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 at 2:20 pm, Dec 04, 2014

December 2, 2014

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 - October 2014.

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 - October 2014

CONESTOGA-ROVERS & ASSOCIATES

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

December 2, 2014 Reference No. 311950

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

Re: Monthly Remedial Progress Report - October 2014
Former Chevron Station 95607
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), is providing this *Monthly Remedial Progress Report - October 2014* (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 October 2014 and cumulatively (Tables 1 through 4).

DPE system compliance testing and sampling was performed on October 13, 2014 in accordance with system operational permits. During the reporting period, approximately 2,223 pounds of total petroleum hydrocarbons as gasoline (TPHg) and 15.9 pounds of benzene were removed in vapor phase (Table 4), and approximately 1.4 pounds of TPHg and 0.3 pounds were removed in dissolved phase (Table 2). A summary of the DPE system operational performance for the month of October 2014 is presented below.

VAPOR-PHASE EXTRACTION DATA-OCTOBER 2014

Soil Vapor Influent Flow Rate (avg scfm)	225 scfm
Soil Vapor Laboratory Influent Concentrations (TPHg ppmv)	1,500 ppmv
Soil Vapor Laboratory Influent Concentrations (Benzene ppmv)	10 ppmv
Soil Vapor Mass Removal (lb TPHg/period)	2,223 pounds
Soil Vapor Mass Removal (lb Benzene/period)	15.9 pounds
Soil Vapor Extraction Period Operating Uptime (hours)	394 hours
Soil Vapor Treatment Destruction Efficiency (%)	100 percent

ppmv – parts per million by volume

CONESTOGA-ROVERS & ASSOCIATES

December 2, 2014 Reference No. 311950

DISSOLVED-PHASE EXTRACTION DATA-OCTOBER 2014

Maximum Groundwater Extraction Rate (gpm)	2.3 gpm
Average Groundwater Extraction Rate (gpm)	0.94 gpm
Dissolved-Phase Mass Removal Rate (lb TPHg/period)	1.4 pounds
Dissolved-Phase Mass Removal Rate (lb Benzene/period)	0.3 pounds
Total Volume Groundwater Treated (gallons)	22,200 gallons
Groundwater Extraction Period Operating Uptime (hours)	394 hours

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

PROFESSIONAL GEOLOGIST BRANDON S. WILKEN No. 7564 STATE OF CALIFORNIA

Darrell Smolko Brandon S. Wilken, PG 7564

DS/aa/33

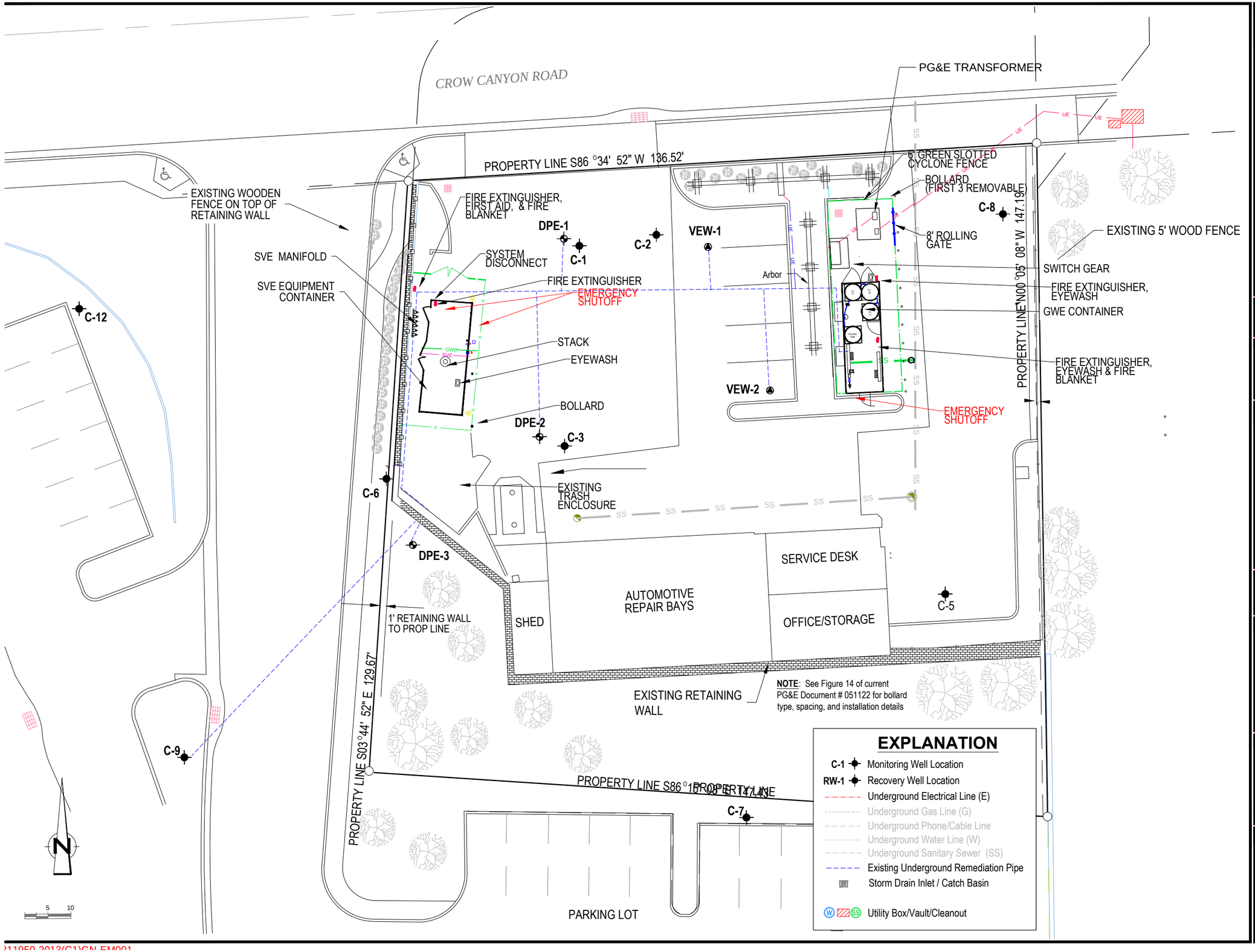
Figure 1 General Site Plan

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

Attachment A Laboratory Analytical Reports

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

FIGURE



211950 2013(C1)GN-FM001

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 # 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)**
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
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

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
NS = Midfluent 3 not sampled due to bypassing one of the carbon vessels for a carbon changeout
TBD = Sample taken during this time and are awaiting results

TPHg analyzed by EPA Method 8015M.
Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B.
MTBE analyzed by EPA Method 8260B.

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

Date (mm/dd/yy)	Operating Well IDs	Hour Meter[1] (hours)	Totalizer Reading (gallons)	Period Volume (gallons)	Period Operational Flow Rate (gpm)	Cumulative Volume (gallons)	TPHg Concentration (µg/L)	TPHg Period Removal[c] (pounds)	TPHg Cumulative Removal (pounds)	Benzene Concentration (µg/L)	Benzene Period Removal[c] (pounds)	Benzene Cumulative Removal (pounds)	MTBE Concentration (µg/L)	MTBE Period Removal[c] (pounds)	MTBE 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
Agency Limits					20										
					Total Extracted Volume (gal):	23,800	Pounds Removed:	1.41	1.5	Pounds Removed:	0.31	0.3	Pounds Removed:	0.00	0.0
					Average Operational Flow Rate (gpm)[3]:	0.98	Gallons Removed[4]	0.2	0.2	Gallons Removed[4]	0.0	0.0	Gallons Removed[c]	0.0	0.0

Reporting Period: 2014-OCT

Number of Days during Reporting Period	28	days
Gallons of Extracted Ground Water	22,200	gal
Average Flow Rate	0.94	gpm
Pounds of TPHg Removed	1.406	lbs
TPHg Removal Rate	0.050	lbs/day
Pounds of Benzene Removed	0.305	lbs
Benzene Removal Rate	0.011	lbs/day
Pounds of MTBE Removed	0.001	lbs
MTBE Removal Rate	0.000	lbs/day

Cumulative Results Since Start-up:

Number Days since Startup	45	days
Cumulative Total Gallons Extracted	23,800	gal
Average Flow Rate[3]	0.98	gpm
Cumulative Pounds of TPHg Removed	1.5	lbs
TPHg Removal Rate	0.032	lbs/day
Cumulative Pounds of Benzene Removed	0.322	lbs
Benzene Removal Rate	0.007	lbs/day
Cumulative Pounds of MTBE Removed	0.001	lbs
MTBE Removal Rate	0.000	lbs/day

Notes:

a = Estimated groundwater system run time, hour meter malfunction
b = Hour meter replaced; groundwater system off, hour meter being used to measure run time for soil vapor extraction system
c = Goundwater system turned on using new hour meter
d = OWS limit is based on 10 gpm operating continuously. No more than 5.26 million gallons of water to be processed in any 12 month period
PUC permit gives average of 20 gpm

Formulas and Assumptions:

1. Hour meter readings taken at the end of the site visit
2. Mass Removed During the Period = Volume of Water Extracted (gallons) x Concentration (µg/L) x ($g/10^6$ µg) x (lb/453.6g) x (3.785 L/gal)
3. When concentration of individual parameters were not detected, the concentration was assumed to be half the detection limit for calculation
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:
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 Vacuum (inH_2O)	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 FID (ppmv)	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	4013.5	0%	0.0	NM	3.00	41	NM	NM	NM	10.0	155	294	259	259	20	747	NM	NM	8,000	20.0	663.8	99.8%
9/29/14 14:00	C9, DPE-1 - DPE3, VE-1, VE-2	5.5	4019.0	1.3%	5.5	15.0	2.81	38	93	165	143	11	189	255	213	213	20	880	NM	2,600	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	38	83	144	127	10	176	255	217	217	25	899	NM	1,800	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	31.7	68	191	176	10.9	180	268	227	227	0	750	883	NM	1,100	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	43	79	140	123	10.5	171	255	219	219	0	750	927	1,300	650	0.3	45.6	100.0%
10/27/14 11:00	C9, DPE-1, DPE2	117.0	4413	69.9%	117.0	15.0	4.1	56	61	161	141	11.6	160	270	236	236	0	750	897	1,325	700	0.4	53.1	99.9%
Reporting Period			**394**	**58.9%**											**225**								**54**	**100%**
Permit Conditions:											**<300**				**<300**			**>600**						**>98.5%**

Abbreviations and Notes:

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
LEL = Lower Explosive Limit
ppmv = parts per million by volume
a = hour meter non-functional due to improper wiring; hour meter values estimated based upon continuous runtime
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.

Compliance:

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

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

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

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

Date (mm/dd/yy hh:mm)	Concentrations[1]								TPHg			Benzene			MTBE			VOC		
	INF-2				Effluent				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 (%)
		TPHg (ppmv)	Benzene (ppmv)	MTBE (ppmv)	VOC (ppmv)	TPHg (ppmv)	Benzene (ppmv)	MTBE (ppmv)	VOC (ppmv)											
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	0.00	3.82	3.31	0.00	0.03	0.02	0.00	0.02	3.86	3.95	98.9%
9/29/14 14:00	C9, DPE-1 - DPE3, VE-1, VE-2	--	--	--	--	--	--	--	--	287.1	65.79	3.14	2.73	0.63	0.03	0.01	0.00	0.01	3.18	3.26	98.9%
10/6/14 11:00	C9, DPE-1 - DPE3, VE-1, VE-2	--	--	--	--	--	--	--	--	292.3	126.15	3.20	2.78	1.20	0.03	0.01	0.01	0.01	3.24	3.32	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	1012.84	0.36	0.66	8.79	0.04	0.04	0.12	0.04	0.44	0.45	99.6%
10/20/14 11:30	C9, DPE-1 - DPE-3	--	--	--	--	--	--	--	--	105.3	1754.96	0.35	0.64	13.28	0.04	0.04	0.37	0.04	0.42	0.43	99.6%
10/27/14 11:00	C9, DPE-1, DPE2	--	--	--	--	--	--	--	--	113.8	2289.13	0.38	0.69	16.51	0.04	0.04	0.55	0.04	0.46	0.47	99.6%
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[10]:									**TPHg =**	**2,223**		**Benzene =**	**15.9**		**MTBE =**	**0.6**				
Total Pounds Removed:									**TPHg =**	**2,289**		**Benzene =**	**16.5**		**MTBE =**	**0.6**				

Notes:

1. TPHg, Benzene, and MTBE analyzed by EPA Method 8015/8020. Vapor samples were collected in 1-liter tedlar bags unless otherwise noted.
2. Molecular weight of TPHg assumed to be 86 lb/lb-mole as hexane.
3. Molecular weight of Benzene assumed to be 78 lb/lb-mole.
4. Molecular weight of MTBE assumed to be 88 lb/lb-mole.
5. Molecular weight of VOCs assumed to be 86 lb/lb-mole as hexane.
6. Removal/Emission Rate (ppd) = C (ppmv) x Q (scfm) x (1lb-mole/386ft^{-3}) x MW (lb/lb-mole) x 60 min/hr x 24 hr/day x 10^{-6}
   C = concentration
   Q = flow
   MW = molecular weight
7. Cumulative TPHg / Benzene / MTBE removed = Previous Total + (Average of Previous and Current Removal Rates * Operation Interval)
8. Inffluent not measured due to water in vapor stream. Individual well samples were collected at a lower vacuum at this time.
9. Destruction efficiency requirements not met, agency notified. Agency granted approval to restart system
10. Reporting Period: October 6 through October 27, 2014

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

Abbreviations:

mm/dd/yy = month/day/year
hh:mm = hours : minutes
TPHg = total petroluem hydrocarbons as gasoline
MTBE = methyl tertiary butyl ether
VOC = volatile organic compounds
ppmv = parts per million by volume
ppd = pounds per day
NA = not applicable
NM = not measured
lb = pounds
ft^{-3} = cubic feet
scfm = standard cubic feet per minute

INF-1 = pre-dilution system influent
INF-2 = post-dilution system influent
TBD = Sample taken during this time and are awaiting results

ATTACHMENT A

LABORATORY ANALYTICAL REPORTS

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

October 28, 2014

Project: 95607

Submittal Date: 10/14/2014
Group Number: 1510760
PO Number: 0015154749
Release Number: HETRICK
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
EFF-W-141013 NA Groundwater	7636678
MID-2-W-141013 NA Groundwater	7636679
MID-1-W-141013 NA Groundwater	7636680
INF-W-141013 NA Groundwater	7636681

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

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

Respectfully Submitted,

Natalie R. Luciano
Senior Specialist

(717) 556-7258

Sample Description: EFF-W-141013 NA Groundwater
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # WW 7636678
LL Group # 1510760
Account # 10880

Project Name: 95607

Collected: 10/13/2014 12:30 by VH

Submitted: 10/14/2014 09:10
Reported: 10/28/2014 22:23

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CVEFF

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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	Z142882AA	10/15/2014 13:40	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142882AA	10/15/2014 13:40	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	14288A20A	10/15/2014 19:34	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14288A20A	10/15/2014 19:34	Miranda P Tillinghast	1

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

Sample Description: MID-2-W-141013 NA Groundwater
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # WW 7636679
LL Group # 1510760
Account # 10880

Project Name: 95607

Collected: 10/13/2014 12:35 by VH

Submitted: 10/14/2014 09:10
Reported: 10/28/2014 22:23

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CVM-2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received 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

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	P142972AA	10/24/2014 12:56	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P142972AA	10/24/2014 12:56	Anita M Dale	1

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

Sample Description: MID-1-W-141013 NA Groundwater
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # WW 7636680
LL Group # 1510760
Account # 10880

Project Name: 95607

Collected: 10/13/2014 12:40 by VH

Submitted: 10/14/2014 09:10
Reported: 10/28/2014 22:23

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CVM-1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	ug/l	
10945	Benzene	71-43-2	2	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	Z142882AA	10/15/2014 14:52	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142882AA	10/15/2014 14:52	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	14288A20A	10/15/2014 19:56	Miranda P Tillinghast	1
01146	GC VOA Water Prep	SW-846 5030B	1	14288A20A	10/15/2014 19:56	Miranda P Tillinghast	1

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

Sample Description: INF-W-141013 NA Groundwater
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # WW 7636681
LL Group # 1510760
Account # 10880

Project Name: 95607

Collected: 10/13/2014 12:45 by VH

Submitted: 10/14/2014 09:10
Reported: 10/28/2014 22:23

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

CVINF

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**		**ug/l**	**ug/l**	
10945	Benzene	71-43-2	1,600		25	50	50
10945	Ethylbenzene	100-41-4	76		3	5	5
10945	Methyl Tertiary Butyl Ether	1634-04-4	4	J	3	5	5
10945	Toluene	108-88-3	37		3	5	5
10945	Xylene (Total)	1330-20-7	630		3	5	5
GC Volatiles	**SW-846 8015B**		**ug/l**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	7,500		500	1,000	10

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	Z142882AA	10/15/2014 15:16	Daniel H Heller	5
10945	BTEX/MTBE	SW-846 8260B	1	Z142882AA	10/15/2014 15:40	Daniel H Heller	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z142882AA	10/15/2014 15:16	Daniel H Heller	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Z142882AA	10/15/2014 15:40	Daniel H Heller	50
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	14288A20A	10/15/2014 21:03	Miranda P Tillinghast	10
01146	GC VOA Water Prep	SW-846 5030B	1	14288A20A	10/15/2014 21:03	Miranda P Tillinghast	10

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

Quality Control Summary

Client Name: ChevronTexaco Group Number: 1510760
Reported: 10/28/14 at 10:23 PM

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: P142972AA	Sample number(s): 7636679								
Benzene	N.D.	0.5	1	ug/l	101		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	99		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	105		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: Z142882AA	Sample number(s): 7636678,7636680-7636681								
Benzene	N.D.	0.5	1	ug/l	89		78-120		
Ethylbenzene	N.D.	0.5	1	ug/l	93		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	88		75-120		
Toluene	N.D.	0.5	1	ug/l	95		80-120		
Xylene (Total)	N.D.	0.5	1	ug/l	97		80-120		
Batch number: 14288A20A	Sample number(s): 7636678,7636680-7636681								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	102	104	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: P142972AA	Sample number(s): 7636679 UNSPK: P647654								
Benzene	107	104	72-134	3	30				
Ethylbenzene	100	99	71-134	0	30				
Methyl Tertiary Butyl Ether	103	101	72-126	2	30				
Toluene	102	102	80-125	0	30				
Xylene (Total)	103	102	79-125	1	30				
Batch number: Z142882AA	Sample number(s): 7636678,7636680-7636681 UNSPK: 7636678								
Benzene	87	92	72-134	5	30				
Ethylbenzene	97	102	71-134	5	30				
Methyl Tertiary Butyl Ether	83	84	72-126	1	30				
Toluene	97	102	80-125	5	30				
Xylene (Total)	103	106	79-125	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: 1510760
Reported: 10/28/14 at 10:23 PM

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: P142972AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7636679	101	100	100	99
Blank	100	97	99	99
LCS	100	101	100	100
MS	101	102	99	100
MSD	101	100	100	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: Z142882AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7636678	100	99	98	98
7636680	99	96	98	97
7636681	97	95	101	101
Blank	99	100	98	97
LCS	96	98	97	103
MS	96	97	98	105
MSD	97	99	97	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 14288A20A

	Trifluorotoluene-F
7636678	84
7636680	84
7636681	90
Blank	88
LCS	88
LCSD	88
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.

1Ø1314-Ø4

Environmen l Analysis Request/Chain of (ıstody

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Acct. # 10880 Group # 1510760 Sample # 7636678-81

Client: Chevron EMC		Matrix		Analyses Requested	For Lab Use Only
Project Name/#: Castro Valley	Site ID #: 95607			Preservation Codes	SF #:
Project Manager: Judy Gilbert	P.O. #: Direct Bill To Chevro				SCR #:
Sampler: Vartan Hanedanian	PWSID #:				
Phone #:	Quote #:				
State where sample(s) were collected: CA. GWE Effluent					

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

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

Sample Identification	Collection Date	Collection Time	Grab	Composite	Soil	Water	Other:	Total # of Containers	TPH-g by 8015M	BTEX by 8260	MTBE by 8260	Remarks
EFF	10-13-14	12:30				X		6	X	X	X	
MID-2	10-13-14	12:35				X		6	X	X	X	HOLD MID-2, SAMPLE ONLY IF MID-1 > N.D.
MID-1	10-13-14	12:40				X		6	X	X	X	
INF	10-13-14	12:45				X		6	X	X	X	

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
V. Hanedanian	10/13/14	1540	A. Aulfer	13 Oct 14	1540
A. Aulfer	13 Oct 14	1630	FEDEX		
			[signature]	10.14.14	910

Relinquished by Commercial Carrier: UPS ___ FedEx X Other ___

Temperature upon receipt 0.3-0.6 °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 - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> 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.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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

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

October 23, 2014

Project: 95607

Submittal Date: 10/14/2014
Group Number: 1511500
PO Number: 0015154749
Release Number: HETRICK
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
EFF-A-141013 Grab Air	7639637
INF-A-141013 Grab Air	7639638

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

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

Respectfully Submitted,

Natalie R. Luciano
Senior Specialist

(717) 556-7258

Sample Description: EFF-A-141013 Grab Air
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # AQ 7639637
LL Group # 1511500
Account # 10880

Project Name: 95607

Collected: 10/13/2014 11:25 by VH

Submitted: 10/14/2014 09:10
Reported: 10/23/2014 13:09

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

EFFRE

CAT No.	Analysis Name	CAS Number	As Received Final Result		MDL	As Received Final Result		MDL	DF
Volatiles in Air	**EPA 18 mod/EPA 25 mod**		ppm(v)		ppm(v)	mg/m3		mg/m3	
07090	Benzene	71-43-2	N.D.		0.5	N.D.		2	1
07090	>C4-C10 Hydrocarbons hexane	n.a.	N.D.		5	N.D.		20	1
07090	Ethylbenzene	100-41-4	N.D.		0.4	N.D.		2	1
07090	MTBE	1634-04-4	N.D.		0.5	N.D.		2	1
07090	Toluene	108-88-3	0.9	J	0.8	3	J	3	1
07090	Xylene (total)	1330-20-7	N.D.		0.7	N.D.		3	1

MDL = Method Detection Limit

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
07090	BTEX/MTBE/C4-C10	EPA 18 mod/EPA 25 mod	1	M1428830AA	10/16/2014 14:38	Florida A Cimino	1

Sample Description: INF-A-141013 Grab Air
Facility# 95607 CRAW
5269 Crow Canyon-Castro Va T0600100344

LL Sample # AQ 7639638
LL Group # 1511500
Account # 10880

Project Name: 95607

Collected: 10/13/2014 11:30 by VH

Submitted: 10/14/2014 09:10
Reported: 10/23/2014 13:09

ChevronTexaco
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

INFRE

CAT No.	Analysis Name	CAS Number	As Received Final Result	MDL	As Received Final Result	MDL	DF
Volatiles in Air	**EPA 18 mod/EPA 25 mod**		ppm(v)	ppm(v)	mg/m3	mg/m3	
07090	Benzene	71-43-2	10	0.5	30	2	1
07090	>C4-C10 Hydrocarbons hexane	n.a.	1,500	50	5,300	180	10
07090	Ethylbenzene	100-41-4	7	0.4	30	2	1
07090	MTBE	1634-04-4	N.D.	20	N.D.	72	1
07090	Toluene	108-88-3	2	0.8	9	3	1
07090	Xylene (total)	1330-20-7	13	0.7	55	3	1

The reporting limit for MTBE was raised due to interference from the sample matrix.

MDL = Method Detection Limit

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
07090	BTEX/MTBE/C4-C10	EPA 18 mod/EPA 25 mod	1	M1428830AA	10/16/2014 15:08	Florida A Cimino	1
07090	BTEX/MTBE/C4-C10	EPA 18 mod/EPA 25 mod	1	M1428930AA	10/16/2014 19:02	Florida A Cimino	10

Quality Control Summary

Client Name: ChevronTexaco Group Number: 1511500
Reported: 10/23/14 at 01:09 PM

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	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: M1428830AA	Sample number(s): 7639637-7639638							
Benzene	N.D.	0.5	ppm(v)	99	99	75-111	0	30
>C4-C10 Hydrocarbons hexane	N.D.	5.	ppm(v)					
Ethylbenzene	N.D.	0.4	ppm(v)	100	101	76-135	2	30
MTBE	N.D.	0.5	ppm(v)					
Toluene	N.D.	0.8	ppm(v)	113	119	66-123	5	30
Xylene (total)	N.D.	0.7	ppm(v)	94	93	70-134	1	30
Batch number: M1428930AA	Sample number(s): 7639638							
>C4-C10 Hydrocarbons hexane	N.D.	5.	ppm(v)					

*- Outside of specification
(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.

Summa Canister Field Test Data/Chain of Custody

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1Ø1314-Ø3

Acct. # 10880 Group # ~~1510718~~ 1511500 For Eurofins Lancaster Laboratories Environmental use only Sample # ~~763651 3-14~~ 7639637-38 Bottle Order (SCR) # _____

Instructions on reverse side correspond with circled numbers.

Client Information

Client: CHEVRON EMC

Account #:

Project Name/#: CASTRO VALLEY

P.O. #:

Sampler: MARTIAN HANEDANIAN

Quote #:

Name of state where samples were collected: CALIFORNIA

Turnaround Time Requested (TAT) (check one)

☒ Standard ☐ Rush (specify) _____

Data Package Required? ☐ Yes ☐ No

EDD Required? ☐ Yes ☐ No

	Temperature (F)		Pressure ("Hg)	
	Start	Stop	Start	Stop
Ambient				
Maximum				
Minimum				

Analyses Requested

EPA TO-3 (TPHg, BTEX, & MTBE) | ☐ EPA 18 ☐ BTEX ☐ MTBE | ☐ EPA 25 (select range below) | Helium as tracer | O2/CO2 | Library Search

Sample Identification	~~Start~~ Date/~~Time~~ (~~24-hour clock~~)	~~Stop~~ ~~Date~~/Time (~~24-hour clock~~)	Canister Pressure in Field ("Hg) (Start)	Canister Pressure in Field ("Hg) (Stop)	Interior Temp. (F) (Start)	Interior Temp. (F) (Stop)	Flow Reg. ID	Can ID	Bag ~~Can Size~~ (~~L~~)	Controller Flowrate (mL/min)	EPA TO-3	EPA 18	EPA 25	Helium	O2/CO2	Library	
EFF	10-13-14	11:25	N/A	N/A	N/A	N/A	N/A	N/A	2	N/A	X						
INF	10-13-14	11:30	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	X						

Instructions/QC Requirements & Comments

EPA 25 (check one) ☐ C1 - C4 ☐ C2 - C10 ☐ C1 - C10 ☐ C4 - C10 (GRO) ☐ C2 - C4

~~Canisters~~ Shipped by:	Date/Time:	~~Canisters~~ Received by:	Date/Time:
Mr. Tom Hanedanian	10/13/14	A. Salgar	13OCT14 1540
Relinquished by:	Date/Time:	Received by:	Date/Time:
A. Salgar	13OCT14 1638	FEDEX	
Relinquished by:	Date/Time:	Received by:	Date/Time:

Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
Relinquished by:	Date/Time:	Received by:	Date/Time:
			10/14/14

410

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7056 0713

eurofins | Lancaster Laboratories Environmental

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 - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> 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.

Data Qualifiers:

C – result confirmed by reanalysis.

J - estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	**B**	Value is <CRDL, but ≥IDL
B	Analyte was also detected in the blank	**E**	Estimated due to interference
C	Pesticide result confirmed by GC/MS	**M**	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	**N**	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	**S**	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	**U**	Compound was not detected
P	Concentration difference between primary and confirmation columns >25%	**W**	Post digestion spike out of control limits
U	Compound was not detected	*****	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	**+**	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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