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Kelly C. Esters
Property Specialist
Marketing Business Unit

**Chevron Environmental
Management Company**
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6480
kesters@chevron.com

August 15, 2013

Mr. Mark E. Detterman, PG, CEG
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Facility No. 9-9708
5910 MacArthur Boulevard, Oakland, California

Dear Mr. Detterman:

Attached for your review is the *First Semiannual 2013 Groundwater Monitoring Report* for the above-referenced site. This report was prepared by ARCADIS, upon whose assistance and advice I have relied. I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct to the best of my knowledge. Should you have any further questions, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in blue ink that reads "Kelly C. Esters". The signature is written in a cursive, flowing style.

Kelly C. Esters
Property Specialist

KCE:st
Encl.



Mr. Mark E. Detterman, PG, CEG
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Subject:

First Semiannual 2013 Groundwater Monitoring Report
Former Chevron Service Station No. 9-9708
5910 MacArthur Boulevard
Oakland, California
Fuel Leak Case No. RO0000124

Dear Mr. Detterman:

ARCADIS has prepared this *First Semiannual 2013 Groundwater Monitoring Report* on behalf of Chevron Environmental Management Company (Chevron) to document the results of groundwater monitoring and sampling at former Chevron Station No. 9-9708, located at 5910 MacArthur Boulevard in Oakland, California (Figure 1).

Groundwater Monitoring and Sampling

Groundwater monitoring and sampling was performed by Blaine Tech Services, Inc. (BTS) of San Jose, California on June 11, 2013. The groundwater monitoring and sampling program consists of water level elevation monitoring, sample collection, and chemical analysis of samples for six monitoring wells (MW-1 through MW-6). Monitoring well MW-4 requires a City of Oakland encroachment permit to set up traffic control and access the well. The BTS groundwater monitoring and sample package is presented in Attachment 1. Separate phase hydrocarbons (SPH) were not observed during the first semiannual 2013 monitoring event, nor have they historically been observed at the site.

ARCADIS U.S., Inc.
320 Commerce
Suite 200
Irvine
California 92602
Tel 714.730.9052
Fax 714.730.9345
www.arcadis-us.com

ENVIRONMENT

Date:
August 11, 2013

Contact:
Toni DeMayo

Phone:
714.508.2657

Email:
Toni.DeMayo@arcadis-us.com

Our ref:
B0060901.9708

Groundwater Flow

Depth-to-water measurements were subtracted from surveyed top of casing elevations to calculate the groundwater elevation at each monitoring well. Depth-to-water measurements and calculated groundwater elevations are presented in Table 1. Calculated groundwater elevation data was used to construct a groundwater elevation contour map of the site, presented as Figure 2.

Laboratory Analysis

Subsequent to collection, samples were packed on ice, cooled to approximately 4 degrees Celsius (°C) and shipped under appropriate chain-of-custody protocols for analysis to Test America Laboratories, Inc. of Irvine, California, a California Department of Public Health certified analytical laboratory. Groundwater samples were screened for the following analytes per the parameters listed:

- Total petroleum hydrocarbons as motor oil (TPH-MO) [C₂₉-C₄₀] and total petroleum hydrocarbons as diesel (TPH-DRO) [C₁₀-C₂₈] by United States Environmental Protection Agency (USEPA) Method 8015B, with silica gel clean-up
- Total petroleum hydrocarbons as gasoline (TPH-GRO) [C₄-C₁₂] by USEPA Method 8015B
- Benzene, toluene, ethylbenzene and total xylenes (BTEX) by USEPA Method 8260B
- Methyl tertiary butyl ether (MTBE) and ethanol by USEPA Method 8260B

A quality assurance/quality control (QA/QC) sample, inclusive of a trip blank, was submitted for laboratory analysis. The trip blank sample was analyzed for TPH-GRO, BTEX, MTBE and ethanol.

The analytical results of the groundwater samples collected during the first semiannual 2013 sampling event are consistent with the results of recent semiannual groundwater sampling events. The analytical sample concentrations are summarized in Table 1. A concentration map of TPH-MO, TPH-DRO and TPH-GRO is presented as Figure 3. The laboratory analytical report and chain-of-custody record for the

semiannual groundwater sampling event are included in Attachment 2. The historical waste oil groundwater sampling data is included in Table 2.

Summary and Conclusions

- Groundwater flowed to the west across the site, at an approximate horizontal hydraulic gradient of 0.027 feet per foot (ft/ft)
- Concentrations of petroleum hydrocarbon constituents detected in groundwater samples collected from the well network were consistent with the results of recent sampling events

Sincerely,

ARCADIS U.S., Inc.



Toni DeMayo
Project Geologist



Melissa Blanchette, PG
Principal Geologist



Enclosures:

- | | |
|--------------|---|
| Figure 1 | Site Plan |
| Figure 2 | Groundwater Elevation Contour Map - First Semiannual 2013 |
| Figure 3 | Concentration Map - First Semiannual 2013 |
| Table 1 | Groundwater Monitoring Data and Analytical Results |
| Attachment 1 | Groundwater Monitoring and Sampling Field Data Sheets |
| Attachment 2 | Laboratory Analytical Report and Chain-of-Custody Record |

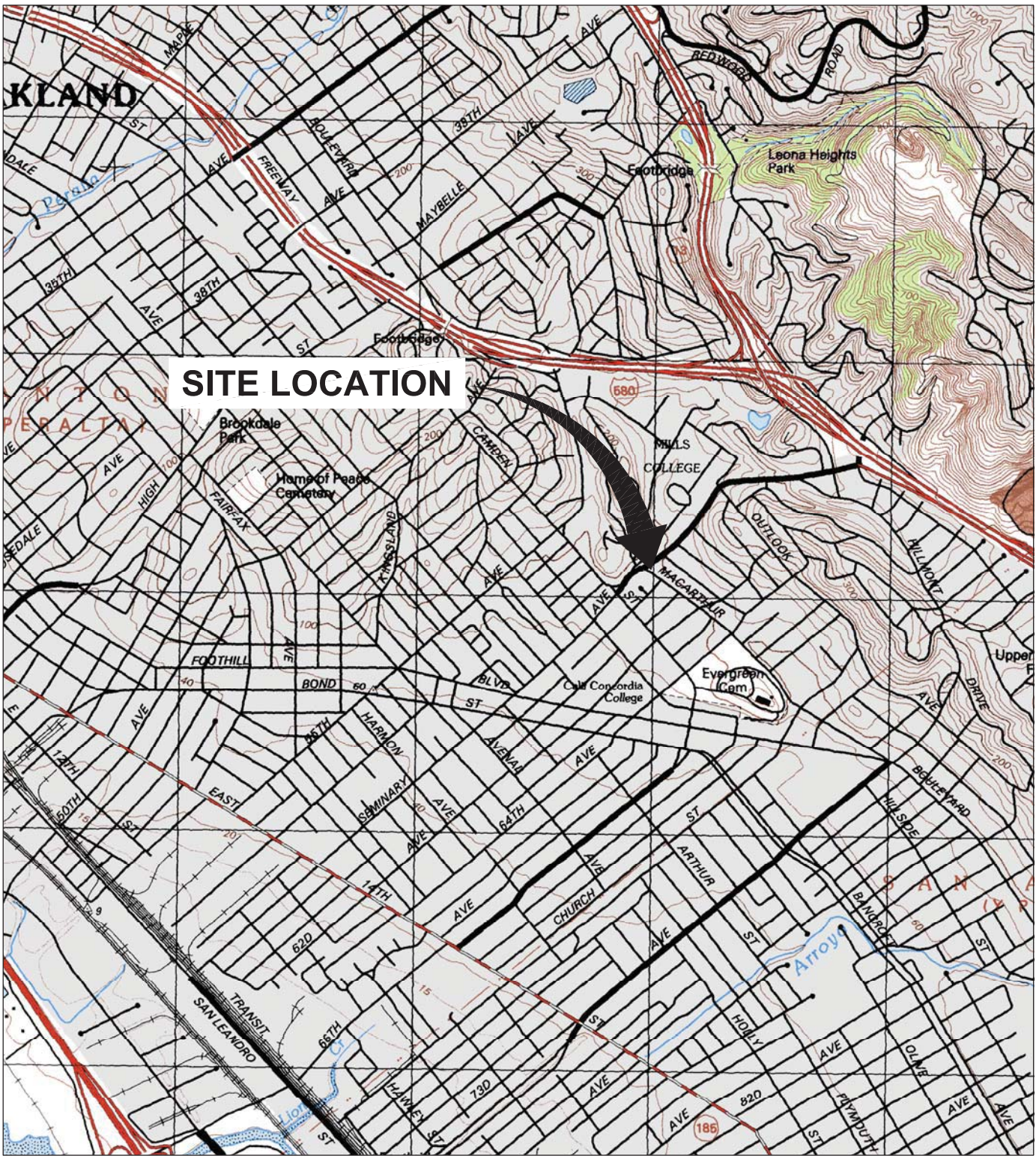
Copies:

- Ms. Kelly Esters – Chevron, electronic copy
Mr. Nisson Saidon, Property Owner

ARCADIS

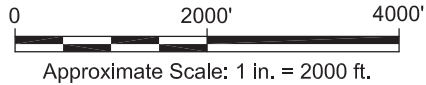
Figures

CITY:(SYRACUSE) DIV:(GROUP:ENV/IN4-DV) DB:(HOWES) LD:(Opt) PIC:(NA) PM:(B/WALL) TM:(Opt) LY:(Opt) OFF=REF
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SITE LOCATION

REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., OAKLAND EAST, CA, 1997.



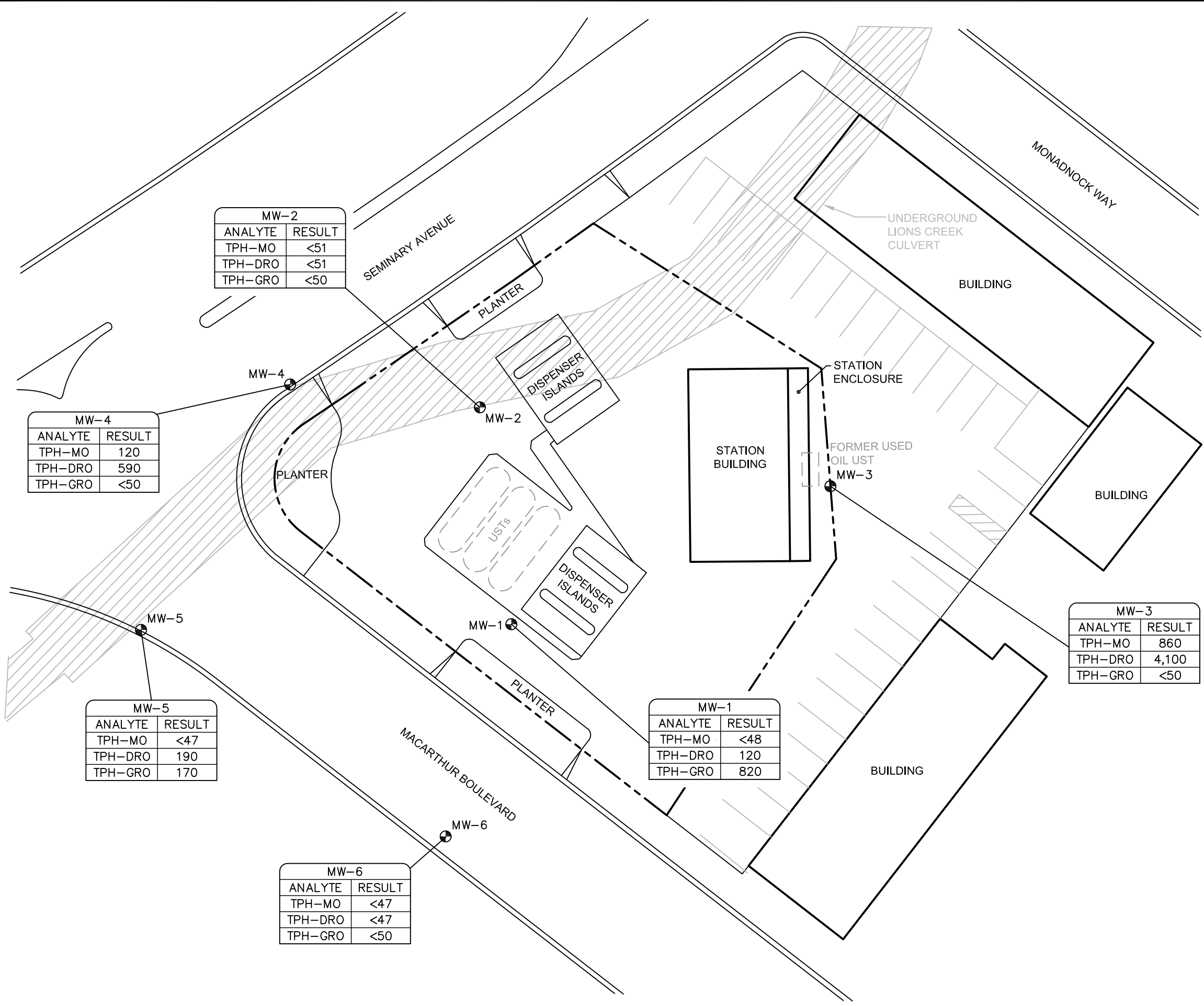
FORMER CHEVRON SERVICE STATION NO. 9-9708
 5910 MACARTHUR BOULEVARD, OAKLAND, CA

SITE LOCATION MAP



FIGURE
1

CITY: SYRACUSE, NY DIV/GROUP: ENV/IM-DV DB: R. BASSETT PM: R. ANDRESEN TM: B. WALL TR: M. AL-JOHAR LVR: ONE-OFF-REF
 GAENVCAD/SYRACUSE/ACT18006090/119708/0001/DWG/60901C01.dwg LAYOUT: 3 SAVED: 7/16/2013 3:06 PM ACADVER: 18.15 (LMS TECH) PAGES: 3 PAGES: 3 PAGES: 3 PAGES: 3
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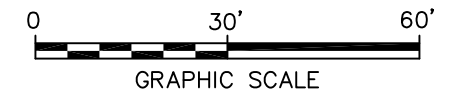


LEGEND:

- PROPERTY LINE
- MONITORING WELL
- (UST) UNDERGROUND STORAGE TANK
- TPH-MO TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
- TPH-DRO TOTAL PETROLEUM HYDROCARBONS AS DIESEL
- TPH-GRO TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- <= NOT DETECTED ABOVE DETECTION LIMIT INDICATED

NOTES:

1. BASE MAP DIGITIZED FROM A PHOTOCOPY OF A DRAWING BY CONESTOGA-ROVER ASSOCIATES (CRA) TITLED "GROUNDWATER ELEVATION AND HYDROCARBON CONCENTRATION MAP", DATED JUNE 13, 2011, @ A SCALE OF 1" = 30'.
2. ALL LOCATIONS ARE APPROXIMATE.
3. ALL CONCENTRATIONS REPORTED IN MICROGRAMS PER LITER.



FORMER CHEVRON SERVICE STATION 9-9708
 5910 MACARTHUR BOULEVARD, OAKLAND, CA

**CONCENTRATION MAP -
 FIRST SEMIANNUAL 2013**



Tables

TABLE 1

GROUNDWATER MONITORING AND SAMPLING DATA
FORMER CHEVRON SERVICE STATION 9-9708
5910 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Location	Date	TOC	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Ethanol
	Units	(ft amsl)	(ft)	(ft amsl)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
MW-1	06/13/11	97.52	11.25	86.27	<41	75	<50	<0.5	<0.5	<0.5	<0.5	13	<50
MW-1	12/02/11	97.52	12.82	84.70	<520	<520	140	1.7	<0.50	<0.50	<1.5	14	<150
MW-1	06/21/12	97.52	13.27	84.25	<470	<470	130	<0.50	<0.50	<0.50	<1.0	11	<150
MW-1	12/18/12	97.52	10.62	86.90	<48	94	70	0.79	<0.50	<0.50	<1.0	10	<150
MW-1	06/11/13	97.52	12.26	85.26	<48	120	820	17	0.87	0.67	<1.0	22	<150
MW-2	06/13/11	97.81	14.06	83.75	<41	<50	<50	<0.5	<0.5	<0.5	<0.5	1	<50
MW-2	12/02/11	97.81	13.42	84.39	<520	<520	<50	<0.50	<0.50	<0.50	<1.5	3.8	<150
MW-2	06/21/12	97.81	13.90	83.91	<480	<480	<50	<0.50	<0.50	<0.50	<1.0	15	<150
MW-2	12/18/12	97.81	12.97	84.84	<48	130	<50	2.4	<0.50	<0.50	<1.0	2.9	<150
MW-2	06/11/13	97.81	14.88	82.93	<51	<51	<50	<0.50	<0.50	<0.50	<1.0	18	<150
MW-3	06/13/11	98.78	11.69	87.09	38,000	19,000	<50	<0.5	2	<0.5	<0.5	<0.5	<50
MW-3	12/02/11	98.78	11.44	87.34	4,100	2,000	<50	<0.50	<0.50	<0.50	<1.5	<0.50	<150
MW-3	06/21/12	98.78	11.80	86.98	1,500	6,800	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150
MW-3	12/18/12	98.78	10.21	88.57	570	1,800	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150
MW-3	06/11/13	98.78	12.20	86.58	860	4,100	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150
MW-4	06/13/11	97.14	13.07	84.07	1,900	2,000	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
MW-4	12/02/11	97.14	INACCESSIBLE		--	--	--	--	--	--	--	--	--
MW-4	06/21/12	97.14	14.43	82.71	620	1,900	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150
MW-4	12/18/12	97.14	12.68	84.46	1,400	3,100	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150
MW-4	06/11/13	97.14	14.20	82.94	120	590	<50	<0.50	1.8	<0.50	<1.0	<0.50	<150

TABLE 1

**GROUNDWATER MONITORING AND SAMPLING DATA
FORMER CHEVRON SERVICE STATION 9-9708
5910 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA**

Location	Date	TOC	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Ethanol
	Units	(ft amsl)	(ft)	(ft amsl)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
MW-5	06/13/11	95.71	11.58	84.13	<42	240	240	<0.5	<0.5	<0.5	<0.5	0.9	<50
MW-5	12/02/11	95.71	11.68	84.03	<500	<500	180	<0.50	<0.50	<0.50	<1.5	1.4	<150
MW-5	06/21/12	95.71	12.22	83.49	<510	<510	200	<0.50	<0.50	<0.50	<1.0	0.68	<150
MW-5	12/18/12	95.71	10.32	85.39	<47	290	280	<0.50	<0.50	<0.50	<1.0	0.98	<150
MW-5	06/11/13	95.71	12.13	83.58	<47	190	170	<0.50	<0.50	<0.50	<1.0	0.64	<150
MW-6	06/13/11	95.84	10.59	85.25	<40	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<50
MW-6	12/02/11	95.84	INACCESSIBLE		--	--	--	--	--	--	--	--	--
MW-6	06/21/12	95.84	INACCESSIBLE		--	--	--	--	--	--	--	--	--
MW-6	12/18/12	95.84	9.17	86.67	<47	<47	<50	<0.50	<0.50	<0.50	<1.0	2.2	<150
MW-6	06/11/13	95.84	10.90	84.94	<47	<47	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150
QA	06/13/11	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
QA	12/02/11	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<0.50	<150
QA	06/21/12	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150
QA	12/18/12	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150
QA	06/11/13	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.0	<0.50	<150

Abbreviations and Notes:

TOC = Top of casing

DTW = Depth to Water (measured from top of casing)

GWE = Groundwater elevation

TPH-MO = Total petroleum hydrocarbons as motor oil range organics

TPH-DRO = Total petroleum hydrocarbons as diesel range organics

TABLE 1

GROUNDWATER MONITORING AND SAMPLING DATA
FORMER CHEVRON SERVICE STATION 9-9708
5910 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

Location	Date	TOC	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Ethanol
Units		(ft amsl)	(ft)	(ft amsl)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)

TPH-GRO = Total petroleum hydrocarbons as gasoline range organics

MTBE = Methyl tertiary butyl ether

Ft amsl = Feet above mean sea level

Ft = Feet

µg/l = micrograms per liter

< = Not detected above detection limit indicated

ARCADIS

Attachment 1

Groundwater Monitoring and
Sampling Field Data Sheets

CHEVRON WELL MONITORING DATA SHEET

Project #: 130611-J21	Station #: 9-9708
Sampler: JD	Date: 6-11-13
Weather: Overcast	Ambient Air Temperature: 68° F
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 _____
Total Well Depth: 19.82	Depth to Water: 12.26
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.77	

Purge Method:

- Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

1.2 (Gals.) X	3	= 3.6 Gals.
I Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
1020	66.2	6.89	855	7100	1.2	
1022	66.2	6.85	855	7000	2.4	
1024	66.1	6.85	856	7000	3.6	

Did well dewater? Yes No Gallons actually evacuated: 3.6

Sampling Date: 6-11-13 Sampling Time: 1030 Depth to Water: 13.42

Sample I.D.: MW-1 Laboratory: Lancaster Other _____

Analyzed for: TPH-G BTEX MTBE OXYS Other: _____

Duplicate I.D.: _____ Analyzed for: TPH-G BTEX MTBE OXYS Other: _____

D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: _____ mg/L

O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 130611-501	Station #: 9-9708
Sampler: S2	Date: 6-11-13
Weather: Overcast	Ambient Air Temperature: 67°F
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8
Total Well Depth: 20.05	Depth to Water: 14.98
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.94	

Purge Method:

- Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing

Other: _____

0.8	(Gals.) X	3	=	2.4	Gals.
I Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
0922	67.0	6.80	878	>1000	0.8	
0924	67.7	6.81	892	>1000	1.6	
0926	67.7	6.86	894	>1000	2.4	

Did well dewater? Yes No Gallons actually evacuated: 2.4

Sampling Date: 6-11-13 Sampling Time: 0930 Depth to Water: 15.03

Sample I.D.: MW-2 Laboratory: Lancaster Other TA-SE

Analyzed for: TPH-G BTEX MTBE OXYS Other:

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
------------------	------------	------	-------------	------

O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV
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CHEVRON WELL MONITORING DATA SHEET

Project #: 130611-121	Station #: 9-9708
Sampler: 52	Date: 6-11-13
Weather: Overcast	Ambient Air Temperature: 67°
Well I.D.: MW-3	Well Diameter: <u>2</u> 3 4 6 8
Total Well Depth: 19.90	Depth to Water: 12.20
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.74	

Purge Method:

- Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

1.2	(Gals.) X	3	=	3.6	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>μS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
0900	66.4	6.79	541	71000	1.2	
0902	66.7	6.81	543	71000	2.4	
0904	66.6	6.82	546	71000	3.6	

Did well dewater? Yes No Gallons actually evacuated: 3.6

Sampling Date: 6-11-13 Sampling Time: 0900 Depth to Water: 13.64

Sample I.D.: MW-3 Laboratory: Lancaster Other: TASE

Analyzed for: TPH-G BTEX MTBE OXYS Other: See COC

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
	O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:

CHEVRON WELL MONITORING DATA SHEET

Project #: 130611-101	Station #: 9-9909
Sampler: JD	Date: 6-11-13
Weather: Overcast	Ambient Air Temperature: 68°F
Well I.D.: MW-4	Well Diameter: 2 3 4 6 8 _____
Total Well Depth: 14.52	Depth to Water: 14.20
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.26	

Purge Method:

- Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

$$0.9 \text{ (Gals.)} \times 3 = 2.7 \text{ Gals.}$$
 1 Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
0953	66.2	7.05	526	>1000	0.9	
0955	66.1	7.04	526	>1000	1.8	
0957	66.1	7.03	527	>1000	2.7	

Did well dewater? Yes No Gallons actually evacuated: 2.7

Sampling Date: 6-11-13 Sampling Time: 1000 Depth to Water: 15.21

Sample I.D.: MW-4 Laboratory: Lancaster Other: TA-88

Analyzed for: TPH-G BTEX MTBE OXYS Other:

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 130611-S0	Station #: 9-9708
Sampler: J0	Date: 6-11-13
Weather: clear	Ambient Air Temperature: 69°F
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8
Total Well Depth: 18.60	Depth to Water: 12.13
Depth to Free Product: -	Thickness of Free Product (feet): -
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.42	

Purge Method:

- Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

1.0	(Gals.) X	3	=	3.0	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
1045	67.7	6.89	862	71000	1.0	
1047	67.6	6.86	861	71000	2.0	
1049	67.6	6.85	862	71000	3.0	

Did well dewater? Yes No Gallons actually evacuated: 3.0

Sampling Date: 6-11-13 Sampling Time: 1055 Depth to Water: 13.39

Sample I.D.: MW-5 Laboratory: Lancaster Other: TA-SE

Analyzed for: TPH-G BTEX MTBE OXYS Other: Se2100

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other:

D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: _____ mg/L

O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 130611-201	Station #: 9-9760
Sampler: JD	Date: 6-11-13
Weather: Overcast	Ambient Air Temperature: 67°
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8
Total Well Depth: 18.70	Depth to Water: 10.90
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.46	

Purge Method:

- Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

1.2 (Gals.) X	3	= 3.6 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
0840	67.1	7.32	464	71000	1.2	
0842	67.1	7.29	467	71000	2.4	
0844	67.1	7.29	469	71000	3.6	

Did well dewater? Yes No Gallons actually evacuated: 3.6

Sampling Date: 6-11-13 Sampling Time: 0850 Depth to Water: 12.31

Sample I.D.: MW-6 Laboratory: Lancaster Other TASF

Analyzed for: TPH-G BTEX MTBE OXYS Other: See COE

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other:

D.O. (if req'd): Pre-purge: mg/L Post-purge: mg/L

O.R.P. (if req'd): Pre-purge: mV Post-purge: mV

Irvine

17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax 949.260.3299

Chain of Custody Record

TestAmerica Laboratories, Inc.

Client Contact		Project Manager: Toni DeMayo			Site Contact:		Date: 6-11-13		COC No:			
Arcadis - U.S., Inc. - Irvine		Tel/Fax: (916) 985-2079			Lab Contact: Sushmitha Reddy		Carrier:		1 of 1 COCs			
320 Commerce, Suite 200		Analysis Turnaround Time			Filtered Sample GRO by EPA 8015 MOD BTEX & MTBE (8260B) DRO with Silica Gel Clean Up by 8015 TPH-mo with Silica Gel Clean Up by 8015 Ethanol by 8260B				Job No. 130611-J01 SDG No.			
Irvine, CA 92602		Calendar (C) or Work Days (W) _____										
714-508-2657 Phone		TAT if different from Below _____										
714-730-9345 FAX		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day										
Project Name: 5910 MacArthur Blvd., Oakland, CA												
Site: 9-9708												
P C		Global ID: T0600102093										
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	GRO by EPA 8015 MOD	BTEX & MTBE (8260B)	DRO with Silica Gel Clean Up by 8015	TPH-mo with Silica Gel Clean Up by 8015	Ethanol by 8260B	Sample Specific Notes:
MW-1	6-11-13	1030	Grab	W	9		X	X	X	X	X	
MW-2		0930					X	X	X	X	X	
MW-3		0910					X	X	X	X	X	
MW-4		1000					X	X	X	X	X	
MW-5		1055					X	X	X	X	X	
MW-6		0950					X	X	X	X	X	
TB- 2030611		0900			4		X	X				
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____						1,2 1,2 1 1 1,2						
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)						
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown						<input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Special Instructions/QC Requirements & Comments:												
Must meet lowest detection limits possible for 8260 compounds												
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:		
		BIS		6-11-13/1540				BIS		6-11-13/1540		
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:		
		BIS		6/11/13/1500								
Relinquished by:		Company:		Date/Time:		Received by:		Company:		Date/Time:		

* SHIPPED VIA FEDEX

SOURCE RECORD **BILL OF LADING**
 FOR PURGEWATER RECOVERED FROM
 GROUNDWATER WELLS AT CHEVRON FACILITIES IN
 THE STATE OF CALIFORNIA. THE PURGE- WATER
 WHICH HAS BEEN RECOVERED FROM GROUND-
 WATER WELLS IS COLLECTED BY THE CONTRACTOR
 AND HAULED TO THEIR FACILITY IN SAN JOSE,
 CALIFORNIA FOR TEMPORARILY HOLDING PENDING
 TRANSPORT BY OTHERS TO FINAL DESTINATION.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BLAINE TECH), 1680 Rogers Ave. San Jose CA (408) 573-0555). BLAINE TECH. is authorized by Chevron Environmental Management Company (CHEVRON EMC) to recover, collect, apportion into loads, and haul the purgewater that is drawn from wells at the CHEVRON EMC facility indicated below and to deliver that purgewater to BLAINE TECH for temporarily holding. Transport routing of the purgewater may be direct from one CHEVRON EMC facility to BLAINE TECH; from one CHEVRON EMC facility to BLAINE TECH via another CHEVRON EMC facility; or any combination thereof. The well purgewater is and remains the property of CHEVRON EMC.

This Source Record **BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Chevron facility described below:

9-9708
 CHEVRON # Rob Speer
 Chevron Engineer

5910 MacArthur Blvd Oakland CA.
 street number street name city state

WELL I.D.	GALS.	WELL I.D.	GALS.
Mw-1	3.6	/	
Mw-2	2.4	/	
Mw-3	3.6	/	
Mw-4	2.7	/	
Mw-5	3.0	/	
Mw-6	3.6	/	
/		/	
/		/	
added equip.		any other	
rinse water	1.0	adjustments	
TOTAL GALS. RECOVERED	<u>19.7</u>	loaded onto	
		BTS vehicle #	<u>85</u>

BTS event # 130611-501 time 1100 date 6/10/13
 Transporter signature [Signature]

REC'D AT BTS time 1520 date 6/10/13
 Unloaded/received by signature [Signature]

ARCADIS

Attachment 2

Laboratory Analytical Report and
Chain-of-Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-49315-1

Client Project/Site: Chevron - 9-9708

For:

ARCADIS U.S., Inc.

320 Commerce, Suite 200

Irvine, California 92602

Attn: Toni DeMayo



Authorized for release by:

7/2/2013 9:01:16 AM

Lena Davidkova, Project Manager I

lena.davidkova@testamericainc.com

Designee for

Philip Sanelle, Project Manager I

philip.sanelle@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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12

13



Table of Contents

Cover Page	1
Table of Contents	2
Sample Summary	3
Case Narrative	4
Client Sample Results	5
Method Summary	10
Chronicle	11
QC Sample Results	13
QC Association	18
Definitions	20
Certification Summary	21
Chain of Custody	22
Receipt Checklists	23

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-49315-1	MW-1	Water	06/11/13 10:30	06/15/13 10:30
440-49315-2	MW-2	Water	06/11/13 09:30	06/15/13 10:30
440-49315-3	MW-3	Water	06/11/13 09:10	06/15/13 10:30
440-49315-4	MW-4	Water	06/11/13 10:00	06/15/13 10:30
440-49315-5	MW-5	Water	06/11/13 10:55	06/15/13 10:30
440-49315-6	MW-6	Water	06/11/13 08:50	06/15/13 10:30
440-49315-7	TB-20130611	Water	06/11/13 08:00	06/15/13 10:30



Case Narrative

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Job ID: 440-49315-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-49315-1

Comments

No additional comments.

Receipt

The samples were received on 6/15/2013 10:30 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.1° C.

GC/MS VOA

No analytical or quality issues were noted.

GC VOA

Method(s) 8015B: Surrogate recovery for the following sample(s) was outside control limits: MW-1 (440-49315-1). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

GC Semi VOA

Method(s) 8015B: Insufficient sample volume was available to perform batch matrix spike/matrix spike duplicate (MS/MSD) associated with batch 112307. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

No other analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

VOA Prep

No analytical or quality issues were noted.



Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Client Sample ID: MW-1
Date Collected: 06/11/13 10:30
Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-1
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	17		0.50		ug/L			06/20/13 21:18	1
Ethanol	ND		150		ug/L			06/20/13 21:18	1
Ethylbenzene	0.67		0.50		ug/L			06/20/13 21:18	1
Methyl-t-Butyl Ether (MTBE)	22		0.50		ug/L			06/20/13 21:18	1
m,p-Xylene	ND		1.0		ug/L			06/20/13 21:18	1
o-Xylene	ND		0.50		ug/L			06/20/13 21:18	1
Toluene	0.87		0.50		ug/L			06/20/13 21:18	1
Xylenes, Total	ND		1.0		ug/L			06/20/13 21:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	109		80 - 120					06/20/13 21:18	1
Dibromofluoromethane (Surr)	100		80 - 120					06/20/13 21:18	1
Toluene-d8 (Surr)	112		80 - 120					06/20/13 21:18	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	820		50		ug/L			06/24/13 15:25	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	53	X	65 - 140					06/24/13 15:25	1

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	0.12		0.048		mg/L		06/18/13 15:19	06/19/13 00:35	1
C29-C40	ND		0.048		mg/L		06/18/13 15:19	06/19/13 00:35	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	51		45 - 120				06/18/13 15:19	06/19/13 00:35	1

Client Sample ID: MW-2

Date Collected: 06/11/13 09:30
Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-2
Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/20/13 22:44	1
Ethanol	ND		150		ug/L			06/20/13 22:44	1
Ethylbenzene	ND		0.50		ug/L			06/20/13 22:44	1
Methyl-t-Butyl Ether (MTBE)	18		0.50		ug/L			06/20/13 22:44	1
m,p-Xylene	ND		1.0		ug/L			06/20/13 22:44	1
o-Xylene	ND		0.50		ug/L			06/20/13 22:44	1
Toluene	ND		0.50		ug/L			06/20/13 22:44	1
Xylenes, Total	ND		1.0		ug/L			06/20/13 22:44	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		80 - 120					06/20/13 22:44	1
Dibromofluoromethane (Surr)	107		80 - 120					06/20/13 22:44	1
Toluene-d8 (Surr)	110		80 - 120					06/20/13 22:44	1

TestAmerica Irvine

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Client Sample ID: MW-2

Lab Sample ID: 440-49315-2

Date Collected: 06/11/13 09:30

Matrix: Water

Date Received: 06/15/13 10:30

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			06/24/13 15:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	95		65 - 140					06/24/13 15:53	1

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		0.051		mg/L		06/18/13 15:19	06/19/13 00:55	1
C29-C40	ND		0.051		mg/L		06/18/13 15:19	06/19/13 00:55	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	53		45 - 120				06/18/13 15:19	06/19/13 00:55	1

Client Sample ID: MW-3

Lab Sample ID: 440-49315-3

Date Collected: 06/11/13 09:10

Matrix: Water

Date Received: 06/15/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/20/13 23:13	1
Ethanol	ND		150		ug/L			06/20/13 23:13	1
Ethylbenzene	ND		0.50		ug/L			06/20/13 23:13	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/20/13 23:13	1
m,p-Xylene	ND		1.0		ug/L			06/20/13 23:13	1
o-Xylene	ND		0.50		ug/L			06/20/13 23:13	1
Toluene	ND		0.50		ug/L			06/20/13 23:13	1
Xylenes, Total	ND		1.0		ug/L			06/20/13 23:13	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		80 - 120					06/20/13 23:13	1
Dibromofluoromethane (Surr)	103		80 - 120					06/20/13 23:13	1
Toluene-d8 (Surr)	111		80 - 120					06/20/13 23:13	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			06/24/13 16:22	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94		65 - 140					06/24/13 16:22	1

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	4.1		0.052		mg/L		06/18/13 15:19	06/19/13 01:15	1
C29-C40	0.86		0.052		mg/L		06/18/13 15:19	06/19/13 01:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	45		45 - 120				06/18/13 15:19	06/19/13 01:15	1

TestAmerica Irvine

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Client Sample ID: MW-4

Lab Sample ID: 440-49315-4

Date Collected: 06/11/13 10:00

Matrix: Water

Date Received: 06/15/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/24/13 18:40	1
Ethanol	ND		150		ug/L			06/24/13 18:40	1
Ethylbenzene	ND		0.50		ug/L			06/24/13 18:40	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/24/13 18:40	1
m,p-Xylene	ND		1.0		ug/L			06/24/13 18:40	1
o-Xylene	ND		0.50		ug/L			06/24/13 18:40	1
Toluene	1.8		0.50		ug/L			06/24/13 18:40	1
Xylenes, Total	ND		1.0		ug/L			06/24/13 18:40	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		80 - 120					06/24/13 18:40	1
Dibromofluoromethane (Surr)	92		80 - 120					06/24/13 18:40	1
Toluene-d8 (Surr)	115		80 - 120					06/24/13 18:40	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			06/24/13 16:50	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90		65 - 140					06/24/13 16:50	1

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	0.59		0.053		mg/L		06/18/13 15:19	06/19/13 01:34	1
C29-C40	0.12		0.053		mg/L		06/18/13 15:19	06/19/13 01:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	56		45 - 120				06/18/13 15:19	06/19/13 01:34	1

Client Sample ID: MW-5

Lab Sample ID: 440-49315-5

Date Collected: 06/11/13 10:55

Matrix: Water

Date Received: 06/15/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/20/13 23:41	1
Ethanol	ND		150		ug/L			06/20/13 23:41	1
Ethylbenzene	ND		0.50		ug/L			06/20/13 23:41	1
Methyl-t-Butyl Ether (MTBE)	0.64		0.50		ug/L			06/20/13 23:41	1
m,p-Xylene	ND		1.0		ug/L			06/20/13 23:41	1
o-Xylene	ND		0.50		ug/L			06/20/13 23:41	1
Toluene	ND		0.50		ug/L			06/20/13 23:41	1
Xylenes, Total	ND		1.0		ug/L			06/20/13 23:41	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	110		80 - 120					06/20/13 23:41	1
Dibromofluoromethane (Surr)	110		80 - 120					06/20/13 23:41	1
Toluene-d8 (Surr)	116		80 - 120					06/20/13 23:41	1

TestAmerica Irvine

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Client Sample ID: MW-5

Lab Sample ID: 440-49315-5

Date Collected: 06/11/13 10:55

Matrix: Water

Date Received: 06/15/13 10:30

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	170		50		ug/L			06/24/13 17:18	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	79		65 - 140					06/24/13 17:18	1

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	0.19		0.047		mg/L		06/18/13 15:19	06/19/13 01:54	1
C29-C40	ND		0.047		mg/L		06/18/13 15:19	06/19/13 01:54	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	61		45 - 120				06/18/13 15:19	06/19/13 01:54	1

Client Sample ID: MW-6

Lab Sample ID: 440-49315-6

Date Collected: 06/11/13 08:50

Matrix: Water

Date Received: 06/15/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/24/13 19:10	1
Ethanol	ND		150		ug/L			06/24/13 19:10	1
Ethylbenzene	ND		0.50		ug/L			06/24/13 19:10	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/24/13 19:10	1
m,p-Xylene	ND		1.0		ug/L			06/24/13 19:10	1
o-Xylene	ND		0.50		ug/L			06/24/13 19:10	1
Toluene	ND		0.50		ug/L			06/24/13 19:10	1
Xylenes, Total	ND		1.0		ug/L			06/24/13 19:10	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	104		80 - 120					06/24/13 19:10	1
Dibromofluoromethane (Surr)	95		80 - 120					06/24/13 19:10	1
Toluene-d8 (Surr)	115		80 - 120					06/24/13 19:10	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			06/24/13 17:47	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	96		65 - 140					06/24/13 17:47	1

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		0.047		mg/L		06/18/13 15:19	06/19/13 02:14	1
C29-C40	ND		0.047		mg/L		06/18/13 15:19	06/19/13 02:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
n-Octacosane	62		45 - 120				06/18/13 15:19	06/19/13 02:14	1

TestAmerica Irvine

Client Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Client Sample ID: TB-20130611

Lab Sample ID: 440-49315-7

Date Collected: 06/11/13 08:00

Matrix: Water

Date Received: 06/15/13 10:30

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/21/13 00:10	1
Ethylbenzene	ND		0.50		ug/L			06/21/13 00:10	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			06/21/13 00:10	1
m,p-Xylene	ND		1.0		ug/L			06/21/13 00:10	1
o-Xylene	ND		0.50		ug/L			06/21/13 00:10	1
Toluene	ND		0.50		ug/L			06/21/13 00:10	1
Xylenes, Total	ND		1.0		ug/L			06/21/13 00:10	1
Ethanol	ND		150		ug/L			06/21/13 00:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		80 - 120		06/21/13 00:10	1
Dibromofluoromethane (Surr)	107		80 - 120		06/21/13 00:10	1
Toluene-d8 (Surr)	111		80 - 120		06/21/13 00:10	1

Method: 8015B - Gasoline Range Organics - (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			06/24/13 13:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	81		65 - 140		06/24/13 13:33	1

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8015B	Gasoline Range Organics - (GC)	SW846	TAL IRV
8015B	Diesel Range Organics (DRO) (GC) Low Level	SW846	TAL IRV

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Client Sample ID: MW-1

Date Collected: 06/11/13 10:30

Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	112947	06/20/13 21:18	AA	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	113557	06/24/13 15:25	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			1035 mL	1 mL	112307	06/18/13 15:19	HN	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			112197	06/19/13 00:35	JR	TAL IRV

Client Sample ID: MW-2

Date Collected: 06/11/13 09:30

Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	112947	06/20/13 22:44	AA	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	113557	06/24/13 15:53	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			980 mL	1 mL	112307	06/18/13 15:19	HN	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			112197	06/19/13 00:55	JR	TAL IRV

Client Sample ID: MW-3

Date Collected: 06/11/13 09:10

Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	112947	06/20/13 23:13	AA	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	113557	06/24/13 16:22	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			970 mL	1 mL	112307	06/18/13 15:19	HN	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			112197	06/19/13 01:15	JR	TAL IRV

Client Sample ID: MW-4

Date Collected: 06/11/13 10:00

Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	113429	06/24/13 18:40	MR	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	113557	06/24/13 16:50	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			945 mL	1 mL	112307	06/18/13 15:19	HN	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			112197	06/19/13 01:34	JR	TAL IRV

Client Sample ID: MW-5

Date Collected: 06/11/13 10:55

Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	112947	06/20/13 23:41	AA	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	113557	06/24/13 17:18	PH	TAL IRV

TestAmerica Irvine

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Client Sample ID: MW-5

Date Collected: 06/11/13 10:55

Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3510C SGC			1055 mL	1 mL	112307	06/18/13 15:19	HN	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			112197	06/19/13 01:54	JR	TAL IRV

Client Sample ID: MW-6

Date Collected: 06/11/13 08:50

Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	113429	06/24/13 19:10	MR	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	113557	06/24/13 17:47	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			1055 mL	1 mL	112307	06/18/13 15:19	HN	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			112197	06/19/13 02:14	JR	TAL IRV

Client Sample ID: TB-20130611

Date Collected: 06/11/13 08:00

Date Received: 06/15/13 10:30

Lab Sample ID: 440-49315-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	112947	06/21/13 00:10	AA	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	113557	06/24/13 13:33	PH	TAL IRV

Laboratory References:

TAL IRV = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-112947/4

Matrix: Water

Analysis Batch: 112947

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/20/13 20:20	1
Ethylbenzene	ND		0.50		ug/L			06/20/13 20:20	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/20/13 20:20	1
m,p-Xylene	ND		1.0		ug/L			06/20/13 20:20	1
o-Xylene	ND		0.50		ug/L			06/20/13 20:20	1
Toluene	ND		0.50		ug/L			06/20/13 20:20	1
Xylenes, Total	ND		1.0		ug/L			06/20/13 20:20	1
Ethanol	ND		150		ug/L			06/20/13 20:20	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		80 - 120		06/20/13 20:20	1
Dibromofluoromethane (Surr)	112		80 - 120		06/20/13 20:20	1
Toluene-d8 (Surr)	114		80 - 120		06/20/13 20:20	1

Lab Sample ID: LCS 440-112947/5

Matrix: Water

Analysis Batch: 112947

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	25.6		ug/L		102	70 - 120
Ethylbenzene	25.0	23.6		ug/L		95	75 - 125
Methyl-t-Butyl Ether (MTBE)	25.0	26.4		ug/L		106	60 - 135
m,p-Xylene	50.0	48.2		ug/L		96	75 - 125
o-Xylene	25.0	24.0		ug/L		96	75 - 125
Toluene	25.0	26.1		ug/L		104	70 - 120
Ethanol	250	270		ug/L		108	40 - 155

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	106		80 - 120
Toluene-d8 (Surr)	115		80 - 120

Lab Sample ID: 440-49315-1 MS

Matrix: Water

Analysis Batch: 112947

Client Sample ID: MW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	17		25.0	40.6		ug/L		95	65 - 125
Ethylbenzene	0.67		25.0	24.4		ug/L		95	65 - 130
Methyl-t-Butyl Ether (MTBE)	22		25.0	46.7		ug/L		97	55 - 145
m,p-Xylene	ND		50.0	48.1		ug/L		96	65 - 130
o-Xylene	ND		25.0	24.1		ug/L		97	65 - 125
Toluene	0.87		25.0	26.0		ug/L		100	70 - 125
Ethanol	ND		250	250		ug/L		100	40 - 155

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120

TestAmerica Irvine

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-49315-1 MS

Matrix: Water

Analysis Batch: 112947

Client Sample ID: MW-1

Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	100		80 - 120
Toluene-d8 (Surr)	111		80 - 120

Lab Sample ID: 440-49315-1 MSD

Matrix: Water

Analysis Batch: 112947

Client Sample ID: MW-1

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	17		25.0	41.9		ug/L		100	65 - 125	3	20
Ethylbenzene	0.67		25.0	24.2		ug/L		94	65 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	22		25.0	50.4		ug/L		112	55 - 145	8	25
m,p-Xylene	ND		50.0	47.2		ug/L		94	65 - 130	2	25
o-Xylene	ND		25.0	23.7		ug/L		95	65 - 125	2	20
Toluene	0.87		25.0	26.6		ug/L		103	70 - 125	2	20
Ethanol	ND		250	256		ug/L		102	40 - 155	2	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	103		80 - 120
Toluene-d8 (Surr)	113		80 - 120

Lab Sample ID: MB 440-113429/4

Matrix: Water

Analysis Batch: 113429

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			06/24/13 09:44	1
Ethylbenzene	ND		0.50		ug/L			06/24/13 09:44	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			06/24/13 09:44	1
m,p-Xylene	ND		1.0		ug/L			06/24/13 09:44	1
o-Xylene	ND		0.50		ug/L			06/24/13 09:44	1
Toluene	ND		0.50		ug/L			06/24/13 09:44	1
Xylenes, Total	ND		1.0		ug/L			06/24/13 09:44	1
Ethanol	ND		150		ug/L			06/24/13 09:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	105		80 - 120		06/24/13 09:44	1
Dibromofluoromethane (Surr)	88		80 - 120		06/24/13 09:44	1
Toluene-d8 (Surr)	112		80 - 120		06/24/13 09:44	1

Lab Sample ID: LCS 440-113429/5

Matrix: Water

Analysis Batch: 113429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	25.0	27.2		ug/L		109	70 - 120
Ethylbenzene	25.0	27.6		ug/L		110	75 - 125

TestAmerica Irvine

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-113429/5

Matrix: Water

Analysis Batch: 113429

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl-t-Butyl Ether (MTBE)	25.0	24.5		ug/L		98	60 - 135
m,p-Xylene	50.0	57.5		ug/L		115	75 - 125
o-Xylene	25.0	27.1		ug/L		108	75 - 125
Toluene	25.0	27.6		ug/L		110	70 - 120
Ethanol	250	277		ug/L		111	40 - 155

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	106		80 - 120
Dibromofluoromethane (Surr)	86		80 - 120
Toluene-d8 (Surr)	112		80 - 120

Lab Sample ID: 440-49767-D-16 MS

Matrix: Water

Analysis Batch: 113429

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	ND		25.0	27.2		ug/L		109	65 - 125
Ethylbenzene	ND		25.0	28.2		ug/L		113	65 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	26.4		ug/L		106	55 - 145
m,p-Xylene	ND		50.0	57.0		ug/L		114	65 - 130
o-Xylene	ND		25.0	26.9		ug/L		107	65 - 125
Toluene	ND		25.0	27.2		ug/L		109	70 - 125
Ethanol	ND		250	267		ug/L		107	40 - 155

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	112		80 - 120
Dibromofluoromethane (Surr)	94		80 - 120
Toluene-d8 (Surr)	111		80 - 120

Lab Sample ID: 440-49767-D-16 MSD

Matrix: Water

Analysis Batch: 113429

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Benzene	ND		25.0	26.9		ug/L		108	65 - 125	1	20
Ethylbenzene	ND		25.0	27.3		ug/L		109	65 - 130	3	20
Methyl-t-Butyl Ether (MTBE)	ND		25.0	25.1		ug/L		101	55 - 145	5	25
m,p-Xylene	ND		50.0	56.7		ug/L		113	65 - 130	0	25
o-Xylene	ND		25.0	26.6		ug/L		106	65 - 125	1	20
Toluene	ND		25.0	27.1		ug/L		108	70 - 125	0	20
Ethanol	ND		250	304		ug/L		122	40 - 155	13	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	109		80 - 120
Dibromofluoromethane (Surr)	90		80 - 120
Toluene-d8 (Surr)	111		80 - 120

TestAmerica Irvine

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Method: 8015B - Gasoline Range Organics - (GC)

Lab Sample ID: MB 440-113557/3

Matrix: Water

Analysis Batch: 113557

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			06/24/13 12:52	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		65 - 140					06/24/13 12:52	1

Lab Sample ID: LCS 440-113557/2

Matrix: Water

Analysis Batch: 113557

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	800	778		ug/L		97	80 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	74		65 - 140				

Lab Sample ID: 440-49313-A-1 MS

Matrix: Water

Analysis Batch: 113557

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
GRO (C4-C12)	ND		800	709		ug/L		89	65 - 140
Surrogate	MS %Recovery	MS Qualifier	Limits						
4-Bromofluorobenzene (Surr)	83		65 - 140						

Lab Sample ID: 440-49313-A-1 MSD

Matrix: Water

Analysis Batch: 113557

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
GRO (C4-C12)	ND		800	739		ug/L		92	65 - 140	4	20
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
4-Bromofluorobenzene (Surr)	92		65 - 140								

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level

Lab Sample ID: MB 440-112307/1-A

Matrix: Water

Analysis Batch: 112197

Client Sample ID: Method Blank

Prep Type: Silica Gel Cleanup

Prep Batch: 112307

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		0.050		mg/L		06/18/13 15:19	06/18/13 18:33	1
C29-C40	ND		0.050		mg/L		06/18/13 15:19	06/18/13 18:33	1

TestAmerica Irvine

QC Sample Results

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Method: 8015B - Diesel Range Organics (DRO) (GC) Low Level (Continued)

Lab Sample ID: MB 440-112307/1-A
Matrix: Water
Analysis Batch: 112197

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 112307

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
n-Octacosane	49		45 - 120	06/18/13 15:19	06/18/13 18:33	1

Lab Sample ID: LCS 440-112307/2-A
Matrix: Water
Analysis Batch: 112197

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 112307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
n-Octacosane	62		45 - 120

Lab Sample ID: LCSD 440-112307/3-A
Matrix: Water
Analysis Batch: 112197

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 112307

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
n-Octacosane	66		45 - 120

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

GC/MS VOA

Analysis Batch: 112947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-49315-1	MW-1	Total/NA	Water	8260B	
440-49315-1 MS	MW-1	Total/NA	Water	8260B	
440-49315-1 MSD	MW-1	Total/NA	Water	8260B	
440-49315-2	MW-2	Total/NA	Water	8260B	
440-49315-3	MW-3	Total/NA	Water	8260B	
440-49315-5	MW-5	Total/NA	Water	8260B	
440-49315-7	TB-20130611	Total/NA	Water	8260B	
LCS 440-112947/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-112947/4	Method Blank	Total/NA	Water	8260B	

Analysis Batch: 113429

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-49315-4	MW-4	Total/NA	Water	8260B	
440-49315-6	MW-6	Total/NA	Water	8260B	
440-49767-D-16 MS	Matrix Spike	Total/NA	Water	8260B	
440-49767-D-16 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
LCS 440-113429/5	Lab Control Sample	Total/NA	Water	8260B	
MB 440-113429/4	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 113557

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-49313-A-1 MS	Matrix Spike	Total/NA	Water	8015B	
440-49313-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8015B	
440-49315-1	MW-1	Total/NA	Water	8015B	
440-49315-2	MW-2	Total/NA	Water	8015B	
440-49315-3	MW-3	Total/NA	Water	8015B	
440-49315-4	MW-4	Total/NA	Water	8015B	
440-49315-5	MW-5	Total/NA	Water	8015B	
440-49315-6	MW-6	Total/NA	Water	8015B	
440-49315-7	TB-20130611	Total/NA	Water	8015B	
LCS 440-113557/2	Lab Control Sample	Total/NA	Water	8015B	
MB 440-113557/3	Method Blank	Total/NA	Water	8015B	

GC Semi VOA

Analysis Batch: 112197

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-49315-1	MW-1	Silica Gel Cleanup	Water	8015B	112307
440-49315-2	MW-2	Silica Gel Cleanup	Water	8015B	112307
440-49315-3	MW-3	Silica Gel Cleanup	Water	8015B	112307
440-49315-4	MW-4	Silica Gel Cleanup	Water	8015B	112307
440-49315-5	MW-5	Silica Gel Cleanup	Water	8015B	112307
440-49315-6	MW-6	Silica Gel Cleanup	Water	8015B	112307
LCS 440-112307/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	112307
LCSD 440-112307/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	112307
MB 440-112307/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	112307

TestAmerica Irvine

QC Association Summary

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

GC Semi VOA (Continued)

Prep Batch: 112307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-49315-1	MW-1	Silica Gel Cleanup	Water	3510C SGC	
440-49315-2	MW-2	Silica Gel Cleanup	Water	3510C SGC	
440-49315-3	MW-3	Silica Gel Cleanup	Water	3510C SGC	
440-49315-4	MW-4	Silica Gel Cleanup	Water	3510C SGC	
440-49315-5	MW-5	Silica Gel Cleanup	Water	3510C SGC	
440-49315-6	MW-6	Silica Gel Cleanup	Water	3510C SGC	
LCS 440-112307/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 440-112307/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 440-112307/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Definitions/Glossary

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: Chevron - 9-9708

TestAmerica Job ID: 440-49315-1

Laboratory: TestAmerica Irvine

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-14
Arizona	State Program	9	AZ0671	10-13-13
California	LA Cty Sanitation Districts	9	10256	01-31-14
California	NELAP	9	1108CA	01-31-14
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-28-14 *
Hawaii	State Program	9	N/A	01-31-14
Nevada	State Program	9	CA015312007A	07-31-13
New Mexico	State Program	6	N/A	01-31-14
Northern Mariana Islands	State Program	9	MP0002	01-31-14
Oregon	NELAP	10	4005	09-12-13
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-15

* Expired certification is currently pending renewal and is considered valid.

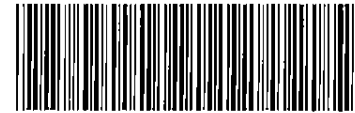
TestAmerica Irvine

Irvine

17461 Derian Ave
 Suite 100
 Irvine, CA 92614
 phone 949.261.1022 fax 949 260.3299

440-49315

Chain of Custody Record



440-49315 Chain of Custody

Client Contact		Project Manager: Toni DeMayo			Site Contact:		Date: 6-1-13					
Arcadis - U.S., Inc. - Irvine		Tel/Fax: (916) 985-2079			Lab Contact: Sushmitha Reddy		Carrier:					
320 Commerce, Suite 200		Analysis Turnaround Time			Filtered Sample GRO by EPA 8015 MOD BTEX & MTBE (8260B) DRO with Silica Gel Clean Up by 8015 TPH-mo with Silica Gel Clean Up by 8015 Ethanol by 8260B		Job No.					
Irvine, CA 92602		Calendar (C) or Work Days (W) _____					130611-J01					
714-508-2657 Phone		TAT if different from Below _____					SDG No.					
714-730-9345 FAX		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day					Sample Specific Notes:					
Project Name: 5910 MacArthur Blvd., Oakland, CA							MW-6 / 6/15/13 TB-2930611 / 13-20					
Site: 9-9708												
P O Global ID: T0600102093												
Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	GRO	BTEX	DRO	TPH	Ethanol	Notes	
MW-1	6-1-13	1030	Grab	W	9	X	X	X	X	X		
MW-2		0930				X	X	X	X	X		
MW-3		0910				X	X	X	X	X		
MW-4		1000				X	X	X	X	X		
MW-5		1055				X	X	X	X	X		
MW-6		0950			6	X	X	X	X	X		
TB-2930611		0900			4	X	X					
Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____						1,2	1,2	1	1	1,2		
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison <input type="checkbox"/> Unknown						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months						
Special Instructions/QC Requirements & Comments: Must meet lowest detection limits possible for 8260 compounds 2.6/2.1 ^{cc}												
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:							
	BIS	6-1-13/1540		BIS	6-1-13/1540							
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:							
	BIS	6/1/13/1500		JR	6/1/13 1030							
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:							

* SHIPPED VIA FEDEX



Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 440-49315-1

Login Number: 49315

List Number: 1

Creator: Perez, Angel

List Source: TestAmerica Irvine

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	Not listed on the coc.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

