Kelly C. Esters
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January 22, 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

RECEIVED
By Alameda County Environmental Health at 8:36 am, Jan 24, 2013

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

Dear Mr. Detterman:

Attached for your review is the *Second Semiannual 2012 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,

Kelly C. Esters
Property Specialist

KCE:st
Encl.

ARCADIS U.S., Inc.
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California 92602
Tel 714.730.9052
Fax 714.730.9345
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ENVIRONMENT

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:
Second Semiannual 2012 Groundwater Monitoring Report
Former Chevron Service Station No. 9-9708
5910 MacArthur Boulevard
Oakland, California
Fuel Leak Case No. RO0000124

Date:
January 23, 2013

Contact:
Toni DeMayo

Phone:
714.508.2657

Email:
Toni.DeMayo@
arcadis-us.com

Our ref:
B0060901.9708

Dear Mr. Detterman:

ARCADIS has prepared this *Second Semiannual 2012 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 December 18, 2012. 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 second semiannual 2012, nor have they historically been observed at the site.

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) [C_{24}-C_{44}] and total petroleum hydrocarbons as diesel (TPH-DRO) [C_{13}-C_{23}] by United States Environmental Protection Agency (USEPA) Method 8015B, with silica gel clean-up

- Total petroleum hydrocarbons as gasoline (TPH-GRO) [C_4-C_{12}] 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 second semiannual 2012 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

Brian Westhoff, PG (CA 8784)
Senior Geologist

Enclosures:

Figure 1	Site Plan
Figure 2	Groundwater Elevation Contour Map - Second Semiannual 2012
Figure 3	Concentration Map - Second Semiannual 2012
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

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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-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-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-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-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**

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-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**
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**

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

TPH-GRO = Total petroleum hydrocarbons as gasoline range organics

MTBE = Methyl tertiary butyl ether

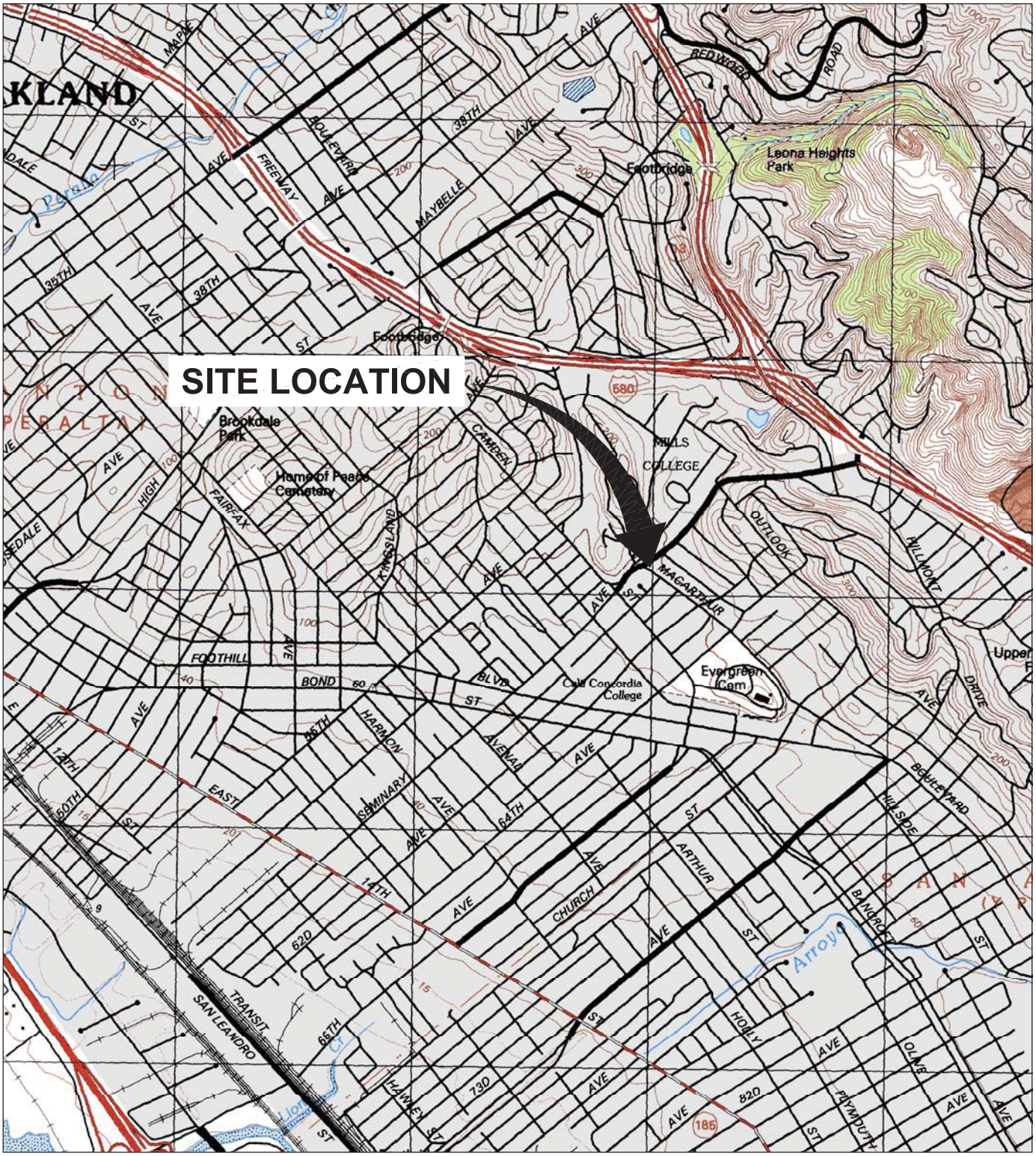
Ft amsl = Feet above mean sea level

Ft = Feet

µg/l = micrograms per liter

< = Not detected above detection limit indicated

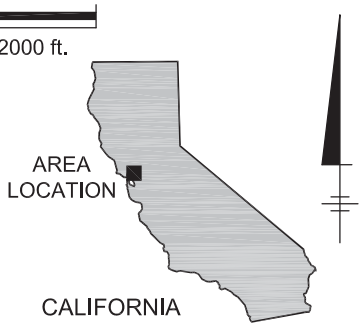
Figures



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

0 2000' 4000'

Approximate Scale: 1 in. = 2000 ft.



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

SITE LOCATION MAP

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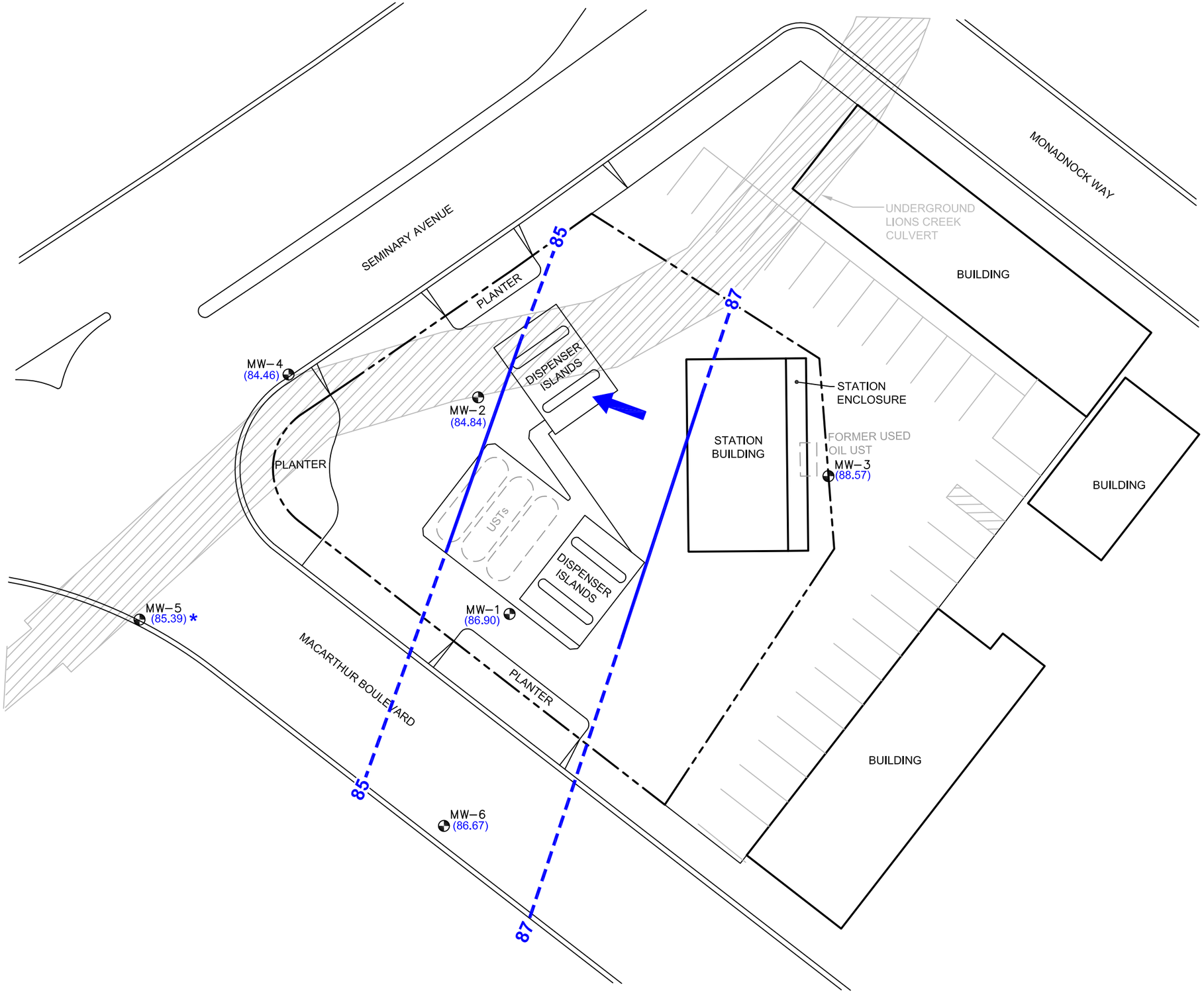
FIGURE 1

CITY:(SYRACUSE) DIV/GROUP:(ENV/IM-DV) DB:(DHOWES) LD:(Opt) PIC:(NA) PM:(BJWALL) TM:(Opt) LYR:(Opt)ON=*;OFF=*REF*
G:\ENVCAD\SYRACUSE\ACTIVE\B006090197081\00001\DWG\609091N01.dwg LAYOUT: 1 SAVED: 1/12/2012 8:12 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 1/12/2012 8:13 AM BY: HOWES, DAVID
XREFS: IMAGES: PROJECTNAME: --
CA_Oakland_East.tif
CA_Oakland_East.tif



LEGEND:

- PROPERTY LINE
- MONITORING WELL
- UST — UNDERGROUND STORAGE TANK
- (88.57) — GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (FT AMSL)
- 86 — GROUNDWATER ELEVATION CONTOUR, DASHED WHERE INFERRED (FT AMSL)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW. HYDRAULIC GRADIENT IS APPROXIMATELY 0.027 FEET PER FOOT (FT/FT)
- * NOT USED FOR CONTOURING

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.

0 30' 60'

GRAPHIC SCALE

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

GROUNDWATER ELEVATION CONTOUR MAP - SECOND SEMIANNUAL 2012

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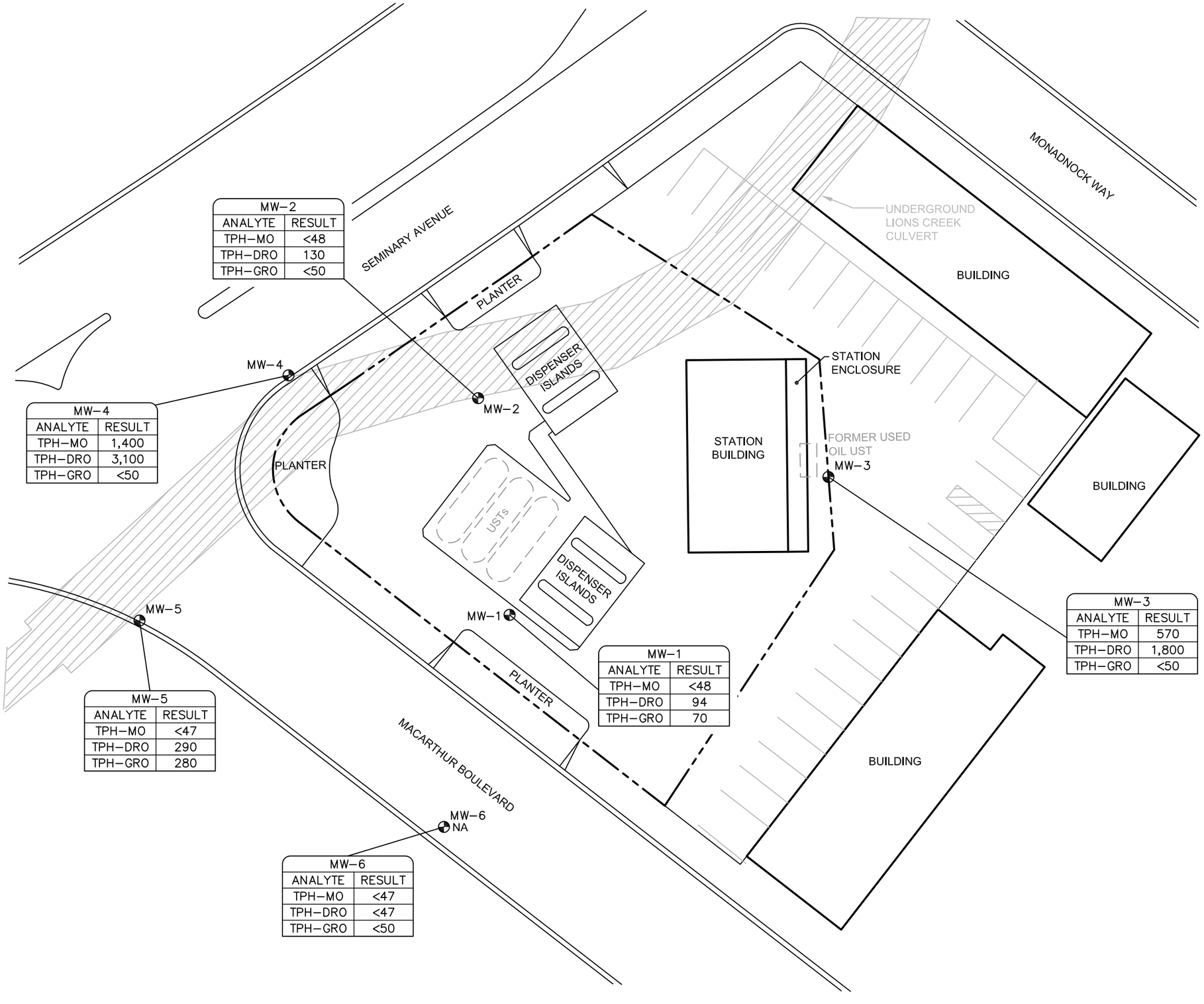
FIGURE 2



MW–2	
ANALYTE	RESULT
TPH–MO	<48
TPH–DRO	130
TPH–GRO	<50

MW–4	
ANALYTE	RESULT
TPH–MO	1,400
TPH–DRO	3,100
TPH–GRO	<50

MW–1	
ANALYTE	RESULT
TPH–MO	<48
TPH–DRO	94
TPH–GRO	70

MW–3	
ANALYTE	RESULT
TPH–MO	570
TPH–DRO	1,800
TPH–GRO	<50

MW–5	
ANALYTE	RESULT
TPH–MO	<47
TPH–DRO	290
TPH–GRO	280

MW–6	
ANALYTE	RESULT
TPH–MO	<47
TPH–DRO	<47
TPH–GRO	<50

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.

0 30' 60'

GRAPHIC SCALE

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

CONCENTRATION MAP - SECOND SEMIANNUAL 2012

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FIGURE 3

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Attachment 1

Groundwater Monitoring and Sampling Field Data Sheets

WELL GAUGING DATA

Project # 121218-BW1 Date 12/18/12 Client Chevron

Site 5910 MacArthur Blvd. Oakland

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	0845	2					10.62	19.89		
MW-2	0840	2					12.97	20.00		
MW-3	0850	2					10.21	19.90		
MW-4	1010	2					12.68	19.52		
MW-5	0904	2					10.32	18.55		
MW-6	0900	2					9.17	18.68		

CHEVRON WELL MONITORING DATA SHEET

Project #: 121218-BW1	Station #: 9-9708
Sampler: BW	Date: 12/18/12
Weather: Clear	Ambient Air Temperature: 56 °F
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 19.89	Depth to Water: 10.62
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
- X Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method: Bailer

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

1.5 (Gals.) X 3 = 4.5 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1120	66.1	7.00	847	201	1.5	
1122	67.5	6.97	854	636	3.0	
1124	66.8	6.99	866	801	4.5	DTW 16.30'

Did well dewater? Yes (No) Gallons actually evacuated: 4.5

Sampling Date: 12/18/12 Sampling Time: 1210 Depth to Water: 13.25 (Site departure)

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

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:	mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 121218-BW1	Station #: 9-9708
Sampler: BW	Date: 12/18/12
Weather: Clear	Ambient Air Temperature: 54 °F
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 20.00	Depth to Water: 12.97
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]: 14.38	

Purge Method:

- Bailer
- X Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method: Bailer

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

1.1 (Gals.) X	3 =	3.3 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1100	65.3	6.97	750	652	1.5	
1103	65.9	6.97	747	>1000	2.5	
1105	66.7	6.96	743	>1000	3.5	DTW=18.21'

Did well dewater? Yes (No) Gallons actually evacuated: 3.5

Sampling Date: 12/18/12 Sampling Time: 1150 Depth to Water: 14.91 (5ft departure)

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

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:	mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 121218-BW1	Station #: 9-9708
Sampler: BW	Date: 12/18/12
Weather: Clear	Ambient Air Temperature: 56 °F
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 19.90	Depth to Water: 10.21
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]: 12.15	

Purge Method:

- Bailer
- X Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method:

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

1.6 (Gals.) X 3 = 4.8 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1138	66.8	7.14	283	202	2.0	
1140	65.9	6.96	276	218	3.5	
1143	66.3	6.99	298	321	5.0	

Did well dewater? Yes (No) Gallons actually evacuated: 5.0

Sampling Date: 12/18/12 Sampling Time: 1230 Depth to Water: 13.81 (5 ft departure)

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

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:	mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 121218-BW1	Station #: 9-9708
Sampler: BW	Date: 12/18/12
Weather: Clear	Ambient Air Temperature: 50 °F
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 19.52	Depth to Water: 12.68
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]: 14.05	

Purge Method:

- Bailer
- X Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method: Bailer

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

1.1 (Gals.) X	3	=	3.3 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1018	62.4	6.80	471	>1000	1.5	
	* Dewatered @ 1.5 gallons *					
1040	63.2	6.75	502	>1000	—	

Did well dewater? (Yes) No Gallons actually evacuated: 1.5

Sampling Date: 12/18/12 Sampling Time: 1040 Depth to Water: 14.21 (Traffic)

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

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:	mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 121218-BW1	Station #: 9-9708
Sampler: BW	Date: 12/18/12
Weather: Clear	Ambient Air Temperature: 50 °F
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 18.55	Depth to Water: 10.32
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]: 11.97	

Purge Method:

- Bailer
- X Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method: Bailer

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

1.3 (Gals.) X 3 = 3.9 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
0940	63.4	6.84	902	71000	1.5	
0943	63.1	6.81	868	71000	3.0	
0945	63.8	6.77	855	>1000	4.0	

Did well dewater? Yes (No) Gallons actually evacuated: 4.0

Sampling Date: 12/18/12 Sampling Time: 0950 Depth to Water: 13.12 (traffic)

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

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:	mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 121218-BW1	Station #: 9-9708
Sampler: BW	Date: 12/18/12
Weather: Clear	Ambient Air Temperature: 48 °F
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8 ____
Total Well Depth: 18.68	Depth to Water: 9.17
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]: 11.07	

Purge Method:

- Bailer
- X Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other_____

Sampling Method: Bailer

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

1.5 (Gals.) X 3 = 4.5 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	radius² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
0906	64.7	6.85	676	71000	1.5	
0908	65.8	6.70	661	71000	3.0	
0910	65.9	6.72	659	71000	4.5	

Did well dewater? Yes (No) Gallons actually evacuated: 4.5

Sampling Date: 12/18/12 Sampling Time: 0915 Depth to Water: 12.97 (traffic)

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

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:	mV

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Toni DeMayo	Site Contact:	Date: 12/18/12	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			Job No. 12l218-BW1
Irvine, CA 92602	Calendar (C) or Work Days (W) _____			
714-508-2657 Phone	TAT if different from Below _____			SDG No.
714-730-9345 FAX	■ 2 weeks			
Project Name: 5910 MacArthur Blvd., Oakland, CA	☐ 1 week			
Site: 9-9708	☐ 2 days			
P O Global ID: T0600102093	☐ 1 day			

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	12/18/12	1210	Grab	Wtr	9		X	X	X	X	X	
MW-2	↓	1150	↓	↓	9		X	X	X	X	X	
MW-3		1230			9		X	X	X	X	X	
MW-4		1040			9		X	X	X	X	X	
MW-5		0950			9		X	X	X	X	X	
MW-6		0915			9		X	X	X	X	X	
TB-20121218		0730			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
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:
Must meet lowest detection limits possible for 8260 compounds

* USE 10 GRAM SILICA GEL CLEAN UP

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	BTS	12/18/12 1715	[signature] Sample Custodian	BTS	12/18/12 1715
Relinquished by: [signature] Sample Custodian BTS	Company: BTS	Date/Time: 12/19/12 1655	Received by: [signature]	Company: TASF	Date/Time: 12-20-12 1055
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

WELLHEAD INSPECTION CHECKLIST

Client Chevron Date 12/18/12

Site Address 5910 MacArthur Blvd. Oakland

Job Number 121218-BW1 Technician BW

Well ID	Well Inspected - No Corrective Action Required	WELL IS SECURABLE BY DESIGN (12"or less)	WELL IS CLEARLY MARKED WITH THE WORDS "MONITORING WELL" (12"or less)	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	X	X	X							
MW-2		X	X					X		
MW-3		X	X					X		
MW-4		X	X					X		
MW-5		X	X					X		
MW-6										

NOTES: MW-2: 3/3 Tab Strip, MW-4: 2/2 Tab Strip
MW-5: 2/2 Tabs Strip, MW-6: 1/2 Tabs Stripped.
MW-3: Casing too high for lid.

CHEVRON-NORTHERN CALIFORNIA TYPE **A** BILL OF LADING BILL OF LADING No. BTS040

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 #

Ron Speer — Chevron Engineer

5910 MacArthur Blvd. — street number / street name

Oakland — city

CA — state

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-1	5		
MW-2	4		
MW-3	5		
MW-4	2		
MW-5	4		
MW-6	5		

added equip. rinse water / 2

any other adjustments / 0

TOTAL GALS. RECOVERED 27

loaded onto BTS vehicle # 66

BTS event # 121218-BW1 time 1300 date 12/18/12

Transporter signature

****

REC'D AT BTS-SJ time date

Unloaded/received by signature

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 5910 MacArthur Blvd. Oakland				PROJECT NUMBER 121218-BW1			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
Myron-L Ultrameter II	6223842	12/18/12 0610	pH 7, 10, 4 Cond 3900 $\mu s/cm$	7.0, 4.0, 10.0 3900 $\mu s/cm$	✓	52.4°F	[illegible]
Hach 2100P Turbidimeter	23324	12/18/12 0615	800ntu	811ntu	✓	N/A	[illegible]

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: 440-33429-1
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:
1/9/2013 4:30:33 PM

Sushmitha Reddy
Project Manager I
sushmitha.reddy@testamericainc.com

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Sample Summary

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

TestAmerica Job ID: 440-33429-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-33429-1	MW-1	Water	12/18/12 12:10	12/22/12 12:15
440-33429-2	MW-2	Water	12/18/12 11:50	12/22/12 12:15
440-33429-3	MW-3	Water	12/18/12 12:30	12/22/12 12:15
440-33429-4	MW-4	Water	12/18/12 10:40	12/22/12 12:15
440-33429-5	MW-5	Water	12/18/12 09:50	12/22/12 12:15
440-33429-6	MW-6	Water	12/18/12 09:15	12/22/12 12:15

Case Narrative

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

TestAmerica Job ID: 440-33429-1

Job ID: 440-33429-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-33429-1

Comments
No additional comments.

Receipt
The samples were received on 12/22/2012 12:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 1.2º C, 1.5º C, 2.4º C, 3.3º C and 3.8º C.

Except:
We didnt receive the Trip Blanks listed on the coc .

GC/MS VOA
No analytical or quality issues were noted.

GC VOA
Method(s) 8015B: Surrogate recovery was outside control limits for the following sample: (440-33429-1 MS), (440-33429-1 MSD). The BFB surrogate coeluted with the TPH standard. Data was not affected.

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 75419. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 8015B: Surrogate recovery for the following sample was outside control limits: MW-3 (440-33429-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No other analytical or quality issues were noted.

Organic Prep
Method(s) 3510C SGC: The following sample(s) was diluted due to the nature of the sample matrix: MW-4 (440-33429-4). Elevated reporting limits (RLs) are provided.

Batch 75419
Method 3510C_SGC/8015B

No other analytical or quality issues were noted.

VOA Prep
No analytical or quality issues were noted.

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

TestAmerica Job ID: 440-33429-1

Client Sample ID: MW-1

Lab Sample ID: 440-33429-1

Date Collected: 12/18/12 12:10

Matrix: Water

Date Received: 12/22/12 12:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.79**		0.50		ug/L			12/29/12 00:10	1
Ethanol	ND		150		ug/L			12/29/12 00:10	1
Ethylbenzene	ND		0.50		ug/L			12/29/12 00:10	1
Methyl-t-Butyl Ether (MTBE)	**10**		0.50		ug/L			12/29/12 00:10	1
m,p-Xylene	ND		1.0		ug/L			12/29/12 00:10	1
o-Xylene	ND		0.50		ug/L			12/29/12 00:10	1
Toluene	ND		0.50		ug/L			12/29/12 00:10	1
Xylenes, Total	ND		1.0		ug/L			12/29/12 00:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*12/29/12 00:10*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*12/29/12 00:10*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*12/29/12 00:10*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	**70**		50		ug/L			12/28/12 08:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*112*		*65 - 140*		*12/28/12 08:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**0.094**		0.048		mg/L		12/26/12 07:10	12/26/12 17:05	1
C29-C40	ND		0.048		mg/L		12/26/12 07:10	12/26/12 17:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*91*		*45 - 120*	*12/26/12 07:10*	*12/26/12 17:05*	*1*

Client Sample ID: MW-2

Lab Sample ID: 440-33429-2

Date Collected: 12/18/12 11:50

Matrix: Water

Date Received: 12/22/12 12:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.4**		0.50		ug/L			12/29/12 00:37	1
Ethanol	ND		150		ug/L			12/29/12 00:37	1
Ethylbenzene	ND		0.50		ug/L			12/29/12 00:37	1
Methyl-t-Butyl Ether (MTBE)	**2.9**		0.50		ug/L			12/29/12 00:37	1
m,p-Xylene	ND		1.0		ug/L			12/29/12 00:37	1
o-Xylene	ND		0.50		ug/L			12/29/12 00:37	1
Toluene	ND		0.50		ug/L			12/29/12 00:37	1
Xylenes, Total	ND		1.0		ug/L			12/29/12 00:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*12/29/12 00:37*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/29/12 00:37*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*12/29/12 00:37*	*1*

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

TestAmerica Job ID: 440-33429-1

Client Sample ID: MW-2

Lab Sample ID: 440-33429-2

Date Collected: 12/18/12 11:50

Matrix: Water

Date Received: 12/22/12 12:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	ND		50		ug/L			12/28/12 10:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*65 - 140*		*12/28/12 10:07*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**0.13**		0.048		mg/L		12/26/12 07:10	12/26/12 18:35	1
C29-C40	ND		0.048		mg/L		12/26/12 07:10	12/26/12 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*68*		*45 - 120*	*12/26/12 07:10*	*12/26/12 18:35*	*1*

Client Sample ID: MW-3

Lab Sample ID: 440-33429-3

Date Collected: 12/18/12 12:30

Matrix: Water

Date Received: 12/22/12 12:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			12/29/12 01:04	1
Ethanol	ND		150		ug/L			12/29/12 01:04	1
Ethylbenzene	ND		0.50		ug/L			12/29/12 01:04	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			12/29/12 01:04	1
m,p-Xylene	ND		1.0		ug/L			12/29/12 01:04	1
o-Xylene	ND		0.50		ug/L			12/29/12 01:04	1
Toluene	ND		0.50		ug/L			12/29/12 01:04	1
Xylenes, Total	ND		1.0		ug/L			12/29/12 01:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*12/29/12 01:04*	*1*
Dibromofluoromethane (Surr)	*100*		*80 - 120*		*12/29/12 01:04*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*12/29/12 01:04*	*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			12/28/12 10:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*65 - 140*		*12/28/12 10:34*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**1.8**		0.048		mg/L		12/26/12 07:10	12/26/12 17:50	1
C29-C40	**0.57**		0.048		mg/L		12/26/12 07:10	12/26/12 17:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*67*		*45 - 120*	*12/26/12 07:10*	*12/26/12 17:50*	*1*

Client Sample ID: MW-4

Lab Sample ID: 440-33429-4

Date Collected: 12/18/12 10:40

Matrix: Water

Date Received: 12/22/12 12:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			12/29/12 01:31	1
Ethanol	ND		150		ug/L			12/29/12 01:31	1
Ethylbenzene	ND		0.50		ug/L			12/29/12 01:31	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			12/29/12 01:31	1
m,p-Xylene	ND		1.0		ug/L			12/29/12 01:31	1
o-Xylene	ND		0.50		ug/L			12/29/12 01:31	1
Toluene	ND		0.50		ug/L			12/29/12 01:31	1
Xylenes, Total	ND		1.0		ug/L			12/29/12 01:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*12/29/12 01:31*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*12/29/12 01:31*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*12/29/12 01:31*	*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			12/28/12 11:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*65 - 140*		*12/28/12 11:02*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**3.1**		0.50		mg/L		12/26/12 07:10	12/26/12 18:57	1
C29-C40	**1.4**		0.50		mg/L		12/26/12 07:10	12/26/12 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*80*		*45 - 120*	*12/26/12 07:10*	*12/26/12 18:57*	*1*

Client Sample ID: MW-5

Lab Sample ID: 440-33429-5

Date Collected: 12/18/12 09:50

Matrix: Water

Date Received: 12/22/12 12:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			12/29/12 01:58	1
Ethanol	ND		150		ug/L			12/29/12 01:58	1
Ethylbenzene	ND		0.50		ug/L			12/29/12 01:58	1
Methyl-t-Butyl Ether (MTBE)	**0.98**		0.50		ug/L			12/29/12 01:58	1
m,p-Xylene	ND		1.0		ug/L			12/29/12 01:58	1
o-Xylene	ND		0.50		ug/L			12/29/12 01:58	1
Toluene	ND		0.50		ug/L			12/29/12 01:58	1
Xylenes, Total	ND		1.0		ug/L			12/29/12 01:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*12/29/12 01:58*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*12/29/12 01:58*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*		*12/29/12 01:58*	*1*

Client Sample ID: MW-5

Lab Sample ID: 440-33429-5

Date Collected: 12/18/12 09:50

Matrix: Water

Date Received: 12/22/12 12:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GRO (C4-C12)	**280**		50		ug/L			12/28/12 11:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*66*		*65 - 140*		*12/28/12 11:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	**0.29**		0.047		mg/L		12/26/12 07:10	12/26/12 18:57	1
C29-C40	ND		0.047		mg/L		12/26/12 07:10	12/26/12 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*85*		*45 - 120*	*12/26/12 07:10*	*12/26/12 18:57*	*1*

Client Sample ID: MW-6

Lab Sample ID: 440-33429-6

Date Collected: 12/18/12 09:15

Matrix: Water

Date Received: 12/22/12 12:15

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50		ug/L			12/29/12 02:25	1
Ethanol	ND		150		ug/L			12/29/12 02:25	1
Ethylbenzene	ND		0.50		ug/L			12/29/12 02:25	1
Methyl-t-Butyl Ether (MTBE)	**2.2**		0.50		ug/L			12/29/12 02:25	1
m,p-Xylene	ND		1.0		ug/L			12/29/12 02:25	1
o-Xylene	ND		0.50		ug/L			12/29/12 02:25	1
Toluene	ND		0.50		ug/L			12/29/12 02:25	1
Xylenes, Total	ND		1.0		ug/L			12/29/12 02:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*12/29/12 02:25*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*		*12/29/12 02:25*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*		*12/29/12 02:25*	*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			12/28/12 11:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*65 - 140*		*12/28/12 11:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		0.047		mg/L		12/26/12 07:10	12/26/12 18:35	1
C29-C40	ND		0.047		mg/L		12/26/12 07:10	12/26/12 18:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*86*		*45 - 120*	*12/26/12 07:10*	*12/26/12 18:35*	*1*

Lab Chronicle

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

TestAmerica Job ID: 440-33429-1

Client Sample ID: MW-1

Lab Sample ID: 440-33429-1

Date Collected: 12/18/12 12:10

Matrix: Water

Date Received: 12/22/12 12:15

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	76121	12/29/12 00:10	TN	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	75862	12/28/12 08:44	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			1050 mL	1 mL	75419	12/26/12 07:10	KW	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			75467	12/26/12 17:05	JR	TAL IRV

Client Sample ID: MW-2

Lab Sample ID: 440-33429-2

Date Collected: 12/18/12 11:50

Matrix: Water

Date Received: 12/22/12 12:15

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	76121	12/29/12 00:37	TN	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	75862	12/28/12 10:07	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			1050 mL	1 mL	75419	12/26/12 07:10	KW	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			75468	12/26/12 18:35	JR	TAL IRV

Client Sample ID: MW-3

Lab Sample ID: 440-33429-3

Date Collected: 12/18/12 12:30

Matrix: Water

Date Received: 12/22/12 12:15

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	76121	12/29/12 01:04	TN	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	75862	12/28/12 10:34	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			1050 mL	1 mL	75419	12/26/12 07:10	KW	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			75468	12/26/12 17:50	JR	TAL IRV

Client Sample ID: MW-4

Lab Sample ID: 440-33429-4

Date Collected: 12/18/12 10:40

Matrix: Water

Date Received: 12/22/12 12:15

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	76121	12/29/12 01:31	TN	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	75862	12/28/12 11:02	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			100 mL	1 mL	75419	12/26/12 07:10	KW	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			75468	12/26/12 18:57	JR	TAL IRV

Client Sample ID: MW-5

Lab Sample ID: 440-33429-5

Date Collected: 12/18/12 09:50

Matrix: Water

Date Received: 12/22/12 12:15

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	76121	12/29/12 01:58	TN	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	75862	12/28/12 11:30	PH	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-33429-1

Client Sample ID: MW-5

Lab Sample ID: 440-33429-5

Date Collected: 12/18/12 09:50

Matrix: Water

Date Received: 12/22/12 12:15

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	75419	12/26/12 07:10	KW	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			75467	12/26/12 18:57	JR	TAL IRV

Client Sample ID: MW-6

Lab Sample ID: 440-33429-6

Date Collected: 12/18/12 09:15

Matrix: Water

Date Received: 12/22/12 12:15

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	76121	12/29/12 02:25	TN	TAL IRV
Total/NA	Analysis	8015B		1	10 mL	10 mL	75862	12/28/12 11:58	PH	TAL IRV
Silica Gel Cleanup	Prep	3510C SGC			1055 mL	1 mL	75419	12/26/12 07:10	KW	TAL IRV
Silica Gel Cleanup	Analysis	8015B		1			75467	12/26/12 18:35	JR	TAL IRV

Laboratory References:

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

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

Lab Sample ID: MB 440-76121/3
Matrix: Water
Analysis Batch: 76121

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			12/28/12 19:41	1
Ethanol	ND		150		ug/L			12/28/12 19:41	1
Ethylbenzene	ND		0.50		ug/L			12/28/12 19:41	1
Methyl-t-Butyl Ether (MTBE)	ND		0.50		ug/L			12/28/12 19:41	1
m,p-Xylene	ND		1.0		ug/L			12/28/12 19:41	1
o-Xylene	ND		0.50		ug/L			12/28/12 19:41	1
Toluene	ND		0.50		ug/L			12/28/12 19:41	1
Xylenes, Total	ND		1.0		ug/L			12/28/12 19:41	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*80 - 120*		*12/28/12 19:41*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*12/28/12 19:41*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*		*12/28/12 19:41*	*1*

Lab Sample ID: LCS 440-76121/4
Matrix: Water
Analysis Batch: 76121

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	21.4		ug/L		86	70 - 120
Ethanol	250	341		ug/L		136	40 - 155
Ethylbenzene	25.0	23.7		ug/L		95	75 - 125
Methyl-t-Butyl Ether (MTBE)	25.0	21.2		ug/L		85	60 - 135
m,p-Xylene	50.0	46.8		ug/L		94	75 - 125
o-Xylene	25.0	24.2		ug/L		97	75 - 125
Toluene	25.0	24.0		ug/L		96	70 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*80 - 120*
Toluene-d8 (Surr)	*108*		*80 - 120*

Lab Sample ID: 440-33251-D-27 MS
Matrix: Water
Analysis Batch: 76121

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	21.9		ug/L		88	65 - 125
Ethanol	ND		250	366		ug/L		146	40 - 155
Ethylbenzene	ND		25.0	23.5		ug/L		94	65 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	19.8		ug/L		79	55 - 145
m,p-Xylene	ND		50.0	47.6		ug/L		95	65 - 130
o-Xylene	ND		25.0	24.3		ug/L		97	65 - 125
Toluene	ND		25.0	23.8		ug/L		95	70 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*

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

Lab Sample ID: 440-33251-D-27 MS
Matrix: Water
Analysis Batch: 76121

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: 440-33251-D-27 MSD
Matrix: Water
Analysis Batch: 76121

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
Benzene	ND		25.0	22.4		ug/L		90	65 - 125	2	20
Ethanol	ND		250	374		ug/L		150	40 - 155	2	30
Ethylbenzene	ND		25.0	23.6		ug/L		94	65 - 130	0	20
Methyl-t-Butyl Ether (MTBE)	ND		25.0	18.6		ug/L		74	55 - 145	7	25
m,p-Xylene	ND		50.0	46.8		ug/L		94	65 - 130	2	25
o-Xylene	ND		25.0	24.0		ug/L		96	65 - 125	1	20
Toluene	ND		25.0	23.6		ug/L		95	70 - 125	1	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*80 - 120*
Toluene-d8 (Surr)	*106*		*80 - 120*

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

Lab Sample ID: MB 440-75862/32
Matrix: Water
Analysis Batch: 75862

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			12/28/12 08:16	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*65 - 140*		*12/28/12 08:16*	*1*

Lab Sample ID: LCS 440-75862/31
Matrix: Water
Analysis Batch: 75862

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	791		ug/L		99	80 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*124*		*65 - 140*

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

Lab Sample ID: 440-33429-1 MS
Matrix: Water
Analysis Batch: 75862

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
GRO (C4-C12)	70		800	698		ug/L		79	65 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*146*	*X*	*65 - 140*

Lab Sample ID: 440-33429-1 MSD
Matrix: Water
Analysis Batch: 75862

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
GRO (C4-C12)	70		800	690		ug/L		77	65 - 140	1	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*144*	*X*	*65 - 140*

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

Lab Sample ID: MB 440-75419/1-A
Matrix: Water
Analysis Batch: 75467

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 75419

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	0.0561		0.050		mg/L		12/26/12 07:10	12/26/12 16:20	1
C29-C40	ND		0.050		mg/L		12/26/12 07:10	12/26/12 16:20	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*93*		*45 - 120*	*12/26/12 07:10*	*12/26/12 16:20*	*1*

Lab Sample ID: MB 440-75419/1-A
Matrix: Water
Analysis Batch: 75768

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 75419

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
C10-C28	ND		0.50		mg/L		12/26/12 07:10	12/27/12 11:07	1
C29-C40	ND		0.50		mg/L		12/26/12 07:10	12/27/12 11:07	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Octacosane	*91*		*45 - 120*	*12/26/12 07:10*	*12/27/12 11:07*	*1*

Lab Sample ID: LCS 440-75419/2-A
Matrix: Water
Analysis Batch: 75467

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 75419

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
C10-C28			1.00	0.816		mg/L		82	40 - 115

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

Lab Sample ID: LCS 440-75419/2-A
Matrix: Water
Analysis Batch: 75467

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 75419

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
n-Octacosane	*89*		*45 - 120*

Lab Sample ID: LCSD 440-75419/3-A
Matrix: Water
Analysis Batch: 75467

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 75419

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
C10-C28			1.00	0.776		mg/L		78	40 - 115	5	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
n-Octacosane	*86*		*45 - 120*

QC Association Summary

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

TestAmerica Job ID: 440-33429-1

GC/MS VOA

Analysis Batch: 76121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-33251-D-27 MS	Matrix Spike	Total/NA	Water	8260B	
440-33251-D-27 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	
440-33429-1	MW-1	Total/NA	Water	8260B	
440-33429-2	MW-2	Total/NA	Water	8260B	
440-33429-3	MW-3	Total/NA	Water	8260B	
440-33429-4	MW-4	Total/NA	Water	8260B	
440-33429-5	MW-5	Total/NA	Water	8260B	
440-33429-6	MW-6	Total/NA	Water	8260B	
LCS 440-76121/4	Lab Control Sample	Total/NA	Water	8260B	
MB 440-76121/3	Method Blank	Total/NA	Water	8260B	

GC VOA

Analysis Batch: 75862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-33429-1	MW-1	Total/NA	Water	8015B	
440-33429-1 MS	MW-1	Total/NA	Water	8015B	
440-33429-1 MSD	MW-1	Total/NA	Water	8015B	
440-33429-2	MW-2	Total/NA	Water	8015B	
440-33429-3	MW-3	Total/NA	Water	8015B	
440-33429-4	MW-4	Total/NA	Water	8015B	
440-33429-5	MW-5	Total/NA	Water	8015B	
440-33429-6	MW-6	Total/NA	Water	8015B	
LCS 440-75862/31	Lab Control Sample	Total/NA	Water	8015B	
MB 440-75862/32	Method Blank	Total/NA	Water	8015B	

GC Semi VOA

Prep Batch: 75419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-33429-1	MW-1	Silica Gel Cleanup	Water	3510C SGC	
440-33429-2	MW-2	Silica Gel Cleanup	Water	3510C SGC	
440-33429-3	MW-3	Silica Gel Cleanup	Water	3510C SGC	
440-33429-4	MW-4	Silica Gel Cleanup	Water	3510C SGC	
440-33429-5	MW-5	Silica Gel Cleanup	Water	3510C SGC	
440-33429-6	MW-6	Silica Gel Cleanup	Water	3510C SGC	
LCS 440-75419/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 440-75419/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 440-75419/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 75467

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-33429-1	MW-1	Silica Gel Cleanup	Water	8015B	75419
440-33429-5	MW-5	Silica Gel Cleanup	Water	8015B	75419
440-33429-6	MW-6	Silica Gel Cleanup	Water	8015B	75419
LCS 440-75419/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	75419
LCSD 440-75419/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	75419
MB 440-75419/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	75419

GC Semi VOA (Continued)

Analysis Batch: 75468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-33429-2	MW-2	Silica Gel Cleanup	Water	8015B	75419
440-33429-3	MW-3	Silica Gel Cleanup	Water	8015B	75419
440-33429-4	MW-4	Silica Gel Cleanup	Water	8015B	75419

Analysis Batch: 75768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-75419/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	75419

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, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
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: 440-33429-1

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	06-30-13
Arizona	State Program	9	AZ0671	10-13-13
California	LA Cty Sanitation Districts	9	10256	01-31-13
California	NELAP	9	1108CA	01-31-13
California	State Program	9	2706	06-30-14
Guam	State Program	9	Cert. No. 12.002r	01-23-13
Hawaii	State Program	9	N/A	01-31-13
Nevada	State Program	9	CA015312007A	07-31-13
New Mexico	State Program	6	N/A	01-31-13
Northern Mariana Islands	State Program	9	MP0002	01-31-13
Oregon	NELAP	10	4005	09-12-13
USDA	Federal		P330-09-00080	06-06-14
USEPA UCMR	Federal	1	CA01531	01-31-13

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

1/9/2013

Client Contact	Project Manager: Toni DeMayo	Site Contact:	Date: 12/18/12	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**			Job No. 121218-BW1
Irvine, CA 92602	Calendar (C) or Work Days (W) _____			
714-508-2657 Phone	TAT if different from Below _____			SDG No.
714-730-9345 FAX	■ 2 weeks			
Project Name: 5910 MacArthur Blvd., Oakland, CA	☐ 1 week			
Site: 9-9708	☐ 2 days			
P O / **Global ID: T0600102093**	☐ 1 day			

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	12/18/12	1210	Grab	WG	9		X	X	X	X	X	
MW-2		1150			9		X	X	X	X	X	
MW-3		1230			9		X	X	X	X	X	
MW-4		1040			9		X	X	X	X	X	
MW-5		0950			9		X	X	X	X	X	
MW-6		0915			9		X	X	X	X	X	
TB-20121218	↓	0730	↓	↓	4		X	X				
							1,2	1,2	1	1	1,2	

Preservation Used: 1= Ice, 2= HCl; 3= H_2SO_4; 4=HNO_3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ■ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:
Must meet lowest detection limits possible for 8260 compounds
* USE 10 GRAM SILICA GEL CLEAN UP

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	BTS	12/18/12 1715	[signature] Sample Custodian	BTS	12/18/12 1715
[signature] Sample Custodian	BTS	12/19/12 1655	[signature]	TASF	12-20-12 1055
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

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

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Toni DeMayo	Site Contact:	Date: 12/18/12	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			Job No. 121218-BW1
Irvine, CA 92602	Calendar (C) or Work Days (W) ____			
714-508-2657 Phone	TAT if different from Below ____			
714-730-9345 FAX	■ 2 weeks			SDG No. 440-33429
Project Name: 5910 MacArthur Blvd., Oakland, CA	☐ 1 week			
Site: 9-9708	☐ 2 days			
P O / Global ID: T0600102093	☐ 1 day			

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	12/18/12	1210	Grab	Wtr	9		X	X	X	X	X	
MW-2	↓	1150	↓	↓	9		X	X	X	X	X	
MW-3	↓	1230	↓	↓	9		X	X	X	X	X	
MW-4	↓	1040	↓	↓	9		X	X	X	X	X	
MW-5	↓	0950	↓	↓	9		X	X	X	X	X	
MW-6	↓	0915	↓	↓	9		X	X	X	X	X	
TB-20121218	↓	0730	↓	↓	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
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* ☐ *Poison B* ☐ *Unknown*

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ■ *Disposal By Lab* ☐ *Archive For* ____ *Months*

Special Instructions/QC Requirements & Comments:
Must meet lowest detection limits possible for 8260 compounds

Temps (2.4, 3.3, 1.2, 3.8, 1.5)°C

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	BTS	12/18/12 1715	[signature] Sample Custodian	BTS	12/18/12 1715
[signature] Sample Custodian BTS	BTS	12/20/12 1655	[signature]	TASF	12-20-12 1655
[signature]	TASF	12-20-12 1830	[signature]	T.A.	12-21-12 13.30

1.3°c, 1.6°c, 1.4°c [signature] T.A. 12-21-12 14:00 [signature] TA 12-22-12 1215

1/9/2013

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 440-33429-1

Login Number: 33429

List Number: 1

Creator: Kim, Will

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.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
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?	N/A	
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	