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

RECEIVED
By Alameda County Environmental Health 9:39 am, Oct 28, 2015

October 26, 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

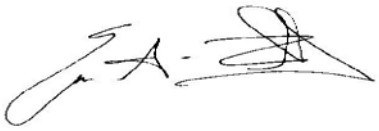
I have reviewed the attached Monthly Remedial Progress Report – September 2015.

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, 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 – September 2015

October 26, 2015 Reference No. 311950

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

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

Dear Mr. Detterman:

GHD, on behalf of Chevron Environmental Management Company (EMC), is providing this *Monthly Remedial Progress Report – September 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 monthly and cumulative summary of the dual-phase extraction (DPE) system operations for the reporting period between August 19, 2015 and September 16, 2015 (Tables 1 through 4).

The soil vapor extraction (SVE) portion of the DPE system has been shut down for repair since July 4, 2015 due to equipment malfunction. On August 19, 2015, GHD and its contractors conducted an investigation on the SVE system and identified the two heater units to be the source of the malfunction. GHD is in the process of completing the heater repair. No vapor sample was collected for laboratory analyses in September 2015 due to the SVE equipment failure. No hydrocarbon was recovered via the vapor phase in September 2015.

GHD continued the operation of the groundwater extraction and treatment system (GWET) in the month of September 2015. GWET system compliance testing and sampling was performed on September 2, 2015 in accordance with system operational permits. During the reporting period, approximately 0.15 pounds of TPHg and 0.014 pounds of benzene were removed via the dissolved phase (Table 2). A summary of the DPE system operational performance for the month of September 2015 is presented below.

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

VAPOR-PHASE EXTRACTION DATA - SEPTEMBER 2015

Soil Vapor Influent Flow Rate (average scfm)	System Off for Repair
Soil Vapor Laboratory Influent Concentrations (TPHg ppmv)	System Off for Repair
Soil Vapor Laboratory Influent Concentrations (Benzene ppmv)	System Off for Repair
Soil Vapor Mass Removal (lb TPHg/period)	0 pound
Soil Vapor Mass Removal (lb Benzene/period)	0 pound
Soil Vapor Extraction Period Operating Uptime (hours)	0 hour
Soil Vapor Treatment Destruction Efficiency (%)	System Off for Repair

ppmv – parts per million by volume

scfm – standard cubic feet per minute

DISSOLVED-PHASE EXTRACTION DATA - SEPTEMBER 2015

Maximum Groundwater Extraction Rate (gpm)	0.40 gpm
Average Groundwater Extraction Rate (gpm)	0.40 gpm
Dissolved-Phase Mass Removal Rate (lb TPHg/period)	0.15 pounds
Dissolved-Phase Mass Removal Rate (lb Benzene/period)	0.014 pounds
Total Volume Groundwater Treated (gallons)	14,000 gallons
Groundwater Extraction Period Operating Uptime (hours)	578.5 hours

gpm – gallons per minute

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

Sincerely,

GHD

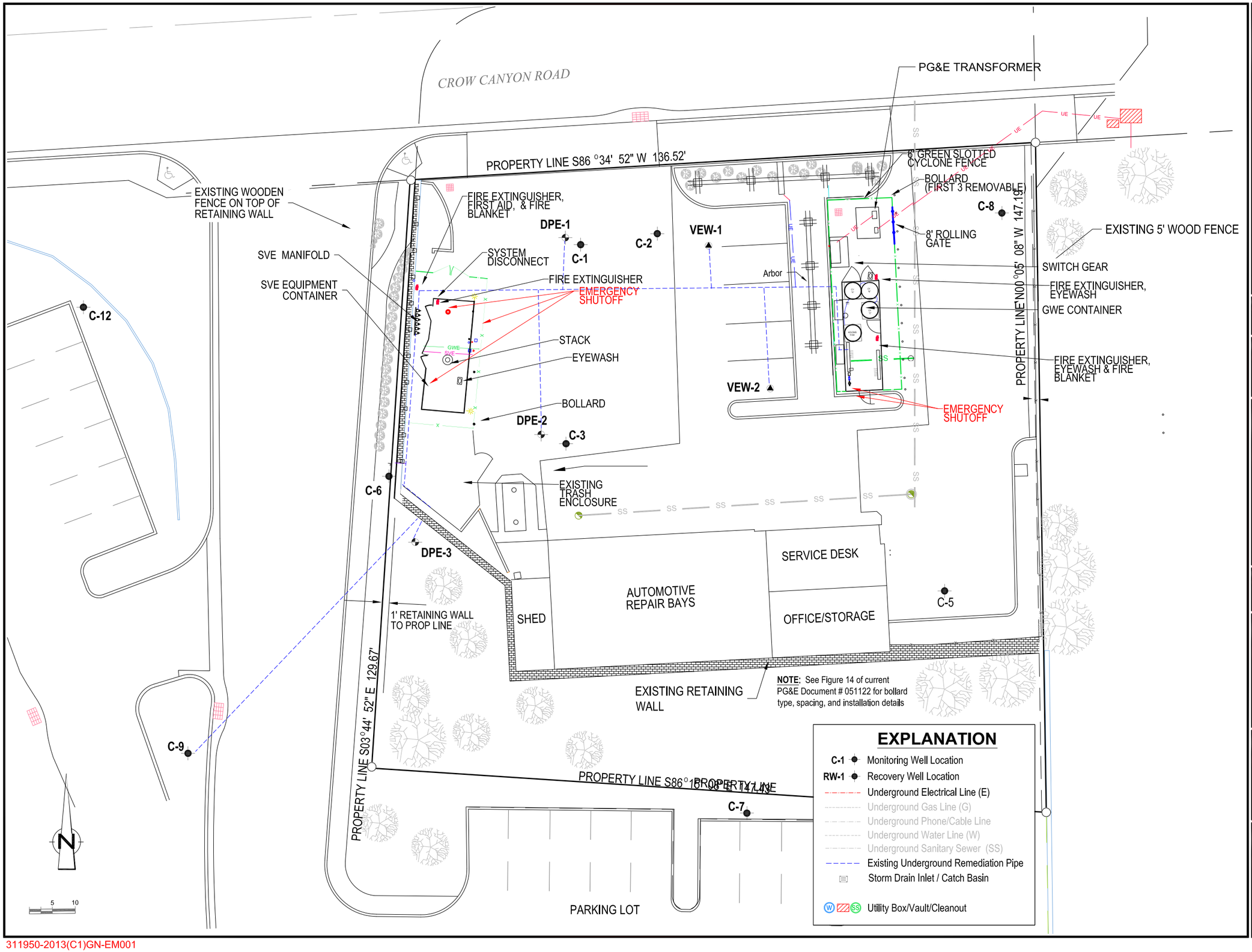
Brandon S. Wilken, PG 7564

AL/de/50

Figure 1	General Site Plan
Table 1	Groundwater Extraction & Treatment System – Hydrocarbon Analytical Data
Table 2	Groundwater Extraction & Treatment System - Operational and Hydrocarbon Mass Removal Data
Table 3	Soil Vapor Extraction System - Operational Data
Table 4	Soil Vapor Extraction System - Hydrocarbon Analytical and Mass Removal Data
Attachment A	Eurofins Lancaster Laboratory Analytical Report – September 23, 2015

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

Figure



311950-2013(C1)GN-EM001

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.

GHD
5900 HOLLIS STREET, SUITE A
EMERYVILLE CA 94608
PHONE: 510.420.0700
FAX: 510.420.9170
WWW.GHD.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**	**4.0**	<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**	**4.0**	<50	2.0	<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	<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**	**4.0**	<50	2.0	<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**	**3.0**	<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**	**3.0**	<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**	**2.0**	<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**	**0.8**	**92**	**2.0**	<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**	**3.0**	<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	
06/23/15	**380**	**3.0**	<0.5	<0.5	**5.0**	**2.0**	<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	7.2
07/20/15	**480**	**2.0**	<0.5	<0.5	**6.0**	**2.0**	<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	
08/05/15	**380**	**1.0**	<0.5	<0.5	**3.0**	**3.0**	<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	
09/02/15	**1,300**	**120**	**3.0**	**2.0**	**14**	**2.0**	<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	7.2

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
NM = Not meaured due to nondetect at MID-1

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 and Hydrocarbon Mass Removal Data
Former Chevron Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

Date (mm/dd/yy)	Well IDs	Operating Time (hours)	Totalizer Reading (gallons)	Period Volume (gallons)	Period Operational Flow Rate (gpm)	Cumulative Volume (gallons)	TPHg			Benzene			MTBE		
							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	---	330,400	0	---	0	---	---	---	---	---	---	---	---	---
9/12/14 14:00	DPE-1 - DPE-3, C-9	5.0	331,500	1,100	3.67	1,100	6,000	0.06	0.06	1,800	0.02	0.02	4.0	0.00004	0.00004
9/29/14 14:00	DPE-1 - DPE-3, C-9	408.0	332,000	500	0.02	1,600	---	0.03	0.08	---	0.01	0.02	---	0.00002	0.00005
10/6/14 11:00	DPE-1 - DPE-3, C-9	165.0	332,700	700	0.07	2,300	---	0.04	0.12	---	0.01	0.03	---	0.00002	0.00008
10/13/14 14:00	DPE-1 - DPE-3, C-9	171.0	341,085	8,385	0.82	10,685	7,500	0.52	0.64	1,600	0.11	0.15	4.0	0.0003	0.0004
10/20/14 11:30	DPE-1 - DPE-3, C-9	165.5	348,600	7,515	0.76	18,200	---	0.47	1.1	---	0.10	0.25	---	0.0003	0.0006
10/27/14 11:00	DPE-1 - DPE-3, C-9	167.5	354,200	5,600	0.56	23,800	---	0.35	1.5	---	0.07	0.32	---	0.0002	0.0008
11/6/14 13:15	DPE-1 - DPE-3, C-9	242.3	364,390	10,190	0.70	33,990	8,000	0.68	2.1	990	0.08	0.41	10	0.0009	0.002
11/21/14 13:50	DPE-1 - DPE-3, C-9	360.6	373,033	8,643	0.40	42,633	---	0.58	2.7	---	0.07	0.48	---	0.0007	0.002
12/2/14 15:15	DPE-1 - DPE-3, C-9	265.4	379,635	6,602	0.41	49,235	7,000	0.39	3.1	780	0.04	0.52	4.0	0.0002	0.003
12/16/14 11:30	DPE-1 - DPE-3, C-9	332.3	399,600	19,965	1.00	69,200	---	1.17	4.3	---	0.13	0.65	---	0.0007	0.003
12/31/14 10:30	DPE-1 - DPE-3, C-9	359.0	436,625	37,025	1.72	106,225	---	2.16	6.4	---	0.24	0.89	---	0.001	0.004
1/14/15 11:25	DPE-1 - DPE-3, C-9	336.9	461,160	24,535	1.21	130,760	3,700	0.76	7.2	290	0.06	0.95	3.0	0.0006	0.005
1/23/15 14:35	DPE-1 - DPE-3, C-9	219.2	472,688	11,528	0.88	142,288	---	0.36	7.5	---	0.03	0.98	---	0.0003	0.005
2/4/15 11:00	DPE-1 - DPE-3, C-9	284.4	486,220	13,532	0.79	155,820	4,100	0.46	8.0	190	0.02	1.0	3.0	0.0003	0.006
2/17/15 14:30	DPE-1 - DPE-3, C-9	315.5	491,310	5,090	0.27	160,910	---	0.17	8.2	---	0.01	1.0	---	0.0001	0.006
3/3/15 14:25	DPE-1 - DPE-3, C-9	335.9	504,915	13,605	0.68	174,515	4,300	0.49	8.7	280	0.03	1.0	2.0	0.0002	0.006
3/11/15 11:45	DPE-1 - DPE-3, C-9	189.3	507,364	2,449	0.22	176,964	---	0.09	8.8	---	0.01	1.0	---	0.00004	0.006
3/16/15 12:00	DPE-1 - DPE-3, C-9	120.2	509,837	2,473	0.34	179,437	---	0.09	8.8	---	0.01	1.1	---	0.00004	0.006
4/2/15 9:30	DPE-1 - DPE-3, C-9	405.5	525,400	15,563	0.64	195,000	---	0.56	9.4	---	0.04	1.1	---	0.0003	0.006
4/16/15 14:30	DPE-1 - DPE-3, C-9	341.0	546,110	20,710	1.01	215,710	1,800	0.31	9.7	180	0.03	1.1	2.0	0.0003	0.007
4/30/15 10:20	DPE-1 - DPE-3, C-9	331.8	559,100	12,990	0.65	228,700	---	0.20	9.9	---	0.02	1.1	---	0.0002	0.007
5/14/15 12:15	DPE-1 - DPE-3, C-9	337.9	562,200	3,100	0.15	231,800	2,900	0.08	10.0	570	0.01	1.2	3.0	0.0001	0.007
5/29/15 9:30	DPE-1 - DPE-3, C-9	357.3	576,000	13,800	0.64	245,600	---	0.33	10.3	---	0.07	1.2	---	0.0002	0.007
6/23/15 11:45	DPE-1 - DPE-3, C-9	602.3	597,000	21,000	0.58	266,600	380	0.07	10.4	3.0	0.0005	1.2	2.0	0.0004	0.008
7/20/15 9:00	DPE-1 - DPE-3, C-9	645.2	616,830	19,830	0.51	286,430	480	0.08	10.5	2.0	0.0003	1.2	2.0	0.0003	0.008
8/5/15 15:15	DPE-1 - DPE-3, C-9	390.2	627,335	10,505	0.45	296,935	380	0.03	10.5	1.0	0.0001	1.2	3.0	0.0003	0.008
8/19/15 15:00	DPE-1 - DPE-3, C-9	335.8	635,900	8,565	0.43	305,500	---	0.03	10.5	---	0.0001	1.2	---	0.0002	0.008
9/2/15 14:00	DPE-1 - DPE-3, C-9	239.0	641,700	5,800	0.40	311,300	1,300	0.06	10.6	120	0.0058	1.2	2.0	0.0001	0.009
9/16/15 17:30	DPE-1 - DPE-3, C-9	339.5	649,900	8,200	0.40	319,500	---	0.09	10.7	---	0.0082	1.2	---	0.0001	0.009
Agency Limits															
					Total Extracted Volume (gal):	**319,500**	**Pounds Removed:**	**0.15**	**10.7**	**Pounds Removed:**	**0.014**	**1.2**	**Pounds Removed:**	**0.0002**	**0.009**
					Average Operational Flow Rate (gpm)[3]:	**0.63**	**Gallons Removed[4]:**	**0.02**	**1.75**	**Gallons Removed[4]:**	**0.0019**	**0.17**	**Gallons Removed[4]:**	**0.00004**	**0.001**

Reporting Period: 8/19/2015 - 9/16/2015

Number of Days during Reporting Period	28	days
Gallons of Extracted Ground Water	14,000	gal
Average Flow Rate	0.40	gpm
Pounds of TPHg Removed	0.15	lbs
TPHg Removal Rate	0.005	lbs/day
Pounds of Benzene Removed	0.014	lbs
Benzene Removal Rate	0.0005	lbs/day
Pounds of MTBE Removed	0.0002	lbs
MTBE Removal Rate	0.00001	lbs/day

Cumulative Results Since Start-up:

Number Days since Startup	369	days
Cumulative Total Gallons Extracted	319,500	gal
Average Flow Rate[3]	0.60	gpm
Cumulative Pounds of TPHg Removed	10.7	lbs
TPHg Removal Rate	0.03	lbs/day
Cumulative Pounds of Benzene Removed	1.2	lbs
Benzene Removal Rate	0.003	lbs/day
Cumulative Pounds of MTBE Removed	0.009	lbs
MTBE Removal Rate	0.00002	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/gal)
3. When concentration of individual parameters were not detected, the concentration was assumed to be half the detection limit for calculation purposes.
   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
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 (°F)	INF-1 Measured Flow (acfm)	INF-1 Calculated Flow (scfm)	INF-2 Pressure[1] (inH_2O)	INF-2 Temperature (°F)	INF-2 Measured Flow[1] (acfm)	INF-2 Calculated Flow (scfm)	Effluent Flow Rate (scfm)	Effluent Flow Rate (scfh)	Effluent Vapor (cubic feet)	Dilution Air (% open)	Pre-Oxidizer Temp (°F)	Post-Oxidizer Temp (°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	0.0	4014	0%	0.0	NM	3.00	NM	NM	NM	10.0	155	294	259	259	15,517	0	20	747	NM	8000	20.0	663.8	99.8%
9/29/14 14:00	C9, DPE-1 - DPE3, VE-1, VE-2	5.5	4019	1.3%	5.5	15.0	2.81	93	165	143	11	189	255	213	213	12,784	70,312	20	880	NM	NM	0.0	NM	100.0%
10/6/14 11:00	C9, DPE-1 - DPE3, VE-1, VE-2	5.0	4024	3.0%	5.0	15.0	2.81	83	144	127	10	176	255	217	217	13,014	65,070	25	899	NM	560	0.2	39.0	100.0%
10/13/14 14:00	C9, DPE-1 - DPE-3	106.0	4130	62.0%	106.0	14.5	2.35	68	191	176	10.9	180	268	227	227	13,621	1,443,865	0	750	883	1100	5.0	80.1	99.5%
10/20/14 11:30	C9, DPE-1 - DPE-3	166.0	4296	100.3%	166.0	15.0	3.18	79	140	123	10.5	171	255	219	219	13,133	2,180,062	0	750	927	650	0.3	45.6	100.0%
10/27/14 11:00	C9, DPE-1, DPE-2	117.0	4413	69.9%	117.0	15.0	4.1	61	161	141	11.6	160	270	236	236	14,189	1,660,164	0	750	897	700	0.4	53.1	99.9%
11/6/14 13:15	C9, DPE-3, DPE-2	67.0	4480	27.7%	67.0	20.0	5.0	61	146	123	10.7	61	146	152	123	7,394	495,403	0	701	900	1250	0.0	60.9	100.0%
11/21/14 13:50	C9, DPE-3, DPE-2	188.6	4669	52.3%	188.6	20.0	5.3	68	132	109	11.1	174	176	151	109	6,517	1,229,109	0	698	809	558	0.4	27.0	99.9%
12/2/14 15:15	C9, DPE-3, DPE-2	113.3	4782	42.7%	113.3	20.0	7.4	63	103	78	3.3	169	157	133	78	4,696	532,051	0	697	785	1215	0.5	51.8	100.0%
12/16/14 11:30	C9, DPE-3, DPE-2	249.1	5031	75.0%	249.1	18.5	10.2	64	61	41	4.3	172	118	100	100	5,977	1,488,981	0	700	750	1650	3.0	52.7	99.8%
12/31/14 10:30	C9, DPE-3, DPE-2	359.1	5390	100.0%	359.1	22.0	10.0	72	133	88	7.2	179	133	112	112	6,710	2,409,733	0	698	707	425	5.0	15.2	98.8%
1/14/15 11:25	C9, DPE-3, DPE-2	336.5	5727	99.9%	336.5	23.0	8.1	71	148	107	9.8	176	148	126	126	7,550	2,540,450	0	700	752	1,000	0.5	40.4	100%
1/23/15 14:35	C9, DPE-3, DPE-2	219.1	5946	100.0%	219.1	23.0	7.1	76	157	118	9.6	174	157	134	134	8,030	1,759,403	0	700	764	915	3.5	39.3	99.6%
2/4/15 11:00	C9, DPE-2	281.0	6227	98.8%	281.0	22.0	8.3	75	137	98	5.9	183	137	114	114	6,848	1,924,213	0	698	738	715	0.7	26.2	99.9%
2/17/15 14:30	C9, DPE-2	82.3	6309	26.1%	82.3	21.5	10.1	62	136	91	6.9	170	136	116	116	6,955	572,382	0	698	682	515	0.1	19.2	100.0%
3/3/15 14:25	C9, DPE-1	167.0	6476	49.7%	167.0	23.0	11.1	79	118	73	4.0	185	118	98	98	5,853	977,400	0	690	698	295	0.4	9.2	99.9%
3/11/15 11:45	C9, DPE-3	25.9	6502	13.7%	25.9	23.0	10.9	67	118	75	7.2	151	118	104	104	6,226	161,266	0	710	740	480	0.2	16.0	100.0%
3/16/15 12:00	C9, DPE-3	28.7	6531	23.9%	28.7	23.0	10.2	67	121	80	7.1	175	121	102	102	6,145	176,359	0	700	689	235	0.0	7.7	100.0%
4/2/15 9:30	C9, DPE-3	223.8	6754	55.2%	223.8	23.0	8.4	73	146	104	10.0	177	146	124	124	7,445	1,666,264	0	698	688	125	0.4	5.0	99.7%
4/16/15 14:30	DPE-2, DPE-3	340.8	7095	99.9%	340.8	23.0	8.4	87	137	95	6.8	199	137	112	112	6,696	2,282,011	0	699	700	210	0.6	7.5	99.7%
4/30/15 10:20	DPE-1, DPE-2	236.9	7332	71.4%	236.9	23.0	8.2	86	137	96	4.6	193	137	112	112	6,722	1,592,355	0	701	699	140	0.8	5.0	99.4%
5/14/15 12:15	DPE-1, VEW-2	21.2	7353	6.3%	21.2	23.0	13.0	81	98	54	1.9	187	223	183	183	10,970	232,565	40	698	693	75	0.0	4.4	100.0%
5/29/15 9:30	DPE-1, VEW-2	259.6	7613	72.7%	259.6	23.0	11.8	79	44	26	4.2	180	118	98	98	5,901	1,531,975	50	699	724	190	2.3	6.0	98.8%
6/23/15 11:45	DPE-1, VEW-2	177.9	7791	29.5%	177.9	23.0	10.1	79	175	114	5.6	190	118	97	97	5,830	1,037,208	0	700	746	280	2.0	8.7	99.3%
7/4/15 3:35	DPE-1, VEW-2	132.6	7923	51.8%	132.6	SVE SYSTEM DOWN FOR REPAIR																		
Permit Conditions:										**<300**				**<300**					**>600**					**>98.5%**

Abbreviations and Notes:

Reporting period: GWE off from 7/4/2015 to 9/16/2015.

mm/dd/yy = month/day/year
hh:mm = hour : minute
inHg = inches of mercury
inH_2O = inches of water
°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
LEL = Lower Explosive Limit
ppmv = parts per million by volume
PID = photo-ionization detector
FID = flame 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
Hydrocarbon Analytical and Mass Removal Data
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	405.2	0.0	4.4	3.3	0.0	0.029	3.2	0.0	0.02	355.3	3.9	98.9%
9/29/14 14:00	C9, DPE-1 - DPE3, VE-1, VE-2	--	--	--	--	--	--	--	--	333.8	84.7	3.7	2.7	0.7	0.024	2.7	0.7	0.01	292.7	3.2	98.9%
10/6/14 11:00	C9, DPE-1 - DPE3, VE-1, VE-2	--	--	--	--	--	--	--	--	339.8	154.9	3.7	2.8	1.3	0.025	2.7	1.2	0.01	298.0	3.2	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	127.0	1185.9	0.42	0.7	8.9	0.017	1.5	10.5	0.04	111.4	0.4	99.6%
10/20/14 11:30	C9, DPE-1 - DPE-3	--	--	--	--	--	--	--	--	122.5	2048.8	0.41	0.6	13.3	0.016	1.4	20.6	0.04	107.4	0.4	99.6%
10/27/14 11:00	C9, DPE-1, DPE2	--	--	--	--	--	--	--	--	132.3	2670.0	0.44	0.7	16.6	0.017	1.6	27.9	0.04	116.1	0.5	99.6%
11/6/14 13:15	C9, DPE-2, DPE3	--	--	--	--	--	--	--	--	85.0	2973.3	0.23	0.4	18.2	0.009	1.0	31.5	0.02	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	31.3	3430.3	0.01	0.0	19.9	0.00006	0.0	35.4	0.00007	27.0	0.01	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	49.6	3621.3	0.007	0.5	21.0	0.00003	0.4	36.3	0.00003	43.5	0.006	100.0%
12/16/14 11:30	C9, DPE-2, DPE-3	--	--	--	--	--	--	--	--	37.2	4071.3	0.009	0.3	25.2	0.00003	0.3	39.8	0.00003	32.6	0.007	100.0%
12/31/14 10:30	C9, DPE-2, DPE-3	--	--	--	--	--	--	--	--	41.7	4661.5	0.010	0.4	30.7	0.00004	0.3	44.4	0.00004	36.6	0.008	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	40.8	5240.3	0.004	0.5	36.8	0.00004	0.2	48.0	0.00004	35.8	0.003	100.0%
1/23/15 14:35	C9, DPE-2, DPE-3	--	--	--	--	--	--	--	--	43.4	5625.0	0.004	0.5	41.3	0.00004	0.2	49.8	0.00004	38.1	0.00	100.0%
2/4/15 11:00	C9, DPE-2	800	17	7	824	1.5	0.014	0.0012	1.52	34.1	6078.7	0.06	0.6	47.5	0.0005	0.3	52.6	0.00004	30.2	0.06	99.8%
2/17/15 14:30	C9, DPE-2	--	--	--	--	--	--	--	--	34.6	6196.4	0.06	0.6	49.5	0.0005	0.3	53.6	0.00005	30.7	0.06	99.8%
3/3/15 14:25	C9, DPE-1	320	5.4	2.5	328	0.076	<0.001	<0.001	0.078	11.6	6357.3	0.003	0.2	52.0	0.00003	0.1	54.8	0.00003	10.3	0.002	100.0%
3/11/15 11:45	C9, DPE-3	--	--	--	--	--	--	--	--	12.4	6370.3	0.003	0.2	52.2	0.00003	0.1	54.9	0.00003	10.9	0.003	100.0%
3/16/15 12:00	C9, DPE-3	--	--	--	--	--	--	--	--	12.2	6385.0	0.003	0.2	52.4	0.00003	0.1	55.0	0.00003	10.8	0.003	100.0%
4/2/15 9:30	C9, DPE-3	--	--	--	--	--	--	--	--	14.8	6511.0	0.004	0.2	54.1	0.00004	0.1	55.9	0.00004	13.1	0.003	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	10.4	6690.1	0.03	0.1	56.1	0.0003	0.0	56.9	0.00007	9.1	0.03	99.7%
4/30/15 10:20	DPE-1, DPE-2	--	--	--	--	--	--	--	--	10.4	6793.1	0.04	0.1	56.9	0.0003	0.0	57.3	0.00007	9.1	0.03	99.7%
5/14/15 12:15	DPE-1, VEW-2	160	2.8	0.71	164	0.11	<0.032	<0.036	0.178	10.9	6802.5	0.008	0.1	57.0	0.002	0.0	57.3	0.002	9.6	0.01	99.9%
5/29/15 9:30	DPE-1, VEW-2	--	--	--	--	--	--	--	--	5.9	6893.3	0.004	0.1	58.3	0.001	0.0	57.7	0.001	5.2	0.01	99.9%
6/23/15 11:45	DPE-1, VEW-2	2,300	35.0	11.0	2,346	0.48	<0.032	<0.001	0.513	83.4	7224.0	0.02	1.0	62.2	0.001	0.4	59.1	0.00003	73.1	0.02	100.0%
7/4/15 3:35	DPE-1, VEW-2	SVE SYSTEM OFF FOR REPAIR			--	--	--	--	--	83.4 a	7684.7 a	0.02 a	1.0 a	67.7 a	0.001 a	0.4 a	61.0 a	0.00003 a	73.1 a	0.02 a	100.0% a
									Period Pounds Removed[9]:	**TPHg =**	**0**		**Benzene =**	**0**		**MTBE =**	**0**			
									Total Pounds Removed:	**TPHg =**	**7,685**		**Benzene =**	**67.7**		**MTBE =**	**61.0**			

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 100 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: SVE system off for repair from 7/4/2015 to 9/16/2015.
   a. Air sample was not taken before system malfunction occurred. Used 6/23/15 sample data to calculate removal and efficiency rate and cumulative removed.

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
lb = pounds
ft^3 = cubic feet
scfm = standard cubic feet per minute
INF-1 = pre-dilution system influent
INF-2 = post-dilution system influent
TBD = Sample taken during this time and are awaiting results
n/a = Not available due to SVE equipment malfunction

Table 5
Dual Phase Extraction System
Individual Well Performance Data Table
Former Chevron Station # 9-5607
5269 Crow Canyon Road, Castro Valley, California

	INF 1	C-9								DPE-1								DPE-2								DPE-3								VEW-1								VEW-2							
Date	Vacuum	Manifold Vacuum	Casing Vacuum	Flow	Flow	Conc w/ FID	Conc w/ OVA	Mass removal based	Mass removal based	Manifold	Manifold Vacuum	Casing Vacuum	Flow	Flow	Conc w/ FID	Conc w/ OVA	Mass removal based	Mass removal based	Manifold Vacuum	Casing Vacuum	Flow	Flow	Conc w/FID	Conc w/OVA	Mass removal based	Mass removal based	Manifold Vacuum	Casing Vacuum	Flow	Flow	Conc w/FID	Conc w/OVA	Mass removal based	Mass removal based	Manifold Vacuum	Casing Vacuum	Flow	Flow	Conc w/ FID	Conc w/ OVA	Mass removal based	Mass removal based	Manifold Vacuum	Casing Vacuum	Flow	Flow	Conc w/FID	Conc w/ OVA	Mass removal based	Mass removal based
(mm/dd/yy)	(inHg)	(inHg)	(inWC)	(acfm)	(scfm)	(ppmv)	(ppmv)	on FID (ppd)	on OVA (ppd)	ug/L	(inHg)	(inWC)	(acfm)	(scfm)	(ppmv)	(ppmv)	on FID (ppd)	on OVA (ppd)	(inHg)	(inWC)	(acfm)	(scfm)	(ppmv)	(ppmv)	on FID (ppd)	on OVA (ppd)	(inHg)	(inWC)	(acfm)	(scfm)	(ppmv)	(ppmv)	on FID (ppd)	on OVA (ppd)	(inHg)	(inWC)	(acfm)	(scfm)	(ppmv)	(ppmv)	on FID (ppd)	on OVA (ppd)	(inHg)	(inWC)	(acfm)	(scfm)	(ppmv)	(ppmv)	on FID (ppd)	on OVA (ppd)
9/29/14 11:00	2.8	4.3	58	56	46	355	165	5.2	2.4	NM	4.4	59	52	42	12,000 +	12,000	163	163	4.3	58	45	37	4,000	1,120	47	13	4.4	59	68	55	20	45	0.4	0.8	4.3	58	59	48	12,000 +	4,300	186	67	4.3	58	60	50	45	30	1	0.5
9/29/14 14:00	2.8	2.7	37	45	40	2900	NM	37	NA	NM	2.7	37	40	35	12,000 +	12,000	136	136	2.8	38	38	33	4,500	NM	48	NA	2.7	37	59	52	660	NM	11	NA	2.8	38	50	44	12,000 +	NM	170	NA	2.8	38	62	57	40	NM	1	NA
10/6/14 9:00	2.8	2.7	37	63	57	500	190	9.2	3.5	NM	2.8	38	69	63	12,000 +	12,000	241	241	2.7	36	49	45	2,300	820	33	12	2.8	38	56	51	50	33	0.8	0.5	2.7	37	47	43	12,000 +	3,080	164	42	2.8	38	50	46	33	33	0	0.5
10/6/14 11:45	2.8	2.7	36	50	45	1300	220	19	3.1	NM	2.7	36	58	52	12,000 +	12,000	199	199	2.8	40	38	34	3,030	890	33	10	2.7	36	63	56	415	110	7.5	2.0	2.7	36	42	38	5000	1,200	60	14	2.7	36	54	49	31	35	0	0.6
10/13/14 14:00	2.8	2.2	30	39	37	NM	2700	NA	32	NM	2.2	30	35	33	NM	44,000	#N/A	464	2.2	30	35	33	NM	3,200	NA	34	2.2	30	97	91	NM	600	NA	18	2.2	30	NA	NA	NM	950	NA	NA	2.2	30	41	38	NM	50	NA	0.6
10/20/14 9:30	2.3	2.3	31	42	39	4400	1500	55	120	NM	2.3	31	39	36	15,000 +	13,000 +	176	152	2.3	31	36	34	2,400	1,050	26	11	2.2	30	36	34	695	390	7.5	4.2	2.3	31	NA	NA	500	260	NA	NA	2.3	31	36	34	32.0	30	0	0.3
10/20/14 12:00	3.2	3.1	42	50	45	4800	1750	69	25	NM	3.1	42	45	40	15,000 +	13,000 +	194	168	3.0	41	42	38	2,550	1,210	31	15	3.1	42	42	38	800	500	10	6.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/27/14 10:15	4.1	3.9	53	88	77	4000	1500	99	37	NM	3.9	53	59	52	15,000 +	12,000 +	249	200	3.9	53	69	61	1,910	855	37	17	3.9	53	60	53	1,100	700	19	12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/27/14 11:30	4.1	4.0	55	93	81	3780	1390	98	36	NM	4.0	55	62	54	15,000 +	12,000 +	260	208	4.0	55	73	64	1,750	810	36	17	4.0	55	65	57	965	540	18	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11/6/14 10:40	5.0	3.7	NM	55	48	490	NM	7.5	NA	NM	3.7	NM	NA	NA	++	NM	NA	NA	3.6	NM	69	60	645	NM	12	NA	3.6	NM	69	60	645	NM	12	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11/6/14 13:15	5.0	5.0	NM	51	42	4,300	NM	58	NA	NM	---	---	---	---	---	---	---	---	5.0	NM	NA	NA	950	NM	17	NA	5.0	NM	88	73	590	NM	14	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
11/21/14 13:50	5.3	4.8	NM	46	44	NM	3,200	NA	46	NM	---	---	---	---	---	---	---	---	4.7	NM	78	75	NM	1,050	NA	25	4.8	NM	108	104	NM	740	NA	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/2/14 15:15	7.4	5.5	NM	55	52	NM	5,200	NA	86	NM	---	---	---	---	---	---	---	---	5.5	NM	72	67	NM	760	NA	16	5.5	NM	68.0	64	NM	610	NA	12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/16/14 11:30	10.2	2.5	NM	112	118	NM	3,600	NA	136	NM	---	---	---	---	---	---	---	---	2.5	NM	113	119	NM	55	NA	2.1	2.5	NM	NA	NA	NM	1,550	NA	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/31/14 10:30	10.0	2.3	NM	59	63	NM	3,010	NA	60	NM	---	---	---	---	---	---	---	---	2.3	NM	107	113	NM	165	NA	6.0	2.3	NM	91	96	NM	810	NA	25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1/14/15 11:25	8.1	6.8	92	69	61	NM	1,300	NA	26	NM	---	---	---	---	---	---	---	---	6.7	91	85	76	NM	410	NA	10	6.8	92	88	78	NM	1,990	NA	50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1/23/15 14:35	7.1	6.7	88	58	52	NM	1,120	NA	19	11,000	---	---	---	---	---	---	---	---	6.7	88	NA	NA	NM	540	NA	NA	6.7	88	93	83	NM	1,380	NA	37	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2/4/15 11:00	8.3	7.7	108	91	78	NM	805	NA	20	NM	---	---	---	---	---	---	---	---	6.3	84	57	52	NM	745	NA	12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
2/17/15 14:30	10.1	7.9	130	66	56	NM	5,420	NA	97	NM	---	---	---	---	---	---	---	---	3.5	41	65	66	NM	45	NA	1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/3/15 10:15	9.1	8.7	122	76	62	NM	205	NA	4.1	NM	---	---	---	---	---	---	---	---	7.0	NM	54	47	NM	55	NA	0.8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/3/15 14:25	11.1	10.7	122	61	45	NM	280	NA	4.0	NM	10.7	NM	NA	NA	NM	251	NA	NA	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/11/15 11:45	10.9	10.1	NM	73	56	NM	400	NA	7.1	NM	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10.1	NM	74	56	605	305	11	5.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
3/16/15 12:00	10.2	9.5	NM	47	36	NM	175	NA	2.0	NM	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	11.0	NM	76	55	NM	320	NA	5.7	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4/2/15 9:30	8.4	7.6	108	41	35	1,350	140	15	1.6	NM	NM	NM	NM	NM	470	60	NA	NA	NM	NM	NM	NM	370	205	NA	NA	7.7	81	72	61	1,100	120	22	2.4	NM	NM	NM	NM	120	25	NA	NA	NM	NM	NM	NM	750	160	NA	NA
4/15/15 14:30	8.4	8.3	108	38	32	NM	420	NA	4.2	NM	---	---	---	---	---	---	---	---	8.4	8	43	35	NM	45	NA	0.5	8.3	108	67	56	NM	335	NA	6.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
4/30/15 10:20	8.2	8.2	108	73	61	NM	1,100	NA	21	NM	9.0	NM	66	53	NM	115	NA	2.0	7.2	NM	68	59	NM	40	NA	0.8	7.3	NM	62	54	NM	298	NA	5.2	7.1	108	NA	NA	NM	10	NM	NA	9.2	NM	58	NA	NM	900	NM	NA
5/14/15 12:15	13.0	10.1	NM	NM	NM	NM	950	NA	NA	NA	7.8	NM	61	52	NM	143	NA	2.4	9.5	NM	75	59	NM	27	NA	0.5	10.3	NM	NM	NM	NM	70	NA	NA	9.0	NM	NA	NA	NM	16	NM	NA	9.0	NM	52	58	NA	215	NA	4.0
5/29/15 9:30	11.8	10.3	---	---	---	---	825	---	---	---	9.5	---	---	---	---	900	---	NA	NM	NM	NM	NM	NM	30	NM	NM	NM	NM	NM	NM	NM	75	NA	NA	NM	NM	NM	NM	NM	15	NM	NA	9.0	---	---	---	---	930	---	---
6/23/15 11:45	10.1	---	---	---	---	---	---	---	---	---	10.0	NM	147	112	NM	1,760	---	63	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	10.0	NM	153	171	NM	1,450	NM	80
7/4/15 3:35	---	SVE system down for repairs		---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

Abbreviations:
In WC = Inches of water column
acfm = actual cubic feet per minute
LEL = lower explosive limit
PID = photo ionization detector
Conc = Concentration
ppmv = Parts per million by volume
DTW = Depth to Water
fbg = Feet below ground surface
NM = Not Measured
off = Well and/or system off during this time
ppd = pounds per day
flow in scfm = flow in acfm * [operating pressure(abs) / standard pressure (abs)] * [standard temperature (abs) / operating temperature (abs)]
pounds per day removed = C (ppmv) x Q (scfm) x [1lb-mole/386ft3] x MW (lb/lb-mole) x 60 min/hr x 24 hr/day x 10-6
C = concentration
Q = flow
MW = molecular weight
LEL assumed to be that of hexane (11,000 ppmv)
LEL percentage to ppm conversion = (LEL%/100)*(11,000 ppm/LEL %)
Gallons in 1 cubic foot = 7.48
Groundwater Flow = (strokes per minute*(Π)*(radius of well (ft.)^2)*(well depth (ft)-length of pump (ft))/7.48)
Temperature for calculating scfm is assumed to be INF-1 temperature
a = While pumps operational, tygon tubing showed vacuum, indicating dewatering success. Manual DTW collects while individual pump is off for 10 minutes.
b = Vacuum too high to get PID and LEL readings
c = water in flow stream; sum of other flows subtracted from total influent flow to estimate flow
d = Concentration data taken using a flame ionization detector

Attachment A
Eurofins Lancaster Laboratory Analytical Report – September 23, 2015

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

September 23, 2015

Project: 95607

Submittal Date: 09/03/2015
Group Number: 1590153
PO Number: 0015164161
Release Number: HETRICK
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
EFF-W-150902 Grab Groundwater	8034108
MID-1-W-150902 Grab Groundwater	8034110
INF-W-150902 Grab Groundwater	8034111
QA-T-150902 NA Water	8034112

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	GHD	Attn: Andy Leung
ELECTRONIC COPY TO	GHD	Attn: Matt B. Smith
ELECTRONIC COPY TO	CRA	Attn: Judy Gilbert
ELECTRONIC COPY TO	Chevron	Attn: GHD EDD

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

Sample Description: EFF-W-150902 Grab Groundwater
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 8034108
LL Group # 1590153
Account # 10880

Project Name: 95607

Collected: 09/02/2015 09:00 by GB

Submitted: 09/03/2015 09:30
Reported: 09/23/2015 10:05

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CCVEF

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**	
10335	Acetone	67-64-1	N.D.	6	20	1
10335	t-Amyl methyl ether	994-05-8	N.D.	0.5	1	1
10335	Benzene	71-43-2	N.D.	0.5	1	1
10335	Bromobenzene	108-86-1	N.D.	1	5	1
10335	Bromochloromethane	74-97-5	N.D.	1	5	1
10335	Bromodichloromethane	75-27-4	N.D.	0.5	1	1
10335	Bromoform	75-25-2	N.D.	0.5	4	1
10335	Bromomethane	74-83-9	N.D.	0.5	1	1
10335	2-Butanone	78-93-3	N.D.	3	10	1
10335	t-Butyl alcohol	75-65-0	N.D.	5	20	1
10335	n-Butylbenzene	104-51-8	N.D.	1	5	1
10335	sec-Butylbenzene	135-98-8	N.D.	1	5	1
10335	tert-Butylbenzene	98-06-6	N.D.	1	5	1
10335	Carbon Disulfide	75-15-0	N.D.	1	5	1
10335	Carbon Tetrachloride	56-23-5	N.D.	0.5	1	1
10335	Chlorobenzene	108-90-7	N.D.	0.5	1	1
10335	Chloroethane	75-00-3	N.D.	0.5	1	1
10335	2-Chloroethyl Vinyl Ether	110-75-8	N.D.	2	10	1
	2-Chloroethyl vinyl ether may not be recovered if acid was used to preserve this sample.					
10335	Chloroform	67-66-3	N.D.	0.5	1	1
10335	Chloromethane	74-87-3	N.D.	0.5	1	1
10335	2-Chlorotoluene	95-49-8	N.D.	1	5	1
10335	4-Chlorotoluene	106-43-4	N.D.	1	5	1
10335	1,2-Dibromo-3-chloropropane	96-12-8	N.D.	2	5	1
10335	Dibromochloromethane	124-48-1	N.D.	0.5	1	1
10335	1,2-Dibromoethane	106-93-4	N.D.	0.5	1	1
10335	Dibromomethane	74-95-3	N.D.	0.5	1	1
10335	1,2-Dichlorobenzene	95-50-1	N.D.	1	5	1
10335	1,3-Dichlorobenzene	541-73-1	N.D.	1	5	1
10335	1,4-Dichlorobenzene	106-46-7	N.D.	1	5	1
10335	Dichlorodifluoromethane	75-71-8	N.D.	0.5	1	1
10335	1,1-Dichloroethane	75-34-3	N.D.	0.5	1	1
10335	1,2-Dichloroethane	107-06-2	N.D.	0.5	1	1
10335	1,1-Dichloroethene	75-35-4	N.D.	0.5	1	1
10335	cis-1,2-Dichloroethene	156-59-2	N.D.	0.5	1	1
10335	trans-1,2-Dichloroethene	156-60-5	N.D.	0.5	1	1
10335	1,2-Dichloropropane	78-87-5	N.D.	0.5	1	1
10335	1,3-Dichloropropane	142-28-9	N.D.	0.5	1	1
10335	2,2-Dichloropropane	594-20-7	N.D.	0.5	1	1
10335	1,1-Dichloropropene	563-58-6	N.D.	1	5	1
10335	cis-1,3-Dichloropropene	10061-01-5	N.D.	0.5	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	N.D.	0.5	1	1
10335	Ethanol	64-17-5	N.D.	50	250	1
10335	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1	1
10335	Ethylbenzene	100-41-4	N.D.	0.5	1	1
10335	Freon 113	76-13-1	N.D.	2	10	1
10335	Hexachlorobutadiene	87-68-3	N.D.	2	5	1
10335	2-Hexanone	591-78-6	N.D.	3	10	1
10335	di-Isopropyl ether	108-20-3	N.D.	0.5	1	1

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

Sample Description: EFF-W-150902 Grab Groundwater
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 8034108
LL Group # 1590153
Account # 10880

Project Name: 95607

Collected: 09/02/2015 09:00 by GB

Submitted: 09/03/2015 09:30
Reported: 09/23/2015 10:05

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CCVEF

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**	
10335	Isopropylbenzene	98-82-8	N.D.		1	5	1
10335	p-Isopropyltoluene	99-87-6	N.D.		1	5	1
10335	Methyl Tertiary Butyl Ether	1634-04-4	N.D.		0.5	1	1
10335	4-Methyl-2-pentanone	108-10-1	N.D.		3	10	1
10335	Methylene Chloride	75-09-2	N.D.		2	4	1
10335	Naphthalene	91-20-3	N.D.		1	5	1
10335	n-Propylbenzene	103-65-1	N.D.		1	5	1
10335	Styrene	100-42-5	N.D.		1	5	1
10335	1,1,1,2-Tetrachloroethane	630-20-6	N.D.		0.5	1	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	N.D.		0.5	1	1
10335	Tetrachloroethene	127-18-4	N.D.		0.5	1	1
10335	Toluene	108-88-3	N.D.		0.5	1	1
10335	1,2,3-Trichlorobenzene	87-61-6	N.D.		1	5	1
10335	1,2,4-Trichlorobenzene	120-82-1	N.D.		1	5	1
10335	1,1,1-Trichloroethane	71-55-6	N.D.		0.5	1	1
10335	1,1,2-Trichloroethane	79-00-5	N.D.		0.5	1	1
10335	Trichloroethene	79-01-6	N.D.		0.5	1	1
10335	Trichlorofluoromethane	75-69-4	N.D.		0.5	1	1
10335	1,2,3-Trichloropropane	96-18-4	N.D.		1	5	1
10335	1,2,4-Trimethylbenzene	95-63-6	N.D.		1	5	1
10335	1,3,5-Trimethylbenzene	108-67-8	N.D.		1	5	1
10335	Vinyl Chloride	75-01-4	N.D.		0.5	1	1
10335	m+p-Xylene	179601-23-1	N.D.		0.5	1	1
10335	o-Xylene	95-47-6	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
Metals	**SW-846 6020A**		**ug/l**		**ug/l**	**ug/l**	
06024	Antimony	7440-36-0	N.D.		0.33	2.0	1
06025	Arsenic	7440-38-2	5.5		0.54	4.0	1
06026	Barium	7440-39-3	184		0.92	4.0	1
06027	Beryllium	7440-41-7	N.D.		0.071	1.0	1
06028	Cadmium	7440-43-9	N.D.		0.23	1.0	1
06031	Chromium	7440-47-3	N.D.		0.70	4.0	1
06032	Cobalt	7440-48-4	0.15	J	0.10	1.0	1
06033	Copper	7440-50-8	0.98	J	0.40	4.0	1
06035	Lead	7439-92-1	0.32	J	0.13	2.0	1
06038	Molybdenum	7439-98-7	1.0		0.25	1.0	1
06039	Nickel	7440-02-0	1.2	J	0.94	4.0	1
06041	Selenium	7782-49-2	N.D.		0.50	4.0	1
06042	Silver	7440-22-4	N.D.		0.11	1.0	1
06045	Thallium	7440-28-0	N.D.		0.15	1.0	1
06048	Vanadium	7440-62-2	N.D.		0.22	1.0	1
06049	Zinc	7440-66-6	N.D.		7.4	30.0	1
	SW-846 7470A		**ug/l**		**ug/l**	**ug/l**	
00259	Mercury	7439-97-6	N.D.		0.050	0.20	1

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

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Analysis Report

Sample Description: EFF-W-150902 Grab Groundwater
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 8034108
LL Group # 1590153
Account # 10880

Project Name: 95607

Collected: 09/02/2015 09:00 by GB

Submitted: 09/03/2015 09:30
Reported: 09/23/2015 10:05

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CCVEF

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Wet Chemistry	**SW-846 9012A**		**ug/l**	**ug/l**	**ug/l**	
08255	Total Cyanide (water)	57-12-5	N.D.	5.0	10	1
	SW-846 9066		**ug/l**	**ug/l**	**ug/l**	
02393	Phenols (water)	n.a.	N.D.	15	40	1
	EPA 1664A		**ug/l**	**ug/l**	**ug/l**	
08079	HEM (oil & grease)	n.a.	N.D.	1,400	5,000	1

General Sample Comments

CA ELAP Lab Certification No. 2792

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
10335	8260 Full List w/ Sep. Xylenes	SW-846 8260B	1	W152522AA	09/10/2015 09:51	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W152522AA	09/10/2015 09:51	Stephanie A Selis	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15252B20A	09/10/2015 20:59	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15252B20A	09/10/2015 20:59	Brett W Kenyon	1
06024	Antimony	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06025	Arsenic	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06026	Barium	SW-846 6020A	1	152470639001D	09/09/2015 07:37	Choon Y Tian	1
06027	Beryllium	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06028	Cadmium	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06031	Chromium	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06032	Cobalt	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06033	Copper	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06035	Lead	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06038	Molybdenum	SW-846 6020A	1	152470639001C	09/09/2015 07:37	Choon Y Tian	1
06039	Nickel	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06041	Selenium	SW-846 6020A	1	152470639001B	09/09/2015 07:37	Choon Y Tian	1
06042	Silver	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06045	Thallium	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06048	Vanadium	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
06049	Zinc	SW-846 6020A	1	152470639001A	09/09/2015 07:37	Choon Y Tian	1
00259	Mercury	SW-846 7470A	1	152515713005	09/10/2015 10:04	Damary Valentin	1
10639	ICPMS - Water, 3020A - U4	SW-846 3010A modified	1	152470639001	09/08/2015 09:46	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	152515713005	09/09/2015 10:06	James L Mertz	1
08255	Total Cyanide (water)	SW-846 9012A	1	15254117101A	09/11/2015 13:27	Venia B McFadden	1
02393	Phenols (water)	SW-846 9066	1	15252120101A	09/09/2015 18:58	Venia B McFadden	1

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

Sample Description: **EFF-W-150902 Grab Groundwater**
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 8034108
LL Group # 1590153
Account # 10880

Project Name: 95607

Collected: 09/02/2015 09:00 by GB

Submitted: 09/03/2015 09:30
Reported: 09/23/2015 10:05

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CCVEF

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08256	Cyanide Water Distillation	SW-846 9012A	1	15254117101A	09/11/2015 10:25	Nancy J Shoop	1
08123	Phenol Distillation (SW-846)	SW-846 9065	1	15252120101A	09/09/2015 09:55	Nancy J Shoop	1
08079	HEM (oil & grease)	EPA 1664A	1	15254807901A	09/11/2015 16:56	Michelle L Lalli	1

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

Sample Description: MID-1-W-150902 Grab Groundwater
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 8034110
LL Group # 1590153
Account # 10880

Project Name: 95607

Collected: 09/02/2015 09:20 by GB

Submitted: 09/03/2015 09:30
Reported: 09/23/2015 10:05

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CCVM1

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

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	P152542AA	09/11/2015 12:17	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152542AA	09/11/2015 12:17	Brett W Kenyon	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15252B20A	09/10/2015 21:27	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15252B20A	09/10/2015 21:27	Brett W Kenyon	1

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

Sample Description: INF-W-150902 Grab Groundwater
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 8034111
LL Group # 1590153
Account # 10880

Project Name: 95607

Collected: 09/02/2015 09:30 by GB

Submitted: 09/03/2015 09:30
Reported: 09/23/2015 10:05

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CCVIN

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	120	0.5	1	1
10945	Ethylbenzene	100-41-4	2	0.5	1	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	2	0.5	1	1
10945	Toluene	108-88-3	3	0.5	1	1
10945	Xylene (Total)	1330-20-7	14	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.	1,300	50	100	1

General Sample Comments

CA ELAP Lab Certification No. 2792

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	P152542AA	09/11/2015 12:43	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P152542AA	09/11/2015 12:43	Brett W Kenyon	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15252B20A	09/10/2015 21:54	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15252B20A	09/10/2015 21:54	Brett W Kenyon	1

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

Sample Description: QA-T-150902 NA Water
Facility# 95607 CRAW
5269 Crow Canyon Rd-Castro T0600100344

LL Sample # WW 8034112
LL Group # 1590153
Account # 10880

Project Name: 95607

Collected: 09/02/2015

Submitted: 09/03/2015 09:30
Reported: 09/23/2015 10:05

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CCVTB

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

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	D152541AA	09/11/2015 14:15	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D152541AA	09/11/2015 14:15	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15252B20A	09/10/2015 13:38	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	15252B20A	09/10/2015 13:38	Brett W Kenyon	1

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

Quality Control Summary

Client Name: ChevronTexaco Group Number: 1590153
Reported: 09/23/2015 10:05

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: D152541AA	Sample number(s): 8034112								
Benzene	N.D.	0.5	1	ug/l	94		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	88		78-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	89		75-120		
Toluene	N.D.	0.5	1	ug/l	90		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	90		80-120		
Batch number: P152542AA	Sample number(s): 8034110-8034111								
Benzene	N.D.	0.5	1	ug/l	98	99	78-120	1	30
Ethylbenzene	N.D.	0.5	1	ug/l	96	96	78-120	1	30
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	106	109	75-120	2	30
Toluene	N.D.	0.5	1	ug/l	96	97	80-120	1	30
Xylene (Total)	N.D.	0.5	1	ug/l	99	100	80-120	1	30
Batch number: W152522AA	Sample number(s): 8034108								
Acetone	N.D.	6.	20	ug/l	109		58-138		
t-Amyl methyl ether	N.D.	0.5	1	ug/l	96		75-120		
Benzene	N.D.	0.5	1	ug/l	105		78-120		
Bromobenzene	N.D.	1.	5	ug/l	103		80-120		
Bromochloromethane	N.D.	1.	5	ug/l	94		80-120		
Bromodichloromethane	N.D.	0.5	1	ug/l	95		73-120		
Bromoform	N.D.	0.5	4	ug/l	97		61-121		
Bromomethane	N.D.	0.5	1	ug/l	88		53-130		
2-Butanone	N.D.	3.	10	ug/l	103		62-131		
t-Butyl alcohol	N.D.	5.	20	ug/l	107		78-121		
n-Butylbenzene	N.D.	1.	5	ug/l	90		68-120		
sec-Butylbenzene	N.D.	1.	5	ug/l	95		75-120		
tert-Butylbenzene	N.D.	1.	5	ug/l	95		74-121		
Carbon Disulfide	N.D.	1.	5	ug/l	93		58-126		
Carbon Tetrachloride	N.D.	0.5	1	ug/l	90		74-130		
Chlorobenzene	N.D.	0.5	1	ug/l	105		80-120		
Chloroethane	N.D.	0.5	1	ug/l	96		56-120		
2-Chloroethyl Vinyl Ether	N.D.	2.	10	ug/l	93		42-152		
Chloroform	N.D.	0.5	1	ug/l	102		80-120		
Chloromethane	N.D.	0.5	1	ug/l	93		65-129		
2-Chlorotoluene	N.D.	1.	5	ug/l	100		78-121		
4-Chlorotoluene	N.D.	1.	5	ug/l	98		78-120		
1,2-Dibromo-3-chloropropane	N.D.	2.	5	ug/l	80		55-131		
Dibromochloromethane	N.D.	0.5	1	ug/l	96		72-120		
1,2-Dibromoethane	N.D.	0.5	1	ug/l	104		80-120		
Dibromomethane	N.D.	0.5	1	ug/l	99		80-120		
1,2-Dichlorobenzene	N.D.	1.	5	ug/l	100		80-120		
1,3-Dichlorobenzene	N.D.	1.	5	ug/l	99		80-120		
1,4-Dichlorobenzene	N.D.	1.	5	ug/l	100		80-120		

*- 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: 1590153
Reported: 09/23/2015 10:05

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dichlorodifluoromethane	N.D.	0.5	1	ug/l	76		55-127		
1,1-Dichloroethane	N.D.	0.5	1	ug/l	107		80-120		
1,2-Dichloroethane	N.D.	0.5	1	ug/l	100		72-127		
1,1-Dichloroethene	N.D.	0.5	1	ug/l	105		76-124		
cis-1,2-Dichloroethene	N.D.	0.5	1	ug/l	101		80-120		
trans-1,2-Dichloroethene	N.D.	0.5	1	ug/l	104		80-120		
1,2-Dichloropropane	N.D.	0.5	1	ug/l	109		80-120		
1,3-Dichloropropane	N.D.	0.5	1	ug/l	107		80-120		
2,2-Dichloropropane	N.D.	0.5	1	ug/l	91		71-125		
1,1-Dichloropropene	N.D.	1.	5	ug/l	96		80-126		
cis-1,3-Dichloropropene	N.D.	0.5	1	ug/l	99		80-120		
trans-1,3-Dichloropropene	N.D.	0.5	1	ug/l	103		76-120		
Ethanol	N.D.	50.	250	ug/l	107		49-144		
Ethyl t-butyl ether	N.D.	0.5	1	ug/l	100		69-120		
Ethylbenzene	N.D.	0.5	1	ug/l	105		78-120		
Freon 113	N.D.	2.	10	ug/l	100		67-127		
Hexachlorobutadiene	N.D.	2.	5	ug/l	82		60-120		
2-Hexanone	N.D.	3.	10	ug/l	108		59-127		
di-Isopropyl ether	N.D.	0.5	1	ug/l	117		70-124		
Isopropylbenzene	N.D.	1.	5	ug/l	102		80-120		
p-Isopropyltoluene	N.D.	1.	5	ug/l	91		76-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	100		75-120		
4-Methyl-2-pentanone	N.D.	3.	10	ug/l	107		59-130		
Methylene Chloride	N.D.	2.	4	ug/l	106		77-121		
Naphthalene	N.D.	1.	5	ug/l	73		59-120		
n-Propylbenzene	N.D.	1.	5	ug/l	103		75-130		
Styrene	N.D.	1.	5	ug/l	98		80-120		
1,1,1,2-Tetrachloroethane	N.D.	0.5	1	ug/l	98		80-120		
1,1,2,2-Tetrachloroethane	N.D.	0.5	1	ug/l	103		65-131		
Tetrachloroethene	N.D.	0.5	1	ug/l	105		80-122		
Toluene	N.D.	0.5	1	ug/l	107		80-120		
1,2,3-Trichlorobenzene	N.D.	1.	5	ug/l	74		69-120		
1,2,4-Trichlorobenzene	N.D.	1.	5	ug/l	82		73-120		
1,1,1-Trichloroethane	N.D.	0.5	1	ug/l	88		66-126		
1,1,2-Trichloroethane	N.D.	0.5	1	ug/l	103		80-120		
Trichloroethene	N.D.	0.5	1	ug/l	102		80-120		
Trichlorofluoromethane	N.D.	0.5	1	ug/l	89		60-142		
1,2,3-Trichloropropane	N.D.	1.	5	ug/l	103		76-120		
1,2,4-Trimethylbenzene	N.D.	1.	5	ug/l	97		75-120		
1,3,5-Trimethylbenzene	N.D.	1.	5	ug/l	97		80-120		
Vinyl Chloride	N.D.	0.5	1	ug/l	92		69-120		
m+p-Xylene	N.D.	0.5	1	ug/l	103		80-120		
o-Xylene	N.D.	0.5	1	ug/l	101		79-120		
Batch number: 15252B20A	Sample number(s): 8034108,8034110-8034112								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	98	94	71-138	4	30
Batch number: 152470639001A	Sample number(s): 8034108								
Antimony	N.D.	0.33	2.0	ug/l	91		80-120		
Arsenic	N.D.	0.54	4.0	ug/l	104		80-120		
Beryllium	N.D.	0.071	1.0	ug/l	106		80-120		
Cadmium	N.D.	0.23	1.0	ug/l	99		80-120		
Chromium	N.D.	0.70	4.0	ug/l	100		80-120		
Cobalt	N.D.	0.10	1.0	ug/l	100		80-120		
Copper	N.D.	0.40	4.0	ug/l	100		80-120		
Lead	N.D.	0.13	2.0	ug/l	104		80-120		

*- 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: 1590153
Reported: 09/23/2015 10:05

Analysis Name	Blank Result	Blank MDL**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Nickel	N.D.	0.94	4.0	ug/l	100		80-120		
Silver	N.D.	0.11	1.0	ug/l	101		80-120		
Thallium	N.D.	0.15	1.0	ug/l	103		80-120		
Vanadium	N.D.	0.22	1.0	ug/l	101		80-120		
Zinc	N.D.	7.4	30.0	ug/l	100		80-120		
Batch number: 152470639001B	Sample number(s): 8034108								
Selenium	N.D.	0.50	4.0	ug/l	101		80-120		
Batch number: 152470639001C	Sample number(s): 8034108								
Molybdenum	N.D.	0.25	1.0	ug/l	99		80-120		
Batch number: 152470639001D	Sample number(s): 8034108								
Barium	N.D.	0.92	4.0	ug/l	104		80-120		
Batch number: 152515713005	Sample number(s): 8034108								
Mercury	N.D.	0.050	0.20	ug/l	96		80-120		
Batch number: 15252120101A	Sample number(s): 8034108								
Phenols (water)	N.D.	15.	40	ug/l	103		82-109		
Batch number: 15254117101A	Sample number(s): 8034108								
Total Cyanide (water)	N.D.	5.0	10	ug/l	106		90-110		
Batch number: 15254807901A	Sample number(s): 8034108								
HEM (oil & grease)	N.D.	1,400.	5,000	ug/l	85	90	78-114	6	11

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: D152541AA	Sample number(s): 8034112 UNSPK: P039766								
Benzene	90	103	78-120	14	30				
Ethylbenzene	85	98	78-120	14	30				
Methyl Tertiary Butyl Ether	84	95	75-120	13	30				
Toluene	87	100	80-120	14	30				
Xylene (Total)	87	99	80-120	13	30				
Batch number: W152522AA	Sample number(s): 8034108 UNSPK: P029103								
Acetone	91	97	58-138	6	30				
t-Amyl methyl ether	89	92	75-120	4	30				
Benzene	110	112	78-120	1	30				
Bromobenzene	106	105	80-120	1	30				
Bromochloromethane	89	90	80-120	2	30				
Bromodichloromethane	95	96	73-120	1	30				
Bromoform	90	91	61-121	1	30				
Bromomethane	94	93	53-130	1	30				
2-Butanone	78	79	62-131	2	30				
t-Butyl alcohol	83	89	78-121	7	30				
n-Butylbenzene	96	99	68-120	3	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: 1590153
Reported: 09/23/2015 10:05

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
sec-Butylbenzene	106	108	75-120	3	30				
tert-Butylbenzene	103	103	74-121	0	30				
Carbon Disulfide	106	106	58-126	1	30				
Carbon Tetrachloride	100	100	74-130	1	30				
Chlorobenzene	107	108	80-120	1	30				
Chloroethane	107	105	56-120	2	30				
2-Chloroethyl Vinyl Ether	0*	0*	42-152	0	30				
Chloroform	103	102	80-120	1	30				
Chloromethane	103	100	65-129	3	30				
2-Chlorotoluene	107	107	78-121	0	30				
4-Chlorotoluene	106	106	78-120	0	30				
1,2-Dibromo-3-chloropropane	71	70	55-131	1	30				
Dibromochloromethane	94	93	72-120	1	30				
1,2-Dibromoethane	100	99	80-120	1	30				
Dibromomethane	92	95	80-120	3	30				
1,2-Dichlorobenzene	98	99	80-120	1	30				
1,3-Dichlorobenzene	103	102	80-120	1	30				
1,4-Dichlorobenzene	103	104	80-120	1	30				
Dichlorodifluoromethane	98	96	55-127	2	30				
1,1-Dichloroethane	103	111	80-120	7	30				
1,2-Dichloroethane	95	98	72-127	3	30				
1,1-Dichloroethene	114	114	76-124	0	30				
cis-1,2-Dichloroethene	101	104	80-120	3	30				
trans-1,2-Dichloroethene	110	111	80-120	1	30				
1,2-Dichloropropane	108	108	80-120	0	30				
1,3-Dichloropropane	105	103	80-120	2	30				
2,2-Dichloropropane	102	103	71-125	1	30				
1,1-Dichloropropene	111	108	80-126	2	30				
cis-1,3-Dichloropropene	98	98	80-120	0	30				
trans-1,3-Dichloropropene	100	99	76-120	1	30				
Ethanol	120	149*	49-144	22	30				
Ethyl t-butyl ether	100	102	69-120	2	30				
Ethylbenzene	112	111	78-120	1	30				
Freon 113	124	125	67-127	1	30				
Hexachlorobutadiene	84	97	60-120	15	30				
2-Hexanone	93	99	59-127	6	30				
di-Isopropyl ether	114	116	70-124	1	30				
Isopropylbenzene	105	107	80-120	2	30				
p-Isopropyltoluene	98	98	76-120	0	30				
Methyl Tertiary Butyl Ether	92	96	75-120	4	30				
4-Methyl-2-pentanone	92	94	59-130	3	30				
Methylene Chloride	102	102	77-121	0	30				
Naphthalene	67	73	59-120	8	30				
n-Propylbenzene	113	112	75-130	1	30				
Styrene	100	100	80-120	1	30				
1,1,1,2-Tetrachloroethane	98	96	80-120	2	30				
1,1,2,2-Tetrachloroethane	98	97	65-131	1	30				
Tetrachloroethene	116	115	80-122	1	30				
Toluene	111	110	80-120	1	30				
1,2,3-Trichlorobenzene	66*	72	69-120	9	30				
1,2,4-Trichlorobenzene	76	81	73-120	6	30				
1,1,1-Trichloroethane	97	98	66-126	1	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: 1590153
Reported: 09/23/2015 10:05

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
1,1,2-Trichloroethane	95	98	80-120	4	30						
Trichloroethene	110	111	80-120	1	30						
Trichlorofluoromethane	110	109	60-142	1	30						
1,2,3-Trichloropropane	98	98	76-120	1	30						
1,2,4-Trimethylbenzene	105	106	75-120	0	30						
1,3,5-Trimethylbenzene	103	105	80-120	2	30						
Vinyl Chloride	107	104	69-120	3	30						
m+p-Xylene	108	108	80-120	0	30						
o-Xylene	103	102	79-120	2	30						
Batch number: 152470639001A	Sample number(s): 8034108 UNSPK: 8034108 BKG: 8034108										
Antimony	98	102	75-125	3	20	N.D.		N.D.		0 (1)	20
Arsenic	96	105	75-125	5	20	5.5		5.7		3 (1)	20
Beryllium	103	106	75-125	2	20	N.D.		N.D.		0 (1)	20
Cadmium	100	102	75-125	2	20	N.D.		N.D.		0 (1)	20
Chromium	102	99	75-125	3	20	N.D.		N.D.		0 (1)	20
Cobalt	95	100	75-125	5	20	0.15	J	0.11	J	35* (1)	20
Copper	94	99	75-125	5	20	0.98	J	0.96	J	2 (1)	20
Lead	103	105	75-125	2	20	0.32	J	0.32	J	2 (1)	20
Nickel	95	100	75-125	5	20	1.2	J	1.3	J	7 (1)	20
Silver	95	100	75-125	5	20	N.D.		N.D.		0 (1)	20
Thallium	108	103	75-125	4	20	N.D.		N.D.		0 (1)	20
Vanadium	102	107	75-125	5	20	N.D.		N.D.		0 (1)	20
Zinc	95	102	75-125	7	20	N.D.		N.D.		0 (1)	20
Batch number: 152470639001B	Sample number(s): 8034108 UNSPK: 8034108 BKG: 8034108										
Selenium	97	96	75-125	2	20	N.D.		N.D.		0 (1)	20
Batch number: 152470639001C	Sample number(s): 8034108 UNSPK: 8034108 BKG: 8034108										
Molybdenum	98	109	75-125	10	20	1.0		0.65	J	44* (1)	20
Batch number: 152470639001D	Sample number(s): 8034108 UNSPK: 8034108 BKG: 8034108										
Barium	109	122	75-125	3	20	184		200		8	20
Batch number: 152515713005	Sample number(s): 8034108 UNSPK: P034173 BKG: P034173										
Mercury	97	100	80-120	2	20	N.D.		N.D.		0 (1)	20
Batch number: 15252120101A	Sample number(s): 8034108 UNSPK: P032854										
Phenols (water)	91	102	82-109	11*	8						
Batch number: 15254117101A	Sample number(s): 8034108 UNSPK: P034669 BKG: P034669										
Total Cyanide (water)	106		72-114			N.D.		N.D.		0 (1)	20
Batch number: 15254807901A	Sample number(s): 8034108 UNSPK: 8034108										
HEM (oil & grease)	93		78-114								

Surrogate Quality Control

*- 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: 1590153
Reported: 09/23/2015 10:05

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: D152541AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8034112	108	102	95	96
Blank	106	101	97	97
LCS	104	103	96	103
MS	103	103	97	102
MSD	103	102	97	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: P152542AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8034110	102	99	100	102
8034111	101	98	100	101
Blank	100	98	99	99
LCS	100	99	100	101
LCSD	100	100	98	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: 8260 Full List w/ Sep. Xylenes
Batch number: W152522AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8034108	96	99	99	95
Blank	93	96	100	95
LCS	95	100	101	98
MS	90	92	100	96
MSD	92	94	100	96
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 15252B20A

	Trifluorotoluene-F
8034108	90
8034110	89
8034111	96
8034112	87
Blank	91
LCS	97
LCSD	99
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.

Environmental Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

Acct. # 10880 Group # 1590153 Sample # 8034108-12

Client: Chevron EMC				
Project Name/#: Castro Valley		Site ID #: 95607		
Project Manager: Judy Gilbert		P.O. #: Direct Bill To Chevro		
Sampler: GREG BRUSINI Blui		PWSID #:		
Phone #: 707 332 8265		Quote #:		
State where sample(s) were collected: GWE Effluent				

Sample Identification	Collection Date	Collection Time	Grab	Composite	Sediment / Soil	Water (Ground ☑, Surface ☐, Potable ☐, NPDES ☐)	Other:	Total # of Containers	TPH-g by 8015M	BTEX by 8260	MTBE by 8260	METALS by 6020B	VOCs by 8260	TOG by 1664A	Phenolics by 9065	CN by 9016			Remarks
EFF	9.2.15	0900	X			X		17	X	X	X	X	X	X	X	X			
MID-2	9.2.15	0910	X			X		6	X	X	X								HOLD MID-2, SAMPLE ONLY IF MID-1 > N.D.
MID-1	9.2.15	0920	X			X		6	X	X	X								
INF	9.2.15	0930	X			X		6	X	X	X								

Analyses Requested / Preservation Codes

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: Judy.Gilbert@ghd.com matthew.b.smith@ghd.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
Brusini	9.2.15	1445			
			CEsh	9/3/15	0930

Relinquished by Commercial Carrier: UPS ___ FedEx ✓ 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.

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.