	<0.0010	<0.0010	0.08	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	0.0080 M	0.0020	0.85	9.0	5753.5	0.0	0.1	56.1	0.0	0.0	56.9	0.0	9.1	0.0	99.7%
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 =**	**262**		**Benzene =**	**4**		**MTBE =**	**2**			
									Total Pounds Removed:	**TPHg =**	**5,754**		**Benzene =**	**56.1**		**MTBE =**	**56.9**			

Notes:

1. TPHg, Benzene, and MTBE analyzed by EPA Method TO-3 (Modified). 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
   Q = flow
   MW = molecular weight
7. Cumulative TPHg / Benzene / MTBE removed = Previous Total + (Average of Previous and Current Removal Rates * Operation Interval)
8. Inflluent not measured due to water in vapor stream. Individual well samples were collected at a lower vacuum at this time.
9. Reporting period from March 16, 2015 through April 16, 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 petroleum hydrocarbons as gasoline
MTBE = methyl tertiary butyl ether
VOC = volatile organic compounds
ppmv = parts per million by volume
ppd = pounds per day
-- = not measured
lb = pounds
ft^3 = cubic feet
scfm = standard cubic feet per minute
INF-2 = pre-dilution system influent
M = Reported value may be biased due to apparent matrix interferences.

Attachment A

Air Toxics Laboratory Analytical Report

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4/30/2015
Ms. Judy Gilbert
Conestoga-Rovers Associates (CRA)
5900 Hollis Street
Suite A
Emeryville CA 94608

Project Name: Castro Valley
Project #: 311950 2015.1
Workorder #: 1504289

Dear Ms. Judy Gilbert

The following report includes the data for the above referenced project for sample(s) received on 4/17/2015 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

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WORK ORDER #: 1504289

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
FAX:	510-420-9170	**PROJECT #**	311950 2015.1 Castro Valley
DATE RECEIVED:	04/17/2015	**CONTACT:**	Kyle Vagadori
DATE COMPLETED:	04/30/2015		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	EFF	Modified TO-3	Tedlar Bag	Tedlar Bag
02A	INF-2	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: 04/30/15

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# 1504289

Two 1 Liter Tedlar Bag samples were received on April 17, 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

There were no receiving discrepancies.

Analytical Notes

The recovery of surrogate Fluorobenzene in sample INF-2 was outside control limits due to high level hydrocarbon matrix interference. Data is reported as qualified.

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

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

Client Sample ID: EFF

Lab ID#: 1504289-01A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Benzene	0.0010	0.0032	0.0080 M	0.025 M
Toluene	0.0010	0.0038	0.0047	0.018
Ethyl Benzene	0.0010	0.0043	0.0015 M	0.0064 M
Total Xylenes	0.0020	0.0087	0.017	0.074
Methyl tert-butyl ether	0.0010	0.0036	0.0020	0.0072
TPH (Gasoline Range)	0.025	0.10	0.84	3.4

Client Sample ID: INF-2

Lab ID#: 1504289-02A

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Benzene	0.013	0.042	2.7	8.5
Toluene	0.013	0.050	1.0	3.8
Ethyl Benzene	0.013	0.058	0.43 M	1.9 M
Total Xylenes	0.027	0.12	4.1	18
Methyl tert-butyl ether	0.013	0.048	1.1	3.9
TPH (Gasoline Range)	0.33	1.4	250	1000

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Client Sample ID: EFF

Lab ID#: 1504289-01A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d041706**	**Date of Collection: 4/16/15 3:00:00 AM**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/17/15 01:17 PM**	

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Benzene	0.0010	0.0032	0.0080 M	0.025 M
Toluene	0.0010	0.0038	0.0047	0.018
Ethyl Benzene	0.0010	0.0043	0.0015 M	0.0064 M
Total Xylenes	0.0020	0.0087	0.017	0.074
Methyl tert-butyl ether	0.0010	0.0036	0.0020	0.0072
TPH (Gasoline Range)	0.025	0.10	0.84	3.4

M = Reported value may be biased due to apparent matrix interferences.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	108	75-150
Fluorobenzene (PID)	92	75-125

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Client Sample ID: INF-2

Lab ID#: 1504289-02A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d041708**	**Date of Collection: 4/16/15 3:15:00 AM**	
Dil. Factor:	**13.3**	**Date of Analysis: 4/17/15 03:29 PM**	

Compound	Rpt. Limit (ppmv)	Rpt. Limit (ug/L)	Amount (ppmv)	Amount (ug/L)
Benzene	0.013	0.042	2.7	8.5
Toluene	0.013	0.050	1.0	3.8
Ethyl Benzene	0.013	0.058	0.43 M	1.9 M
Total Xylenes	0.027	0.12	4.1	18
Methyl tert-butyl ether	0.013	0.048	1.1	3.9
TPH (Gasoline Range)	0.33	1.4	250	1000

M = Reported value may be biased due to apparent matrix interferences.
Q = Exceeds Quality Control limits, due to matrix effects. Matrix effects confirmed by re-analysis.

Container Type: 1 Liter Tedlar Bag

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	290 Q	75-150
Fluorobenzene (PID)	201 Q	75-125

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Client Sample ID: Lab Blank

Lab ID#: 1504289-03A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d041705**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/17/15 12:28 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)	114	75-150
Fluorobenzene (PID)	99	75-125

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Client Sample ID: LCS

Lab ID#: 1504289-04A

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d041704b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/17/15 11:31 AM**	

Compound	%Recovery	Method Limits
Benzene	90	75-125
Toluene	89	75-125
Ethyl Benzene	92	75-125
Total Xylenes	97	75-125
Methyl tert-butyl ether	89	75-125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (PID)	80	75-125

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Client Sample ID: LCSD

Lab ID#: 1504289-04AA

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d041714b**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/17/15 09:30 PM**	

Compound	%Recovery	Method Limits
Benzene	89	75-125
Toluene	87	75-125
Ethyl Benzene	90	75-125
Total Xylenes	94	75-125
Methyl tert-butyl ether	87	75-125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (PID)	78	75-125

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Client Sample ID: LCS

Lab ID#: 1504289-04B

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d041702**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/17/15 09:50 AM**	

Compound	%Recovery	Method Limits
TPH (Gasoline Range)	83	75-125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	92	75-150

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Client Sample ID: LCSD

Lab ID#: 1504289-04BB

MODIFIED EPA METHOD TO-3 GC/PID/FID

File Name:	**d041713**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 4/17/15 08:49 PM**	

Compound	%Recovery	Method Limits
TPH (Gasoline Range)	84	75-125

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Fluorobenzene (FID)	93	75-150

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

May 05, 2015

Project: 95607

Submittal Date: 04/18/2015
Group Number: 1554398
PO Number: 0015164161
Release Number: HETRICK
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
EFF-W-150416 NA Groundwater	7853046
MID-1-W-150416 NA Groundwater	7853048
INF-1-W-150416 NA Groundwater	7853049

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

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

Sample Description: EFF-W-150416 NA Groundwater
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # WW 7853046
LL Group # 1554398
Account # 10880

Project Name: 95607

Collected: 04/16/2015 12:00 by DS

Submitted: 04/18/2015 09:30
Reported: 05/05/2015 15:15

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

EF416

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	Z151122AA	04/22/2015 12:48	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151122AA	04/22/2015 12:48	Amanda K Richards	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15110B20A	04/21/2015 16:01	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15110B20A	04/21/2015 16:01	Brett W Kenyon	1

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

Sample Description: MID-1-W-150416 NA Groundwater
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # WW 7853048
LL Group # 1554398
Account # 10880

Project Name: 95607

Collected: 04/16/2015 12:20 by DS

Submitted: 04/18/2015 09:30
Reported: 05/05/2015 15:15

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

M1416

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	Z151101AA	04/20/2015 07:56	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151101AA	04/20/2015 07:56	Anita M Dale	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15110A20A	04/20/2015 15:07	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15110A20A	04/20/2015 15:07	Brett W Kenyon	1

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

Sample Description: INF-1-W-150416 NA Groundwater
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # WW 7853049
LL Group # 1554398
Account # 10880

Project Name: 95607

Collected: 04/16/2015 12:30 by DS

Submitted: 04/18/2015 09:30
Reported: 05/05/2015 15:15

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

IN416

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	180		0.5	1	1
10945	Ethylbenzene	100-41-4	0.8	J	0.5	1	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	2		0.5	1	1
10945	Toluene	108-88-3	6		0.5	1	1
10945	Xylene (Total)	1330-20-7	92		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.	1,800		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	Z151122AA	04/22/2015 13:12	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z151122AA	04/22/2015 13:12	Amanda K Richards	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15110B20A	04/21/2015 16:46	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15110B20A	04/21/2015 16:46	Brett W Kenyon	1

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

Quality Control Summary

Client Name: ChevronTexaco Group Number: 1554398
Reported: 05/05/2015 15:15

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: Z151101AA	Sample number(s): 7853048								
Benzene	N.D.	0.5	1	ug/l	100		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	101		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	93		75-120		
Toluene	N.D.	0.5	1	ug/l	101		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	103		80-120		
Batch number: Z151122AA	Sample number(s): 7853046,7853049								
Benzene	N.D.	0.5	1	ug/l	86	88	78-120	3	30
Ethylbenzene	N.D.	0.5	1	ug/l	90	91	80-120	1	30
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	87	87	75-120	1	30
Toluene	N.D.	0.5	1	ug/l	91	92	80-120	1	30
Xylene (Total)	N.D.	0.5	1	ug/l	94	95	80-120	1	30
Batch number: 15110A20A	Sample number(s): 7853048								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	100	102	80-139	2	30
Batch number: 15110B20A	Sample number(s): 7853046,7853049								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	99	100	80-139	2	30

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: Z151101AA	Sample number(s): 7853048 UNSPK: 7853048								
Benzene	101	101	72-134	0	30				
Ethylbenzene	104	102	71-134	2	30				
Methyl Tertiary Butyl Ether	91	91	72-126	0	30				
Toluene	104	104	80-125	0	30				
Xylene (Total)	106	107	79-125	1	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.

*- 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: 1554398
Reported: 05/05/2015 15:15

Surrogate Quality Control

Analysis Name: BTEX/MTBE
Batch number: Z151101AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7853048	103	100	98	93
Blank	102	101	97	93
LCS	101	105	96	95
MS	101	99	98	96
MSD	102	101	97	96
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: Z151122AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7853046	103	97	98	92
7853049	100	97	97	95
Blank	102	100	97	93
LCS	100	98	98	95
LCSD	100	100	97	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 15110A20A

	Trifluorotoluene-F
7853048	94
Blank	95
LCS	104
LCSD	107
Limits:	63-135

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 15110B20A

	Trifluorotoluene-F
7853046	73
7853049	84
Blank	69
LCS	73
LCSD	72
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 (ıstody

eurofins | Lancaster Laboratories Environmental 041715-04

Acct. # 10880 Group # ~~7853046~~ Sample # ~~7853050~~ ~~1553498~~ 1554398 (7853046-50) cmc 4/18/15

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										

Sample Identification	Collection Date	Collection Time	Grab	Composite	Sediment / Soil	Water (Ground ☑)	Other:	Total # of Containers	TPH-g by 8015M	BTEX by 8260	MTBE by 8260	Remarks
EFF	4/16/15	1200				X		6	X	X	X	
MID-2	↓	1210				X		6	X	X	X	HOLD MID-2, SAMPLE ONLY IF MID-1 > N.D.
MID-1	↓	1220				X		6	X	X	X	
INF-1	↓	1230				X		6	X	X	X	
												* MID-1 24 hr TAT

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:
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]	4/17/15	1200	[signature]	4/17/15	1200
[signature]	17 APR 15	1630	FX		
			[signature]	4.18.15	930

Relinquished by Commercial Carrier:
UPS ____ FedEx X Other ____

Temperature upon receipt 1.0-3.8 °C

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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.

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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.

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