

By Alameda County Environmental Health 11:27 am, Jul 05, 2016

Second Quarter 2016 Annual Groundwater Monitoring Report

Former Chevron-branded Service Station 94612 3616 San Leandro Street Oakland, California Case #: RO0000233



Prepared for: Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583

Prepared by: Stantec Consulting Services Inc. 15575 Los Gatos Blvd., Building C Los Gatos, CA 95032



Carryl MacLeod Project Manager Marketing Business Unit

Chevron Environmental Management Company 6001 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 842-3201 CMacleod@chevron.com

July 1, 2016

Mr. Mark Detterman Alameda County Environmental Health 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

Dear Mr. Detterman:

Attached for your review is the Second Quarter 2016 Annual Groundwater Monitoring Report for former Chevron-branded service station 94612, located at 3616 San Leandro Street in Oakland, California (Case #: RO0000233). This report was prepared by Stantec Consulting Services Inc. (Stantec), 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.

If you should have any further questions, please do not hesitate to contact me or the Stantec project manager, Travis Flora, at (408) 356-6124 ext. 238, or travis.flora@stantec.com.

Sincerely,

Carryl MacLeod Project Manager



July 1, 2016

Attention: Mr. Mark Detterman

Alameda County Environmental Health

1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502

Reference: Second Quarter 2016 Annual Groundwater Monitoring Report

Former Chevron-branded Service Station 94612 3616 San Leandro Street, Oakland, California

Case #: RO0000233

Dear Mr. Detterman:

On behalf of Chevron Environmental Management Company (Chevron), Stantec Consulting Services Inc. (Stantec) is pleased to submit the Second Quarter 2016 Annual Groundwater Monitoring Report for former Chevron-branded service station 94612, which was located at 3616 San Leandro Street, Oakland, Alameda County, California (Site - shown on Figure 1). This report is presented in three sections: Site Background, Second Quarter 2016 Groundwater Monitoring and Sampling Program, and Conclusions and Recommendations.

SITE BACKGROUND

The Site is a former Chevron-branded service station located on the northern corner at the intersection of San Leandro Street and 37th Avenue in Oakland, California. The Site is currently comprised of two parcels (Alameda County Assessor's Parcel Number [APN] 33-2178-9-1 and APN 33-2178-10) owned by separate private parties. A one-story commercial warehouse occupies the northwestern parcel, while the southeastern parcel is a paved parking lot. A Chevron-branded service station operated at the Site from approximately 1967 until 1976. Stantec reviewed Alameda County Environmental Health (ACEH) files, and specific dates of operational history are unclear.

Former Site features consisted of three gasoline underground storage tanks (USTs; two 10,000-gallon and one 5,000-gallon) located in the northwestern portion of the Site, a 1,000-gallon waste oil UST located in the northern portion of the Site, two fuel dispenser islands located in the southern portion of the Site, associated product piping, and a station building with two hydraulic hoists located in the center of the Site. In 1976, the service station was closed and all Site features were removed. The Site remained a vacant lot until the existing warehouse was constructed in approximately 1988.

Land use near the Site consists of a mixture of commercial and residential properties. The Site is bounded to the northwest by a residence, to the northeast by a Bay Area Rapid Transit (BART) parking lot and elevated rail tracks, on the southeast by 37th Avenue followed by a commercial building, and on the southwest by San Leandro Street followed by a mixed commercial and residential area.

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SECOND QUARTER 2016 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Gettler-Ryan Inc. (G-R) performed the Second Quarter 2016 groundwater monitoring and sampling event on May 2, 2016. G-R's standard operating procedures (SOPs) and field data sheets are included in **Attachment A**. G-R gauged depth-to-groundwater (DTW) in four Site wells (VH-1, MW-2, MW-3, and MW-4) prior to collecting groundwater samples for laboratory analysis. All four Site wells were sampled. G-R indicated well VH-1 was inaccessible with the sampling truck; therefore, purging was not conducted at well VH-1 prior to sample collection.

Investigation-derived waste (IDW) generated during the Second Quarter 2016 groundwater monitoring and sampling event was transported by Clean Harbors Environmental Services to Seaport Environmental in Redwood City, California.

Groundwater Elevation and Gradient

Well construction details and a screen interval assessment for each Site well are presented in **Table 1**. Wells MW-2, MW-3, and MW-4 are currently screened across the prevailing groundwater table, while the DTW measurement in well VH-1 is above the respective screen interval, and the screen interval is currently entirely submerged. Current and historical groundwater elevation data are presented in **Table 2**. A groundwater elevation contour map (based on Second Quarter 2016 data) is shown on **Figure 2**. The direction of groundwater flow at the time of sampling was generally towards the southwest at an average hydraulic gradient of approximately 0.017 feet per foot (ft/ft). This is generally consistent with the historical direction of groundwater flow, as shown by the groundwater flow direction rose diagram on **Figure 3** illustrating the direction of groundwater flow from First Quarter 1993 to present.

Schedule of Laboratory Analysis

Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline range organics (TPH-GRO) using United States Environmental Protection Agency (US EPA) Method 8015B (SW-846) and benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds) and methyl tertiary-butyl ether (MtBE) using US EPA Method 8260B (SW-846). In addition, the groundwater sample collected from well MW-3 was analyzed for total petroleum hydrocarbons as diesel range organics (TPH-DRO) with silica gel cleanup using US EPA Method 8015B (SW-846).

Groundwater Analytical Results

During Second Quarter 2016, groundwater samples were collected from four Site wells (VH-1, MW-2, MW-3, and MW-4). Current and historical groundwater analytical results and field parameters are included in **Table 2** through **Table 6**. A figure showing the latest groundwater analytical data plotted on a Site map is included as **Figure 4**. A TPH-GRO isoconcentration map is shown on **Figure 5**. Isoconcentration maps were not developed for benzene and MtBE because concentrations were below California Regional Water Quality Control Board – San Francisco Bay Region Environmental Screening Levels (ESLs) or method detection limits (MDLs). An isoconcentration map was not developed for TPH-DRO because it was only analyzed at one well.

Certified laboratory analysis reports and chain-of-custody documents are presented as **Attachment B**. Hydrographs based on current and historical groundwater elevations and analytical results are included in **Attachment C**. A summary of Second Quarter 2016 groundwater analytical results follows:

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- **TPH-GRO** was detected in three Site wells, at concentrations of 310 micrograms per liter (µg/L; well VH-1), 2,000 µg/L (well MW-3), and 3,000 µg/L (well MW-2).
- **TPH-DRO** was detected in the one Site well in which it was analyzed (well MW-3), at a concentration of 160 µg/L.
- **Benzene** was detected in one Site well, at a concentration of 0.5 µg/L (well MW-2).
- **Toluene** was not detected above the MDL (0.5 µg/L) in any Site well sampled.
- Ethylbenzene was not detected above the MDL (0.5 µg/L) in any Site well sampled.
- Total Xylenes were not detected above the MDL (0.5 µg/L) in any Site well sampled.
- **MtBE** was detected in three Site wells, at concentrations of 0.8 μg/L (well MW-3), 0.9 μg/L (well MW-2), and 1 μg/L (well VH-1).

CONCLUSIONS AND RECOMMENDATIONS

Maximum concentrations of TPH-GRO and BTEX compounds were historically observed in well VH-1, located approximately 6 feet from the former gasoline USTs; however, between Second Quarter 2013 and Second Quarter 2014, concentrations of TPH-GRO and BTEX compounds in well VH-1 decreased by approximately one order of magnitude. During Second Quarter 2015 and Second Quarter 2016, maximum concentration of TPH-GRO was observed in well MW-2, located approximately 3 feet from the former southernmost dispenser island. Toluene, ethylbenzene, and total xylenes were not detected above MDLs, and benzene was not detected above its ESL (1 μ g/L).

In a letter dated May 6, 2014, ACEH conditionally approved Stantec's *Site Conceptual Model and Data Gap Work Plan*, dated February 28, 2014, and requested a Soil and Groundwater Investigation Report by July 7, 2014. Due to issues obtaining an encroachment permit from the City of Oakland, Stantec requested extensions on the due date for the Soil and Groundwater Investigation Report in letters dated August 19 and November 21, 2014, and January 20, 2015.

Stantec obtained the necessary encroachment permit from the City of Oakland and scheduled utility locating activities for March 2, 2015, and Site assessment drilling activities for March 5, 2015. During utility locating activities, a high priority petroleum pipeline was discovered underground adjacent to the proposed soil boring locations. On March 3, 2015, ACEH and Stantec reviewed Site photographs and discussed the petroleum pipeline and potential alternate soil boring locations. During that conversation, Stantec proposed relocating the soil borings to private properties located down-gradient of the previously proposed locations.

Due to issues obtaining access to the off-site private properties, Stantec requested additional extensions on the due date for the Soil and Groundwater Investigation Report in letters dated March 27, July 13, and October 16, 2015. On May 13, 2016, ACEH sent letters to the off-site property owners encouraging cooperation for access. There is currently no set due date for the Soil and Groundwater Investigation Report.

If you have any questions, please contact the Stantec Project Manager, Travis Flora, at (408) 356-6124 or <u>Travis.Flora@stantec.com</u>.

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LIMITATIONS

This document entitled Second Quarter 2016 Annual Groundwater Monitoring Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Chevron Environmental Management Company (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by	Erin O'Malley	
	(signature)	

Erin O'Malley Project Engineer

Reviewed by Marusa Kuffenburger (Signature)

Marisa Kaffenberger Senior Engineer

Reviewed by

Travis L. FloraAssociate Project Manager

Reviewed by

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Dorota Runyan, P.E. Senior Engineer

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Attachments:

Table 1 – Well Details / Screen Interval Assessment – Second Quarter 2016

Table 2 – Groundwater Monitoring Data and Analytical Results

Table 3 – Groundwater Analytical Results – Oxygenate Compounds

Table 4 – Groundwater Analytical Results – Metals and Volatile Organic Compounds

Table 5 – Groundwater Analytical Results – PCBs

Table 6 - Dissolved Oxygen Levels

Figure 1 – Site Location Map

Figure 2 – Groundwater Elevation Contour Map – Second Quarter 2016

Figure 3 – Groundwater Flow Direction Rose Diagram – Second Quarter 2016

Figure 4 – Site Plan Showing Groundwater Concentrations – Second Quarter 2016

Figure 5 – TPH-GRO Isoconcentration Map – Second Quarter 2016

Attachment A – Gettler-Ryan Inc. Field Data Sheets and Standard Operating Procedures – Second Quarter 2016

Attachment B – Certified Laboratory Analysis Reports and Chain-of-Custody Documents Attachment C – Hydrographs

cc:

Ms. Carryl MacLeod, Chevron Environmental Management Company, 6001 Bollinger Canyon Road, San Ramon, CA 94583 – Electronic Copy

Mr. Terry McIlraith, Vivian McIlraith Trust, 407 Castello Road, Lafayette, CA 94549

Ms. Jana Ratto Armstrong, Ratto Land Company – Electronic Copy



Table 1 Well Details / Screen Interval Assessment Second Quarter 2016

Former Chevron-Branded Service Station 94612 3616 San Leandro Street, Oakland, California

Well ID	Date Installed	Well Type	Casing Diameter (inches)	Top of Casing (feet above msl)	Construction Well Depth (feet bgs)	Current Well Depth ¹ (feet below TOC)	Current Depth to Groundwater ¹ (feet below TOC)	Screen Interval (feet bgs)	Screen Interval Assessment
VH-1	08/09/88	Monitoring	4	27.91	30.00	28.97	8.30	10-30	Depth-to-groundwater above screen interval.
MW-2	02/01/93	Monitoring	2	28.05	20.00	19.45	9.01	5-20	Depth-to-groundwater within screen interval.
MW-3	02/01/93	Monitoring	2	29.04	20.00	17.96	8.55	5-20	Depth-to-groundwater within screen interval.
MW-4	08/15/95	Monitoring	2	27.27	20.00	17.85	7.64	7-20	Depth-to-groundwater within screen interval.

Notes:

bgs = below ground surface

msl = mean sea level

TOC = top of casing

¹ = As measured on May 2, 2016.

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	В	T	E	Х	MtBE	TOG
DATE	(ft.)	(ft.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)
VH-1												
08/10/88		13.00				11,000	3,300	200	520	540		
06/01/89		10.32				15,000	2,200	120	540	310		
09/15/89		15.69				5,600	1,900	90	350	160		
12/08/89		14.77				11,000	1,900	69	270	99		
03/07/91		11.26				4,500	820	39	120	77		
09/24/91		12.98				3,300	520	19	39	27		
01/08/92		13.77				5,000	600	34	81	76		
04/20/92		8.18				7,400	670	60	110	140		
03/26/93	27.85	6.71	21.14			4,900	600	40	72	94		
05/27/93	27.85	8.58	19.27			13,000	1,600	120	230	220		
08/18/93	27.85	10.46	17.39			2,700	210	10	8.1	18		
11/03/93	27.85	12.57	15.28			4,600	680	42	35	68		
02/10/94	27.85	9.08	18.77			1,900	260	19	22	29		
05/12/94	27.85	8.09	19.76			2,000	390	28	3.9	29		
08/26/94	27.85	10.75	17.10			4,900	500	<5.0	23	31		
11/14/94	27.85	9.45	18.40			760	69	<2.0	<2.0	2.2		
02/01/95	27.85	5.97	21.88			1,300	120	5.9	<0.5	13		
05/12/95	27.85	7.71	20.14			4,400	460	31	45	49		
08/22/95	27.85	9.26	18.59			2,900	310	15	28	32		
12/19/95	27.85	8.80	19.05			930	53	<2.5	<2.5	<2.5	39	
01/31/96	27.85	5.50	22.35			3,700	320	<10	41	40	180	
04/30/96	27.85	8.04	19.81			3,900	270	<20	<20	<20	120	
08/01/96	27.85	9.18	18.67			2,700	140	11	18	28	200	
10/30/96	27.85	10.76	17.09			2,700	140	<12	<12	<12	280	
02/07/97	27.85	8.10	19.75			220	13	0.6	<0.5	1.6	15	
05/07/97	27.85	9.52	18.33			5,200	33	12	21	26	330	
07/22/97	27.85	10.42	17.43			4,200	80	<10	16	24	400	
11/03/97	27.85	11.00	16.85			2,400	150	6.8	6.5	9.5	510	
01/28/98	27.85	7.10	20.75			850	69	4.8	5.0	11	38/48 ¹²	
05/08/98	27.85	7.71	20.14			4,200	200	30	40	42	310/200 ¹²	
07/29/98	27.85	9.45	18.40			3,800	54	10	27	30	35/290 ¹²	
11/06/98	27.85	10.70	17.15			4,800	100	20	12	23	360/210 ¹²	
02/09/99 ⁵	27.85	5.98	21.87			2,950	79.5	<10	<10	<10	435/312 ¹²	
05/13/99	27.85	8.14	19.71			4,180	147	12.8	16.5	20.3	433/24512	
09/07/99	27.85	9.91	17.94			2,750	57.6	<5.0	6.53	<5.0	297/233 ¹²	
11/24/99	27.85	10.49	17.36			2,550	38	3.18	2.54	5.21	216 ^{1,12}	
02/25/00	27.85	6.65	21.20			120	2.7	<0.5	<0.5	<0.5	20.5/11.9 ¹²	

WELL ID/		TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	В	T	E	Х	MtBE	TOG
DATE		(ft.)	(ft.)	(msl)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)
VH-1 (cont)													
05/10/00		27.85	8.09	19.76			1,4008	63	3.3	3.1	4.9	230/110 ¹²	
7/31/00 ¹¹		27.85	9.55	18.30			360 ⁸	22	2.7	1.6	3.1	100/88 ¹²	
10/30/00 ¹¹		27.85	9.94	17.91			98710	47.0	1.00	<0.500	1.80	153/130 ¹²	
02/05/01		27.91	8.68	19.23			2,670	42.7	<5.00	<5.00	<5.00	225/160 ¹²	
05/07/0111		27.91	8.30	19.61			1,800 ⁶	100	8.2	10	7.9	440/110 ¹²	
08/06/0111		27.91	9.82	18.09			1,0006	67	6.1	2.1	7.1	270/140 ¹²	
11/12/01 ¹¹		27.91	10.62	17.29			220	1.2	<0.50	<0.50	<1.5	63/61 ¹²	
02/11/02 ¹¹		27.91	8.08	19.83			1,700	33	<5.0	6.3	3.8	64/52 ¹²	
05/13/0211		27.91	8.70	19.21			2,700	54	4.1	5.6	6.2	100/80 ¹²	
08/09/0211		27.91	9.41	18.50			2,400	37	2.4	1.2	3.4	86/89 ¹²	
11/07/02 ¹¹		27.91	10.57	17.34			150	1.3	<0.50	<0.50	<1.5	56/50 ¹²	
02/04/0311		27.91	8.28	19.63			1,700	40	3.1	7.8	5.0	100/53 ¹²	
05/05/03 ¹¹		27.91	7.50	20.41			2,100	44	3.4	3.7	5.2	96/62 ¹²	
09/06/03 ^{11,14}		27.91	9.60	18.31			690	7	0.6	<0.5	0.6	59	
11/14/03 ^{11,14}		27.91	9.92	17.99			1,000	3	0.6	2	0.7	47	
02/13/04 ^{14,15}		27.91	7.93	19.98			2,400	30	2	4	3	47	
05/13/04 ¹⁴		27.91	8.67	19.24			1,900	49	4	3	5	74	
08/17/04 ¹⁴		27.91	9.65	18.26			1,800	11	1	0.9	2	58	
11/10/04		27.91	INACCESSIBLE										
02/08/05 ¹⁴		27.91	7.83	20.08			2,700	26	3	4	5	48	
06/03/05 ¹⁴		27.91	8.20	19.71			3,100	40	5	6	9	45	
08/05/05 ¹⁴		27.91	10.10	17.81			2,500	34	4	0.6	6	46	
12/02/05 ¹⁴		27.91	8.98	18.93			3,500	69	7	2	8	57	
03/03/06 ¹⁴	NP ¹⁸	27.91	7.25	20.66			4,100	37	6	6	8	40	
05/31/06 ¹⁴	NP^{18}	27.91	8.17	19.74			4,100	33	5	3	8	34	
08/18/06 ¹⁴		27.91	9.12	18.79			3,300	23	4	1	5	33	
11/17/06 ¹⁴		27.91	9.27	18.64			3,200	18	3	0.6	3	33	
02/09/07 ¹⁴	NP^{18}	27.91	8.38	19.53			3,600	23	4	2	5	28	
05/11/07 ¹⁴	NP^{18}	27.91	8.38	19.53			3,200	14	3	1	5	26	
08/10/07 ¹⁴	NP^{18}	27.91	9.50	18.41			2,400	10	2	0.6	3	21	
11/08/07 ¹⁴	NP^{18}	27.91	9.66	18.25			3,000	10	2	0.5	2	18	
02/07/08 ¹⁴	NP^{18}	27.91	7.15	20.76			4,000	14	3	5	5	14	
05/02/08 ¹⁴	NP^{18}	27.91	8.95	18.96			3,000	14	3	2	4	17	
07/31/08 ¹⁴	NP^{18}	27.91	9.68	18.23			2,700	13	2	0.8	3	14	
11/13/08 ¹⁴	NP^{18}	27.91	10.18	17.73			2,500	6	1	<0.5	1	12	
02/02/0914	NP^{18}	27.91	9.91	18.00			4,000	7	1	<0.5	1	12	
05/01/09 ¹⁴	NP^{18}	27.91	9.16	18.75			3,900	20	3	3	6	15	
08/10/09 ¹⁴	NP^{18}	27.91	9.67	18.24			1,400	6	1	<0.5	1	11	
01/29/10 ¹⁴	NP^{18}	27.91	7.23	20.68			3,700	24	4	5	5	13	

WELL ID/ DATE		TOC* (ft.)	DTW (ft.)	GWE (msl)	TPH-MO (µg/L)	TPH-DRO (μg/L)	TPH-GRO (μg/L)	Β (μg/L)	T (μg/L)	E (μg/L)	Χ (μg/L)	M†BE (µg/L)	TOG (μg/L)
VH-1 (cont)		(,	(,	(,	(F-97-7	(F97-7	(I=9/-/	(F-97-7	(F97-7	(F97-7	(F3/-/	(F97-7	(F-97-7
08/23/10 ¹⁴	NP ¹⁸	27.91	9.28	18.63			3,600	18	3	2	4	9	
08/22/1114		27.91	9.28	18.63			3,400	12	2	0.8	3	7	
05/10/12 ¹⁴	NP ¹⁸	27.71	8.26	19.65			3,100	12	3	2	4		
05/08/13 ¹⁴	NP ¹⁸											6	
		27.91	8.98	18.93			3,500	12	2	1	5	5	
05/13/14 ¹⁴	NP ¹⁸	27.91	8.71	19.20			390	<0.5	<0.5	<0.5	<0.5	2	
05/14/15 ¹⁴	NP ¹⁸	27.91	9.15	18.76			290	<0.5	<0.5	<0.5	<0.5	2	
05/02/16 ¹⁴	NP ¹⁸	27.91	8.30	19.61			310	<0.5	<0.5	<0.5	<0.5	1	
MW-2													
02/16/93		27.51					9,200	720	110	250	170		
03/26/93		27.51	7.62	19.89									
05/27/93		27.51	9.47	18.04			360	5.3	2.1	1.8	2.5		
08/18/93		27.51	11.05	16.46			9,400	1,100	76	110	100		
11/03/93		27.51	12.95	14.56			8,600	390	20	2.7	120		
02/10/94		27.51	9.79	17.72			2,700	370	38	44	41		
05/12/94 08/26/94		27.51 27.51	8.92 11.37	18.59 16.14			3,800 16,000	650 1,300	76 270	15 28	62 120		
11/14/94		27.51	10.03	17.48			5,100	390	10	43	27		
02/01/95		27.51	7.04	20.47			6,900	520	82	170	110		
05/12/95		27.51	8.75	18.76			7,700	510	83	110	100		
08/22/95		27.51	10.16	17.35			4,500	220	16	61	47		
12/19/95		27.51	9.46	18.05			2,900	240	<10	19	18	220	
01/31/96		27.51	5.60	21.91			3,900	320	18	72	39	<25	
04/30/96		27.51	8.83	18.68			5,600	200	36	55	47	170	
08/01/96		27.51	10.26	17.25			6,200	190	15	62	59	220	
10/30/96		27.51	11.48	16.03			5,700	190	<25	67	36	260	
02/07/97		27.51	9.40	18.11			8,300	210	34	70	59	330	
05/07/97		27.51 27.51	9.94	17.57 16.36			6,900	190	12	38	37	530 630	
07/22/97			11.15				10,000	18	25	62	41	590/9.6 ^{4,12}	
11/03/97		27.51	11.58	15.93			6,500	260	8.5	26	14		
01/28/98		27.51	8.13	19.38			6,700	65	13	67	54	280/94 ¹²	
05/08/98		27.51	8.62	18.89			5,500	91	38	43	61	220/6212	
07/29/98		27.51	10.45	17.06			3,600	41	8.9	3.6	14	16/94 ¹²	
11/06/98		27.51	11.62	15.89			6,900	77	<5.0	14	17	290/110 ¹²	
02/09/99 ⁵		27.51	6.90	20.61			8,070	75.6	<10	<10	<10	397/144 ¹²	
												401/69.4 ¹²	
05/13/99		27.51	9.30	18.21			5,890	120	<5.0	12.5	26.6	260/145 ¹²	
09/07/99		27.51	10.94	16.57			5,820	41.2	<5.0	14.6	<5.0		
11/24/99		27.51	11.53	15.98			5,940	40.9	<10	10.8	<10	1201,12	

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	В	Ţ	E	Х	MtBE	TOG
DATE	(ft.)	(ft.)	(msl)	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(μg/L)	(µg/L)
MW-2 (cont)												
02/25/00	27.51	6.51	21.00			6,370	101	9.37	39.8	33.2	321/121 ¹²	
05/10/00	27.51	9.02	18.49			6,100 ⁸	110	13	27	31	560/120 ¹²	
07/31/00 ¹¹	27.51	10.33	17.18			3,000 ⁸	75	14	28	28	200/130 ¹²	
10/30/00 ¹¹	27.51	10.56	16.95			6,810 ¹⁰	162	<5.00	8.05	<15.0	372/140 ¹²	
02/05/0111	28.05	9.58	18.47			5,860	28.4	6.86	16.2	11.8	285/140 ¹²	
05/07/0111	28.05	9.20	18.85			4,700 ⁶	120	15	30	42	540/88 ¹²	
08/06/0111	28.05	10.74	17.31			3,700 ⁶	120	<20	28	33	490/110 ¹²	
11/12/01 ¹¹	28.05	11.45	16.60			7,000	29	<10	27	22	93/98 ¹²	
02/11/02 ¹¹	28.05	9.06	18.99			5,900	43	15	24	27	90/86 ¹²	
05/13/02 ¹¹	28.05	9.64	18.41			5,500	26	5.2	23	26	120/47 ¹²	
08/09/0211	28.05	10.29	17.76			5,700	26	3.7	26	50	100/6912	
11/07/02 ¹¹	28.05	11.27	16.78			5,900	33	4.4	23	21	<100/69 ¹²	
02/04/03 ¹¹	28.05	9.13	18.92			5,400	22	4.7	13	14	<50/55 ¹²	
05/05/03 ¹¹	28.05	8.38	19.67			4,500	23	4.7	12	15	<50/31 ¹²	
09/06/03 ^{11,14}	28.05	10.40	17.65			3,200	13	2	7	7	54	
11/14/03 ^{11,14}	28.05	10.62	17.43			4,000	11	2	7	6	55	
02/13/04 ^{14,15}	28.05	8.79	19.26			6,200	6	2	8	8	31	
05/13/04 ¹⁴	28.05	9.56	18.49			3,200	6	3	13	11	34	
08/17/04 ¹⁴	28.05	10.48	17.57			4,300	7	1	6	5	46	
11/10/04 ¹⁴	28.05	9.53	18.52			3,000	5	1	6	7	37	
02/08/05 ¹⁴	28.05	8.71	19.34			4,700	3	2	10	8	22	
06/03/05 ¹⁴	28.05	9.01	19.04			4,100	4	3	15	11	23	
08/05/05 ¹⁴	28.05	9.76	18.29			3,500	4	1	<0.5	8	23	
12/02/05 ¹⁴	28.05	9.64	18.41			2,900	4	2	3	3	24	
03/03/06 ¹⁴	28.05	8.04	20.01			3,800	5	6	4	5	9	
05/31/06 ¹⁴	28.05	9.01	19.04			4,600	2	1	3	3	8	
08/18/06 ¹⁴	28.05	9.91	18.14			4,300	2	1	11	7	14	
11/17/06 ¹⁴	28.05	9.95	18.10			4,600	2	0.7	7	4	14	
02/09/07 ¹⁴	28.05	9.10	18.95			3,600	1	0.6	3	3	9	
05/11/07 ¹⁴	28.05	9.12	18.93			3,600	2	1	5	5	8	
08/10/07 ¹⁴	28.05	10.20	17.85			3,600	1	1	7	4	9	
11/08/07 ¹⁴	28.05	10.35	17.70			3,600	2	0.7	5	2	7	
02/07/08 ¹⁴	28.05	7.92	20.13			5,000	1	1	5	3	5	
05/02/08 ¹⁴	28.05	9.49	18.56			3,300	1	0.9	3	2	4	
07/31/08 ¹⁴	28.05	10.35	17.70			3,000	2	0.6	2	1	5	
11/13/08 ¹⁴	28.05	10.81	17.24			3,800	2	0.5	2	0.8	4	
02/02/0914	28.05	9.97	18.08			3,500	2	0.6	2	1	5	
05/01/09 ¹⁴	28.05	9.70	18.35			3,900	2	1	4	3	4	
08/10/09 ¹⁴	28.05	10.38	17.67			3,100	2	0.8	2	1	4	

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	B	T 6(1)	E	X	MtBE	TOG
DATE	(ft.)	(ft.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-2 (cont)												
01/29/10 ¹⁴	28.05	7.98	20.07			3,200	1	0.8	2	1	5	
08/23/10 ¹⁴	28.05	10.03	18.02			3,500	1	0.6	1	0.7	3	
08/22/11114	28.05	9.73	18.32			3,700	1	0.6	1	0.9	3	
05/10/12 ¹⁴	28.05	8.95	19.10			2,600	0.8	0.8	1	1	2	
05/08/13 ¹⁴	28.05	9.66	18.39			2,800	0.9	0.5	0.5	0.7	2	
05/13/14 ¹⁴	28.05	9.41	18.64			2,400	0.8	<0.5	<0.5	<0.5	2	
05/14/15 ¹⁴	28.05	9.85	18.20			2,400	0.7	<0.5	<0.5	<0.5	1	
05/02/16 ¹⁴	28.05	9.01	19.04			3,000	0.5	<0.5	<0.5	<0.5	0.9	
MW-3												
02/16/93	28.50					3,500	<0.5	8.1	4.6	7.7		
03/26/93	28.50	7.18	21.32									
05/27/93	28.50	9.33	19.17			4,200	580	84	150	100		
08/18/93	28.50	12.00	16.50		1,400	910	12	3.7	6.2	3.8		<5,000
11/03/93	28.50	13.29	15.21			5,300	29	1.9	0.6	27		
02/10/94	28.50	9.63	18.87		<50	63	<0.5	0.7	<0.5	<0.5		
05/12/94 08/26/94	28.50 28.50	8.77 11.42	19.73 17.08		84	<50 2,100	<0.5 12	0.5 <0.5	<0.5 5.0	<0.5 0.5		
11/14/94	28.50	10.07	18.43			140	0.78	<0.5	<0.5	<0.5		
02/01/95	28.50	6.29	22.21		<50	<50	<0.5	<0.5	<0.5	<0.5		
05/12/95	28.50	8.07	20.43		540 ²	330	13	1.1	1.9	0.69		
08/22/95	28.50	9.95	18.55		550 ²	980	32	<1.0	<1.0	<1.0		
12/19/95	28.50	9.40	19.10		<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/31/96	28.50	5.05	23.45		<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/30/96	28.50	8.40	20.10		240 ²	320	2.4	<0.5	0.75	<0.5	7.8	
			18.70		470 ²	980	9.6	<0.5		2.2	7.6 54	
08/01/96	28.50	9.80			760 ²				0.98			
10/30/96	28.50	11.48	17.02		61 ²	2,000	14	<10	<10	<10	140	
02/07/97	28.50	8.60	19.90			200 ²	<0.5	<0.5	<0.5	<0.5	8.9	
05/07/97	28.50	9.01	19.49		550 ²	3,500	14	3.9	3.6	8.0	160	
07/22/97	28.50	11.12	17.38		800 ²	3,500	55	<10	<10	<10	150	
11/03/97	28.50	11.51	16.99		910 ²	4,100	140	<5.0	<5.0	<5.0	380	
01/28/98	28.50	7.34	21.16			1,100	24	<1.2	<1.2	2.8	33/6.112	
05/08/98	28.50	8.06	20.44		250 ²	990	3.6	7.7	0.7	2.2	37/7.5 ¹²	
07/29/98	28.50	10.25	18.25		290 ²	1,200	13	<0.5	<0.5	1.4	11/28 ¹²	
11/06/98	28.50	11.39	17.11		390 ²	2,600	5.3	<2.5	<2.5	3.0	91/41 ¹²	
02/09/99 ⁵	28.50	6.10	22.40		184 ²	406	<1.0	4.03	<1.0	<1.0	17.7/1.97 ¹²	
											43.5/21.2 ¹²	
05/13/99	28.50	9.12	19.38		 F00 ²	615	13.8	1.05	<0.5	<0.5		
09/07/99	28.50	10.73	17.77		528 ²	2,710	<5.0	<5.0	<5.0	<5.0	96.3/57.9 ¹²	

WELL ID/ DATE	TOC* (ff.)	DTW (ff.)	GWE (msl)	TPH-MO (μg/L)	TPH-DRO (μg/L)	TPH-GRO (μg/L)	Β (μg/L)	T (μg/L)	E (µg/L)	Χ (μg/L)	MtBE (μg/L)	ΤΟG (μg/L)
MW-3 (cont)												
11/24/99	28.50	11.13	17.37		1,070 ²	5,530	<5.0	<5.0	5.59	<5.0	66 ^{1,12}	
02/25/00	28.50	6.28	22.22			189	4.68	<0.5	<0.5	<0.5	11.9/<2.0 ¹²	
03/01/00	28.50	6.70	21.80		380 ²							
05/10/00	28.50	8.60	19.90		830 ⁷	1,600 ⁶	22	<10	<10	<10	100/51 12	
07/31/00 ¹¹	28.50	10.07	18.43		490 ⁷	2,200 ⁶	76	10	<5.0	13	230/5212	
10/30/00 ¹¹	28.50	10.53	17.97		580°	3,32010	<5.00	<5.00	<5.00	<15.0	147/64 ¹²	
02/05/01 ¹¹	29.04	9.26	19.78			3,960	<5.00	6.02	<5.00	<5.00	159/70 ¹²	
05/07/0111	29.04	8.75	20.29			2,800 ⁶	61	12	<10	20	230/4912	
05/10/0111	29.04	8.83	20.21		390 ¹³							
08/06/0111	29.04	10.45	18.59		870 ⁷	1,600 ⁶	39	14	1.3	5.6	130/43 ¹²	
11/12/01 ¹¹	29.04	11.22	17.82		1,400	3,100	3.6	23	2.3	5.6	40/4612	
02/11/02 ¹¹	29.04	8.38	20.66		700	4,000	10	<5.0	4.2	5.5	44/4212	
05/13/02 ¹¹	29.04	9.20	19.84		730	2,500	18	<5.0	<5.0	5.2	44/3212	
08/09/02 ¹¹	29.04	10.17	18.87		560	2,700	17	<5.0	<5.0	<10	45/33 ¹²	
11/07/02 ¹¹	29.04	11.13	17.91		660	2,600	24	<5.0	2.0	4.8	51/37 ¹²	
02/04/03 ¹¹	29.04	8.60	20.44		370	2,200	13	1.5	2.7	5.0	<50/24 ¹²	
05/05/03 ¹¹	29.04	7.82	21.22		580	2,100	14	1.8	2.0	3.9	<20/1912	
09/06/03 ^{11,14}	29.04	10.25	18.79		780	1,800	2	0.6	0.6	1	28	
11/14/03 ^{11,14}	29.04	10.52	18.52		860	2,000	1	0.6	0.6	0.9	30	
02/13/04 ^{14,15}	29.04	8.28	20.76		590	3,600	1	0.6	1	2	21	
05/13/04 ¹⁴	29.04	9.17	19.87		670	1,600	1	<0.5	0.5	1	20	
08/17/04 ¹⁴	29.04	10.25	18.79		900	2,500	1	<0.5	<0.5	0.7	25	
11/10/04 ¹⁴	29.04	9.23	19.81		780	1,500	1	0.6	0.5	1	27	
02/08/05 ¹⁴	29.04	8.12	20.92		530	2,500	1	0.6	2	3	11	
06/03/05 ¹⁴	29.04	8.57	20.47		600	1,700	1	<0.5	0.7	1	9	
08/05/05 ¹⁴	29.04	10.60	18.44		530 ¹⁶	980	0.6	<0.5	<0.5	0.8	9	
12/02/05 ¹⁴	29.04	9.58	19.46		1,400 ¹⁷	2,400	1	2	0.8	1	7	
03/03/06 ¹⁴	29.04	7.58	21.46		530	2,300	0.8	1	<0.5	1	4	
05/31/06 ¹⁴	29.04	8.53	20.51		480	2,700	0.6	<0.5	<0.5	0.8	4	
08/18/06 ¹⁴	29.04	9.71	19.33		410	2,700	<0.5	<0.5	<0.5	0.6	6	
11/17/06 ¹⁴	29.04	9.81	19.23		390	2,600	<0.5	<0.5	<0.5	1	4	
02/09/07 ¹⁴	29.04	8.88	20.16		640	2,100	<0.5	<0.5	<0.5	1	3	
05/11/07 ¹⁴	29.04	8.71	20.33		350	1,400	<0.5	<0.5	<0.5	2	2	
08/10/07 ¹⁴	29.04	9.98	19.06		340	1,300	<0.5	<0.5	<0.5	1	2	
11/08/07 ¹⁴	29.04	10.11	18.93		440	1,400	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/08 ¹⁴	29.04	7.28	21.76		320	2,100	<0.5	0.7	1	2	0.7	
05/02/08 ¹⁴	29.04	9.18	19.86		260	1,300	<0.5	<0.5	<0.5	<0.5	2	
07/31/08 ¹⁴	29.04	10.13	18.91		500	2,900	<0.5	<0.5	<0.5	<0.5	1	
11/13/08 ¹⁴	29.04	10.58	18.46		880	1,800	<0.5	<0.5	<0.5	<0.5	2	

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	B	T (:=//)	E	X	MtBE	TOG
DATE	(ft.)	(ft.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-3 (cont)					310 ¹⁹							
02/02/09 ¹⁴	29.04	9.58	19.46			2,000	<0.5	<0.5	<0.5	<0.5	2	
05/01/09 ¹⁴	29.04	9.40	19.64		51 ²⁰	1,500	<0.5	<0.5	<0.5	<0.5	2	
08/10/09 ¹⁴	29.04	10.21	18.83		470	1,300	<0.5	<0.5	<0.5	<0.5	3	
01/29/10 ¹⁴	29.04	7.39	21.65		420	2,600	<0.5	<0.5	2	1	1	
08/23/10 ¹⁴	29.04	9.70	19.34		410	2,000	< 0.5	<0.5	<0.5	<0.5	2	
08/22/11114	29.04	9.96	19.08	<41/<40 ²¹	500/250 ²¹	2,500	<0.5	<0.5	<0.5	<1	2	
05/10/12 ¹⁴	29.04	8.50	20.54		350/160 ²¹	1,300	<0.5	<0.5	<0.5	<0.5	1	
05/08/13 ¹⁴	29.04	9.40	19.64		460/140 ^{21,22}	1,700	<0.5	<0.5	<0.5	<0.5	2	
05/13/14 ¹⁴	29.04	9.03	20.01		200/140 ^{21,22}	1,200	<0.5	<0.5	<0.5	<0.5	1	
05/14/15 ¹⁴	29.04	9.53	19.51		260/120 ^{21,22}	1,800		<0.5	<0.5		1	
					160 ^{21,22}		<0.5			<0.5		
05/02/16 ¹⁴	29.04	8.55	20.49		160	2,000	<0.5	<0.5	<0.5	<0.5	0.8	
MW-4												
08/22/95	27.27	9.11	18.16			9,600	100	<10	<10	<10		
12/19/95	27.27	8.30	18.97			<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/31/96 04/30/96	27.27 27.27	5.60 7.00	21.67 20.27			<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<2.5 <2.5	
08/01/96	27.27	7.00 9.15	18.12			<50	<0.5	<0.5	<0.5	<0.5		
10/30/96	27.27	10.74	16.53			110	<0.5	<0.5	<0.5	<0.5	<2.5	
02/07/97	27.27	7.80	19.47			80	<0.5	<0.5	<0.5	<0.5	4.1	
05/07/97	27.27	5.85	21.42			<50	<0.5	<0.5	<0.5	< 0.5	<2.5	
07/22/97	27.27	10.05	17.22			150	<0.5	<0.5	<0.5	<0.5	<2.5	
11/03/97	27.27	10.72	16.55			52	0.9	<0.5	<0.5	<0.5	3	
01/28/98	27.27	6.51	20.76			<50	<0.5	<0.5	< 0.5	<0.5	<2.5/<2.0 ¹²	
05/08/98	27.27	7.02	20.25			56	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0 ¹²	
07/29/98	27.27	8.95	18.32			<50	0.9	<0.5	<0.5	<0.5	<2.5/<2.0 ¹²	
11/06/98	27.27	10.59	16.68			72	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0 ¹²	
02/09/99	27.27	5.86	21.41			<50	<0.5	<0.5	<0.5	<0.5	<2.0/<1.112	
05/13/99	27.27	7.95	19.32			<50	<0.5	<0.5	<0.5	<0.5	<5.0/<2.0 ¹²	
											<2.0/<1.0 ¹²	
09/07/99	27.27	9.48	17.79			70.2	<0.5	<0.5	<0.5	<0.5	<0.5 ¹²	
11/24/99	27.27 27.27	10.05 INACCESSIBL	17.22			227	<0.5	<0.5 	<0.5	<0.5	<0.5	
02/25/00											 <2.5/<2.0 ¹²	
03/01/00	27.27 27.27	6.17	21.10	 (ED OVER WELI	 I	<50 	<0.5 	<0.5 	<0.5 	<0.5 	\ 2.3/ \ 2.0	
05/10/00				CLD OVER WEL							<2.5/<2.0 ¹²	-
07/31/00	27.27	9.37	17.90			<50	<0.50	<0.50	<0.50	<0.50		
10/30/00	27.27	9.47	17.80	 (ED OVER WELL		54.0 ¹⁰	<0.500	<0.500	<0.500	<1.50	<2.50/<2.0 ¹²	
02/05/01	27.27			(ED OVER WELI							0 F1 -0 0 ¹²	
05/07/01	27.27	7.81	19.46			<50	<0.50	<0.50	<0.50	< 0.50	<2.5/<2.0 ¹²	

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	В (1)	T (1)	E (1)	X (1)	MtBE	TOG
DATE	(ft.)	(ft.)	(msl)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-4 (cont)												
08/06/01	27.27	9.78	17.49			<50	1.1	0.52	<0.50	1.1	6.0/<2.0 ¹²	
11/12/01	27.27	10.41	16.86			93	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ¹²	
02/11/02	27.27	7.64	19.63			<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ¹²	
05/13/02	27.27	8.32	18.95			54	<0.50	0.84	<0.50	<1.5	<2.5/<2 ¹²	
08/09/02	27.27	9.25	18.02			54	< 0.50	<0.50	<0.50	<1.5	<2.5/<2 ¹²	
11/07/02	27.27	10.42	16.85			<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 ¹²	
02/04/03	27.27	7.75	19.52			<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5 ¹²	
05/05/03	27.27	6.90	20.37			<50	<0.5	<0.5	<0.5	<1.5	<2.5/<0.5 ¹²	
09/06/03 ¹⁴	27.27	9.50	17.77			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/14/03 ¹⁴	27.27	9.80	17.47			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/13/04 ¹⁴	27.27	7.36	19.91			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/13/04 ¹⁴	27.27	8.28	18.99			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/17/04 ¹⁴	27.27	9.63	17.64			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/10/04 ¹⁴	27.27	8.46	18.81			52	< 0.5	<0.5	<0.5	<0.5	<0.5	
02/08/05 ¹⁴	27.27	7.20	20.07			<50	< 0.5	<0.5	<0.5	<0.5	<0.5	
06/03/05 ¹⁴	27.27	7.61	19.66			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/05/05 ¹⁴	27.27	9.44	17.83			<50	< 0.5	<0.5	<0.5	<0.5	<0.5	
12/02/05 ¹⁴	27.27	8.35	18.92			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/03/06 ¹⁴	27.27	6.45	20.82			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/31/06 ¹⁴	27.27	7.51	19.76			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/18/06 ¹⁴	27.27	8.42	18.85			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/17/06 ¹⁴	27.27	8.96	18.31			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/09/07 ¹⁴	27.27	7.73	19.54			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/11/07 ¹⁴	27.27	7.60	19.67			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/10/07 ¹⁴	27.27	9.01	18.26			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/08/07 ¹⁴	27.27	9.26	18.01			<50	<0.5	<0.5	<0.5	1	1	
02/07/08 ¹⁴	27.27	6.38	20.89			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/02/08 ¹⁴	27.27	8.12	19.15			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/31/08 ¹⁴	27.27	9.28	17.99			75	<0.5	<0.5	<0.5	<0.5	<0.5	
11/13/08 ¹⁴	27.27	9.93	17.34			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/02/0914	27.27	9.02	18.25			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/01/09 ¹⁴	27.27	8.29	18.98			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/10/09 ¹⁴	27.27	9.50	17.77			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
01/29/10 ¹⁴	27.27	6.57	20.70			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/23/10 ¹⁴	27.27	8.96	18.31			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/22/11 ¹⁴	27.27	8.85	18.42			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/10/12 ¹⁴	27.27	7.55	19.72			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
00/10/12	21.21	7.33	17./2			\ 50	\U. 5	\U. 5	~U. 3	\U. 5	\U. 5	

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	В	Ţ	E	Х	MtBE	TOG
DATE	(ft.)	(ft.)	(msl)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-4 (cont)												
05/13/14 ¹⁴	27.27	8.29	18.98			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/14/15 ¹⁴	27.27	8.81	18.46			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/02/16 ¹⁴	27.27	7.64	19.63			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
TRIP BLANK												
05/27/93						<50	<0.5	<0.5	<0.5	<1.5		
08/18/93					1,400	<50	<0.5	<0.5	<0.5	<1.5		<5,000
11/03/93						<50	<0.5	<0.5	<0.5	< 0.5		
02/10/94					<50	<50	<0.5	<0.5	<0.5	<0.5		
05/12/94					84	<50	<0.5	<0.5	<0.5	<0.5		
08/26/94						<50	<0.5	<0.5	<0.5	<0.5		
11/14/94						<50	<0.5	<0.5	<0.5	<0.5		
02/01/95						<50	<0.5	<0.5	<0.5	<0.5		
05/12/95						<50	<0.5	<0.5	<0.5	<0.5		
08/22/95						<50	<0.5	<0.5	<0.5	<0.5		
12/19/95						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/31/96						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/30/96						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
08/01/96						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
10/30/96						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
02/07/97						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
05/07/97						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
07/22/97						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
01/28/98						<50	<0.5	<0.5	<0.5	<0.5	<2.012	
05/08/98											<2.012	
07/29/98						<50	<0.5	<0.5	<0.5	<0.5	<2.012	
11/06/98						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
								<0.5			<2.0	
02/09/99						<50	<0.5		<0.5	<0.5		
05/13/99						<50	<0.5	<0.5	<0.5	<0.5	<5.0/<2.0 ¹²	
09/07/99						<50	<0.5	<0.5	<0.5	<0.5	<2.0	
11/24/99						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
02/25/00						<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/01/00						<50	<0.5	<0.5	<0.5	<0.5	<2.5	
05/10/00						<50	<0.50	<0.50	<0.50	< 0.50	<2.5	
07/31/00						<50	<0.50	<0.50	<0.50	<0.50	<2.5	
10/30/00						<50.0	<0.500	<0.500	<0.500	<1.50	<2.50	
02/05/01						<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	
05/07/01						<50	<0.50	< 0.50	< 0.50	< 0.50	<2.5	

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	В	Ţ	E	Х	MtBE	TOG
DATE	(ft.)	(ft.)	(msl)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
TRIP BLANK (cont)												
05/10/01						<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5	
08/06/01						<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5	
QA												
11/12/01						<50	<0.50	<0.50	<0.50	<1.5	<2.5	
02/11/02 05/13/02						<50 <50	<0.50 <0.50	<0.50 <0.50	<0.50 <0.50	<1.5 <1.5	<2.5 <2.5	
08/09/02						<50	<0.50	<0.50	<0.50	<1.5	<2.5	
11/07/02						<50	<0.50	<0.50	<0.50	<1.5	<2.5	
02/04/03						<50	< 0.50	< 0.50	< 0.50	<1.5	<2.5	
05/05/03						<50	<0.5	<0.5	<0.5	<1.5	<2.5	
09/06/03 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/14/03 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/13/04 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/13/04 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/17/04 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/10/04 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/08/05 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
06/03/05 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/05/05 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/02/05 ¹⁴												
03/03/06 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/31/06 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
08/18/06 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/17/06 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/09/07 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/11/07 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	< 0.5	
08/10/07 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/08/07 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/07/08 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/02/08 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
07/31/08 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
11/13/08 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
02/02/09 ¹⁴	==					<50		<0.5	<0.5	<0.5	<0.5	
05/01/09 ¹⁴							<0.5					
03/01/0 7 08/10/09 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/08/13 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/13/14 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/14/15 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
05/02/16 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	

Table 2

Groundwater Monitoring Data and Analytical Results

Former Chevron-branded Service Station 94612 3616 San Leandro Street Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to May 10, 2000 were compiled from reports prepared by Blaine Tech Services, Inc. Groundwater monitoring data and laboratory analytical results from May 10, 2000 to May 10, 2012 were provided by Gettler-Ryan Inc. Current groundwater monitoring data was provided by Gettler-Ryan Inc. Current laboratory analytical results were provided by Eurofins Lancaster Laboratories.

TOC = Top of Casing DRO = Diesel Range Organics TOG = Total Oil and Grease (ft.) = Feet GRO = Gasoline Range Organics (μ g/L) = Micrograms per liter GWE = Groundwater Elevation B = Benzene NP = No purge

 (msl) = Mean sea level
 T = Toluene
 -- Not Measured/Not Analyzed

 DTW = Depth to Water
 E = Ethylbenzene
 QA = Quality Assurance/Trip Blank

TPH = Total Petroleum Hydrocarbons X = Xylenes

MO = Motor Oil MtBE = Methyl tertiary-butyl ether

- * TOC elevations were re-surveyed on March 8, 2001, by Virgil Chavez Land Surveying. The benchmark for the survey was a City of Oakland benchmark, being a cut square top of curb at the centerline return at the northwest corner of East 14th and 37th Avenue, (Benchmark Elevation = 38.21 feet, NGVD 29).
- Lab could not get a good ion chromatogram match for MtBE. See laboratory report.
- ² Chromatogram pattern indicates an unidentified hydrocarbon.
- No value for MtBE could be determined; see lab report for analyses.
- Confirmation run.
- ORC was installed.
- Laboratory report indicates gasoline C6-C12.
- Laboratory report indicates unidentified hydrocarbons <C16.</p>
- ⁸ Laboratory report indicates assoline C6-C12 + unidentified hydrocarbons <C6.
- ⁹ Laboratory report indicates unidentified hydrocarbons >C16.
- Laboratory report indicates hydrocarbon pattern present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
- 11 ORC in well.
- 12 MtBE by EPA Method 8260.
- Laboratory report indicates unidentified hydrocarbons C9-C17.
- 14 BTEX and MtBE by EPA Method 8260.
- ¹⁵ ORC removed from well.
- Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It eludes in the TPH-DRO range earlier and later than #2 fuel.
- 17 Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It eludes in the TPH-DRO range earlier than #2 fuel.
- No purge; unable to access well with truck.
- Laboratory report indicates the LCS/LCSD recovery for the TPH-DRO analysis is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction so all results are reported from the original extract. Similar results were obtained in both extracts.
- Laboratory report indicates the surrogate data is outside the QC limits. Results from the reextraction are within the limits. The hold time had expired prior to the reextraction. Therefore, all results are reported from the original extract. The TPH-DRO result for the reextraction was 190 ug/L.
- Analyzed with silica gel cleanup.
- Laboratory report indicates the reverse surrogate, capric acid, is present at <1%.

Table 3 Groundwater Analytical Results - Oxygenate Compounds

WELL ID	DATE	ETHANOL (μg/L)	TBA (μg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)
VH-1	02/05/01	<500	<50	<2.0	<2.0	<2.0
MW-2	02/05/01	<500	<50	<2.0	<2.0	<2.0
MW-3	02/05/01 08/22/11	<500 <50	<50 <5	<2.0 <0.5	<2.0 <0.5	<2.0 <0.5

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron-branded Service Station 94612 3616 San Leandro Street Oakland, California

EXPLANATIONS:

TBA = Tertiary-Butyl Alcohol
DIPE = Di-Isopropyl Ether
EtBE = Ethyl Tertiary-Butyl Ether
TAME = Tertiary-Amyl Methyl Ether
(µg/L) = Micrograms per liter
-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

Table 4 Groundwater Analytical Results - Metals and PPL Volatiles

Former Chevron-branded Service Station 94612 3616 San Leandro Street Oakland, California

WELL ID/ DATE	Cadmium (µg/L)	Chromium (µg/L)	Lead (µg/L)	Nickel (µg/L)	Zinc (µg/L)	n- Butylbenzene (µg/L)	sec- Butylbenzene (µg/L)	tert- Butylbenzene (µg/L)	Naphthalene (µg/L)
MW-3 08/22/11	2.6	173	8.3	308	123	3	3	4	2

EXPLANATIONS:

(µg/L) = Micrograms per liter

PPL = priority pollutant list

Only metals and PPL volatiles with historically detected concentrations are shown.

ANALYTICAL METHODS:

PPL volatiles by EPA Method 8260B Wear metals by EPA Method 6010B

Table 5 Groundwater Analytical Results - PCBs

Former Chevron-branded Service Station 94612 3616 San Leandro Street Oakland, California

WELL ID/	PCB- 1016	PCB- 1221	PCB- 1232	PCB- 1242	PCB- 1248	PCB- 1254	PCB- 1260
DATE	(μg/L)						
MW-3 08/22/11	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.15

EXPLANATIONS:

ANALYTICAL METHODS:

(µg/L) = Micrograms per liter PCBs = Polychlorinated Biphenyls PCBs by EPA Method 8082

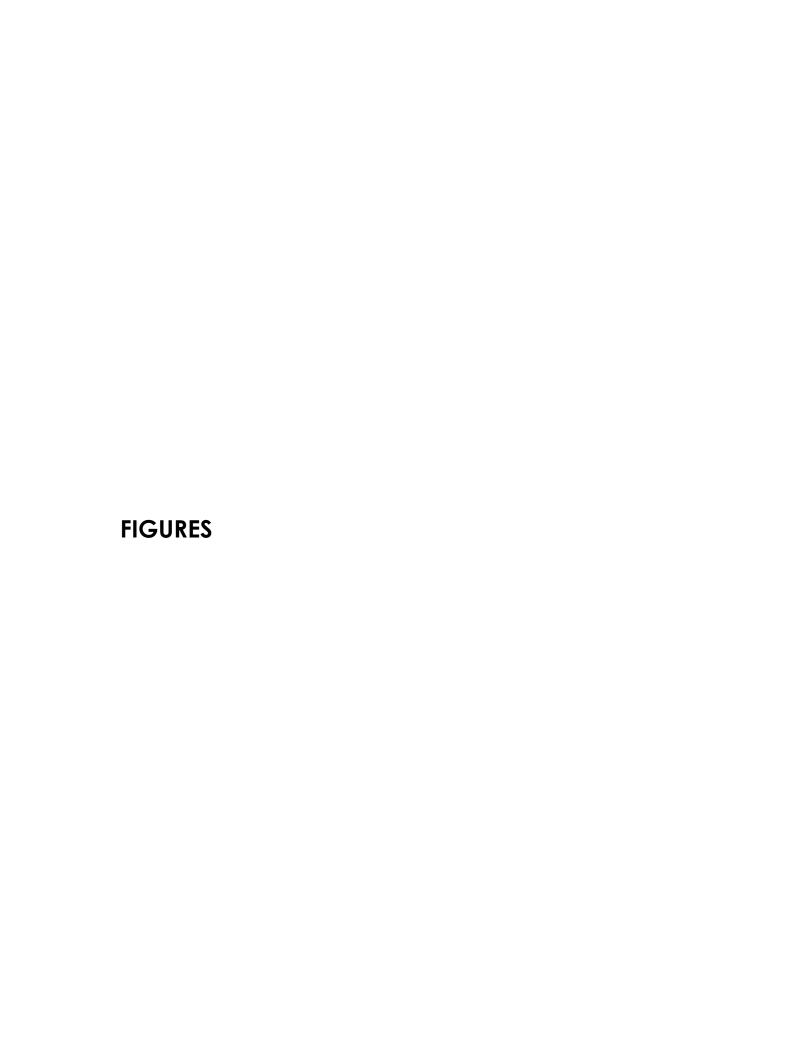
Table 6 Dissolved Oxygen Levels

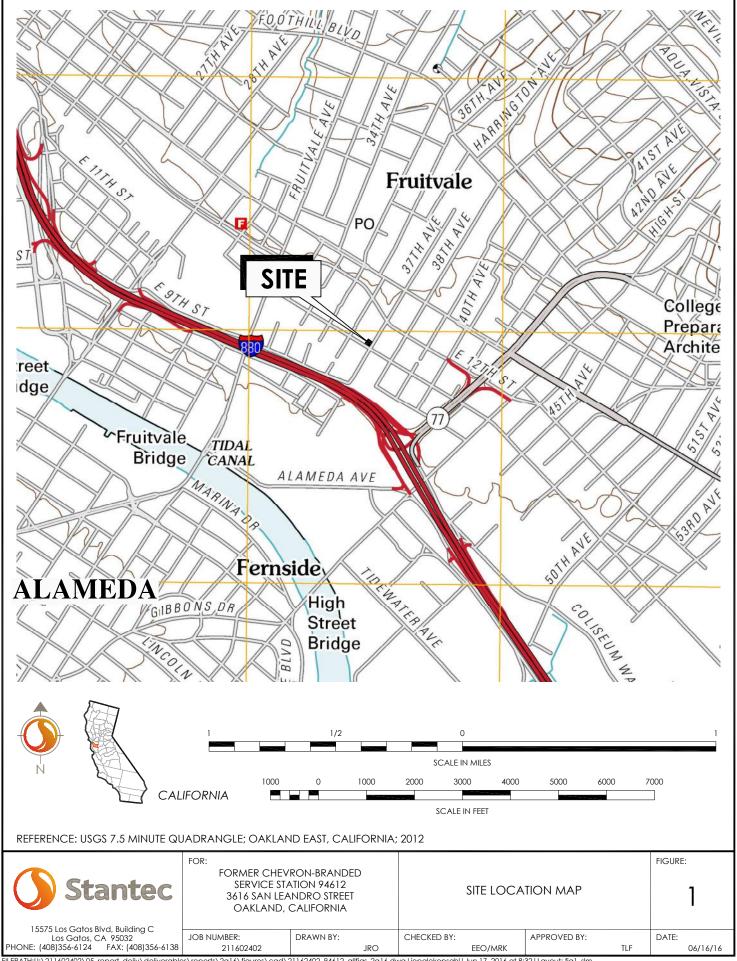
Former Chevron-branded Service Station 94612 3616 San Leandro Street Oakland, California

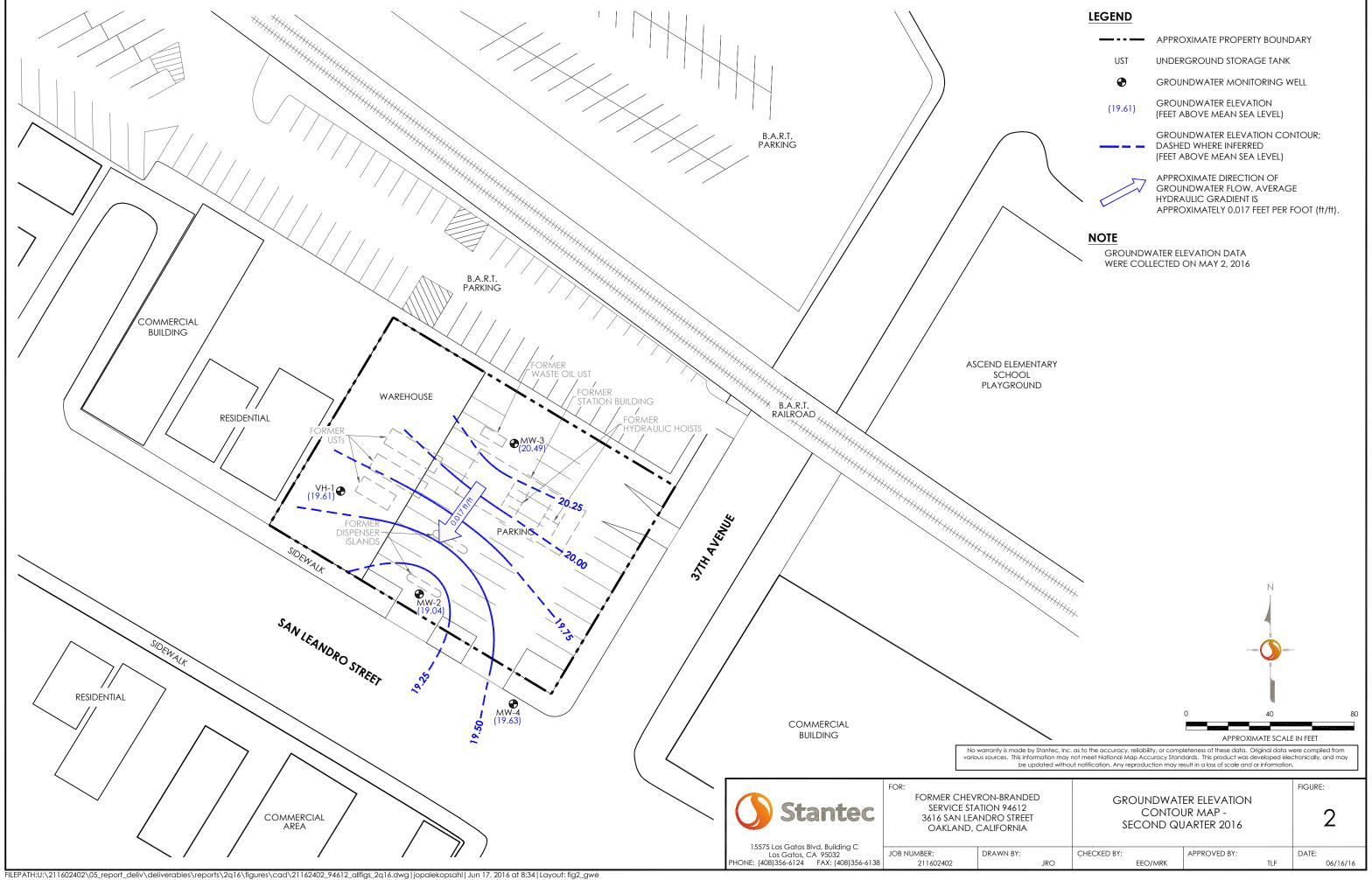
WELL ID	DATE	PRE-PURGE D.O.
	DAIL	(mg/L)
VH-1	05/10/00	0.90
	07/31/00	1.25
	10/30/00	1.97
	05/07/01	1.10
	08/06/01	1.40
	11/12/01	0.90
	02/11/02	1.10
	05/13/02	0.70
MW-2	05/10/00	0.57
	07/31/00	1.26
	10/30/00	1.25
	05/07/01	0.90
	08/06/01	1.10
	11/12/01	0.80
	02/11/02	0.60
	05/13/02	0.80
MW-3	05/10/00	1.56
	07/31/00	1.46
	10/30/00	1.18
	05/07/01	0.70
	08/06/01	0.90
	11/12/01	0.50
	02/11/02	0.80
	05/13/02	1.80
MW-4	07/31/00	0.64
14/41-4	10/30/00	0.64
	05/07/01	0.50
	08/06/01	0.70
	11/12/01	1.00
	02/11/02	1.00
	05/13/02	2.90
	33, 13, 32	2.,, 0

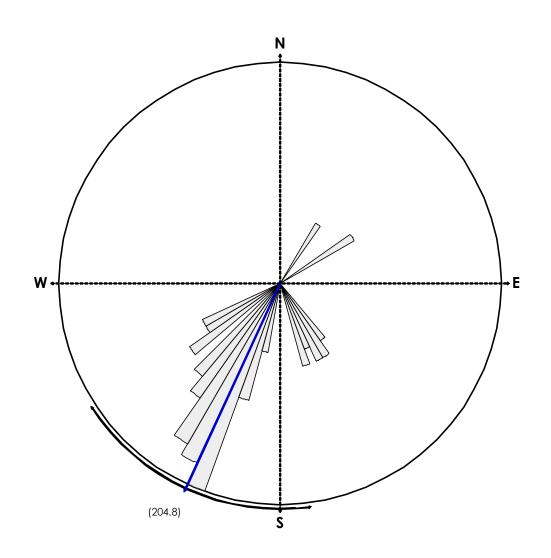
EXPLANATIONS:

D.O. = Dissolved Oxygen (mg/L) = Milligrams per liter -- = Not Measured









EQUAL AREA PLOT

Number of Points 64

Class Size 5

Vector Mean 204.81

Vector Magnitude 53.63

Consistency Ratio 0.84

NOTE: ROSE DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING FIRST QUARTER 1993.

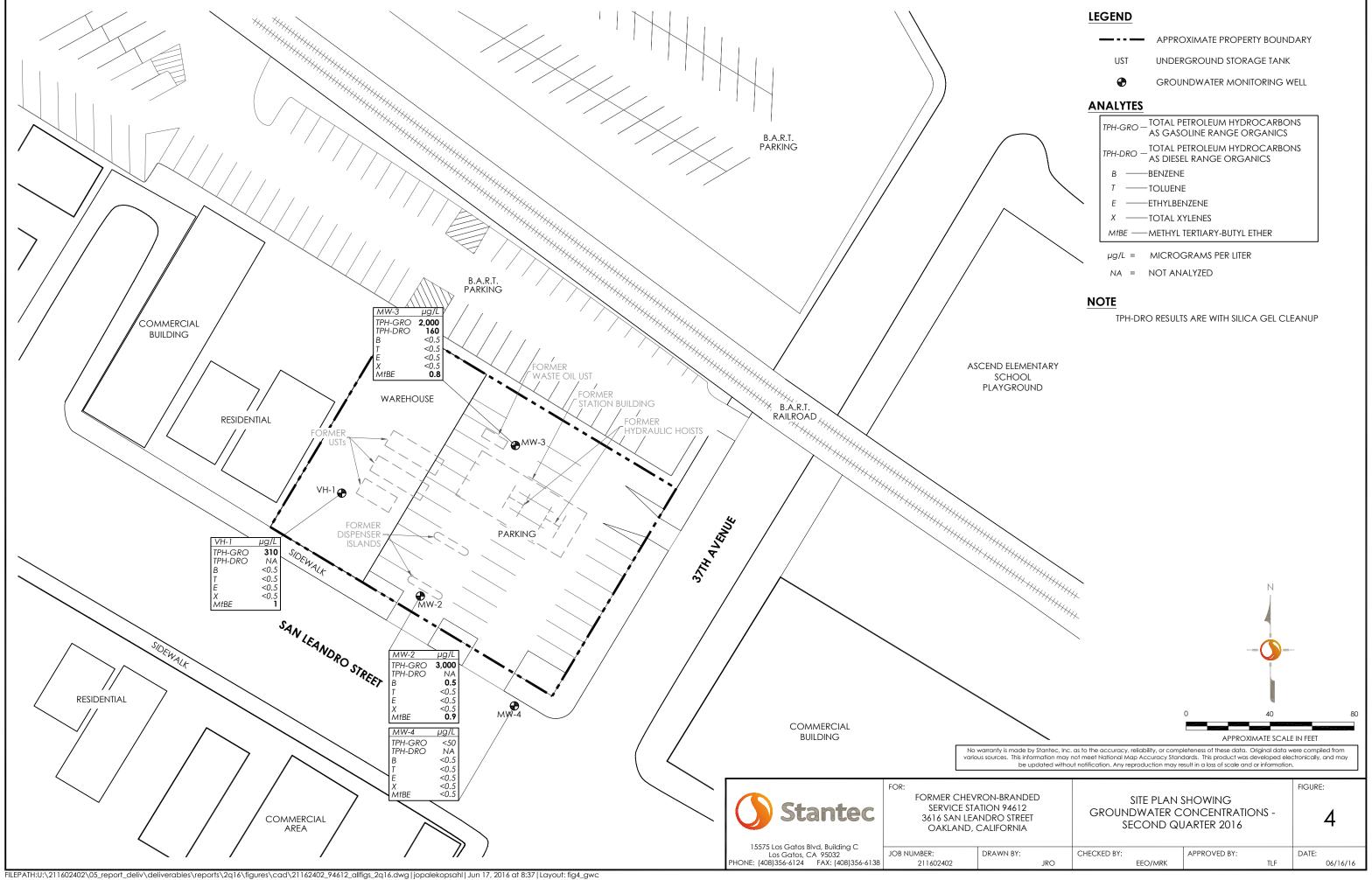
15575 Los Gatos Blvd, Building C Los Gatos, CA 95032 PHONE: (408)356-6124 FAX: (408)356-6138 FORMER CHEVRON-BRANDED SERVICE STATION 94612 3616 SAN LEANDRO STREET OAKLAND, CALIFORNIA

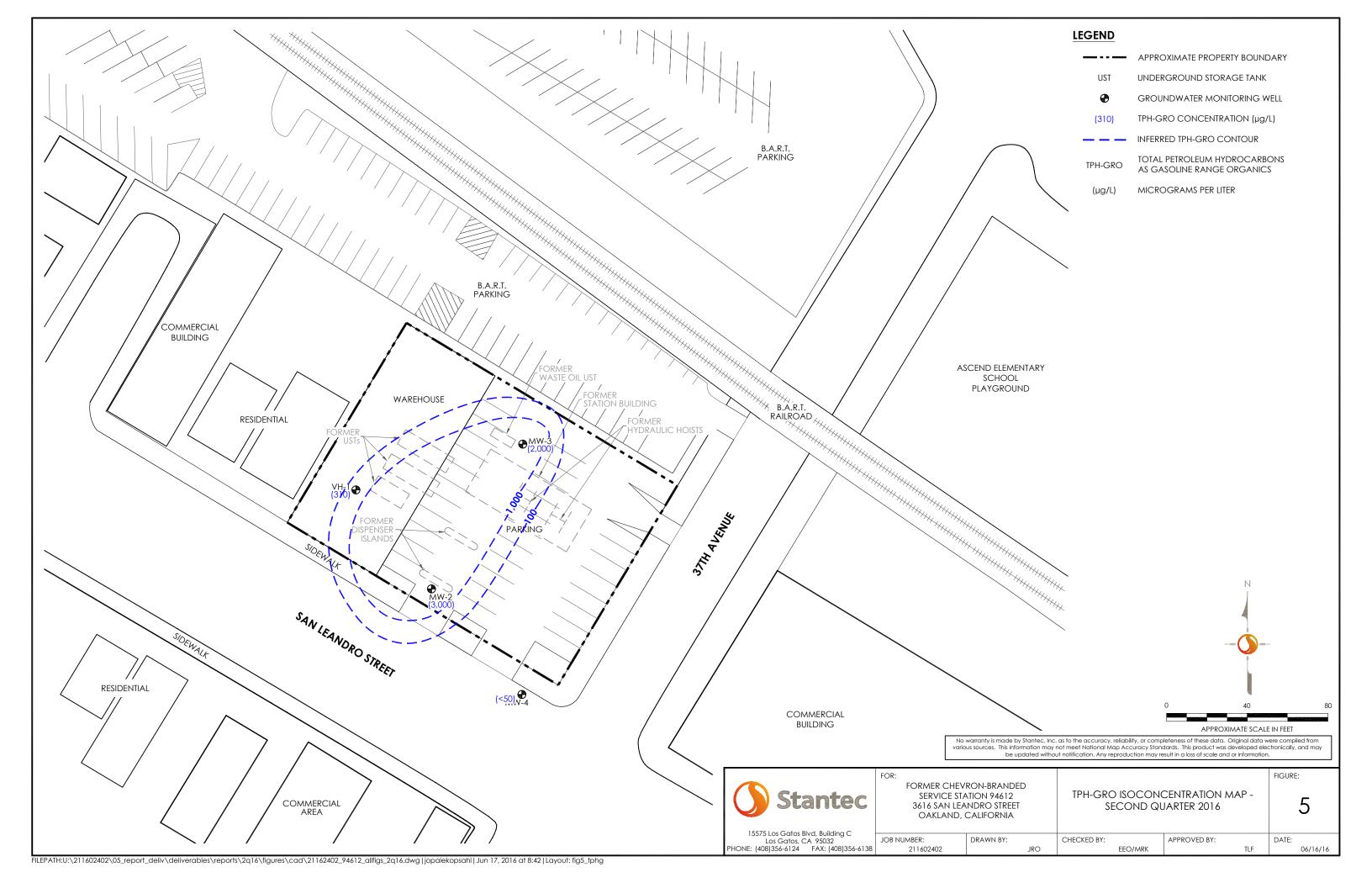
FOR:

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM -SECOND QUARTER 2016 FIGURE:

JOB NUMBER: DRAWN BY: CHECKED BY: 211602402 JRO EEO/MRK

APPROVED BY:





ATTACHMENT A
Gettler-Ryan Inc. Field Data Sheets and Standard
Operating Procedures – Second Quarter 2016

50.0

TRANSMITTAL

May 12, 2016 G-R #386473

TO:

Mr. Travis Flora

Stantec

15575 Los Gatos Boulevard

Los Gatos, CA 95032

FROM:

Deanna L. Harding

Project Coordinator

Gettler-Ryan Inc.

6805 Sierra Court, Suite G

Dublin, California 94568

RE: Former Chevron Service Station

#9-4612

3616 San Leandro Street

Oakland, California

RO 0000233

WE HAVE ENCLOSED THE FOLLOWING:

COPIES DESCRIPTION

VIA PDF

Groundwater Monitoring and Sampling Data Package
Annual Event of May 2, 2016

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced data for your use.

Please provide us the updated historical data prior to the next monitoring and sampling event for our field use.

Please feel free to contact me if you have any comments/questions.

trans/9-4612

				WE	ELL CO	NDITIC	N STAT	'US SI	HEET		
Client/ Facility #:	Chevror	n #9-4612					Job#:	386473			
Site Address:	3616 Sa	n Leandro	Street			-	Event Date:		-2-16		
City:	Oakland	l, CA				- -	Sampler:		AW		_
WELL ID	Vault Frame Condition	Gasket/ O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retaped	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Boits	Pictures Taken Y/N
MW-2	OK		>	25	OK		-3	M	N	Morrison / 8"/2	N
mw-3	OF			52	OK			1	(J	1
MVY	OK						>			BM10/8"/2	
VHI	ok	NA		>	0k		->	V	V	10×8" BOX	
											4
					<u> </u>						
											57

comments com	

STANDARD OPERATING PROCEDURE -GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Seaport Environmental located in Redwood City, California.



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Cnevron #9-4612		Job Number:	386473	
Site Address:	3616 San Leandre	o Street	Event Date:	5/2/16	(inclusive)
City:	Oakland, CA		Sampler:	AW	
Well ID	VH-I		Date Monitored:	5-2-16	
Well Diameter	2 / 4) in.	Vol	ume 3/4"= 0.	02 1"= 0.04 2"= 0.17 3"	= 0.38
Total Depth	28.97 ft.	Fac	etor (VF) 4"= 0.		= 5.80
Depth to Water	20.67 xvF	Check if water colun		ft. Estimated Purge Volume:	- and
Depth to Water	w/ 80% Recharge [(Heigh				
Duran Faulament		O-malla - Fautawa		Time Started: Time Completed:	(2400 hrs)
Purge Equipment:		Sampling Equipment		Depth to Product:	
Disposable Bailer Stainless Steel Baile	<u> </u>	Disposable Bailer Pressure Bailer		Depth to Water:	ft
Stack Pump		Metal Filters		Hydrocarbon Thickness:	
Peristaltic Pump		Peristaltic Pump		Visual Confirmation/Descr	iption:
QED Bladder Pump		QED Bladder Pump		Skimmer / Absorbant Sock	
Other:	/	Other:		Amt Removed from Skimn	
				Amt Removed from Well:	
				Water Removed:	Itr
Start Time (purge	e):	Weather Co	nditions:	Cloudy	
Sample Time/Da	ate: 0835 / 5-2-	16 Water Color	:_Clear	Odor: Y	
Approx. Flow Ra		Sediment D		Clear	
Did well de-wate		s, Time:V		_ gal. DTW @ Sampling:	8.30
Time (2400 hr.)	Volume (gal.) pH	Conductivity	Temperature (D.O. ORP (mg/L) (mV)	
	<u>/ 7.3</u>		18.6		
		LABORATORY I	NEORMATION		
SAMPLE ID	(#) CONTAINER REF	RIG. PRESERV. TYPE	LABORATORY	ANALYS	
VH-	6 x voa vial YE		LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8	260)
	x 500ml ambers YE	S NP	LANCASTER	TPH-DRO w/sgc COLUMN	
	12				
COMMENTS:	Well Inaccessib	le va to	uck. No	purge sample.	taken
				T. T.	
	<u>-</u>				
Add/Replaced Ga	isket: Add/Re	eplaced Bolt:	Add/Replaced Loc	k: Add/Replaced F	Plug:



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #9-461:	2	Job Number:	386473	
Site Address:	3616 San Leand	ro Street	Event Date:	5-2-16	(inclusive)
City:	Oakland, CA		Sampler:	Bu	(,
Well ID Well Diameter Total Depth Depth to Water	MW-2 (2) 4 in. [9,45 ft. 9,0] ft. [0,44 xVF w/ 80% Recharge [(Height	Vol Fac	Date Monitored: ume	S-7-16 1"= 0.04 2"= 0.17 66 5"= 1.02 6"= 1.50 1ft. Estimated Purge Volume: Time Started: Time Completed: Depth to Product: Depth to Water: Hydrocarbon Thickne Visual Confirmation/D Skimmer / Absorbant Amt Removed from S Amt Removed from V	
Start Time (purge Sample Time/Da Approx. Flow Ra	ate: 0655 / 5-7 ate:gpm	Sediment D	: <u>Clear</u> escription: _	Clear	ishf
Time (2400 hr.) 0630 0640	Volume (gal.) pi	Conductivity (Temperature (Ø / F) 17-9 180 18-2		rg:
SAMPLE ID	(#) CONTAINER RE	LABORATORY I FRIG. PRESERV. TYPE		T	LYSES
MW-7_		ES HCL	LANCASTER	TPH-GRO(8015)/BTEX+MT	
	x 500ml ambers	ES NP	LANCASTER	TPH-DRO w/sgc COLUMN	
COMMENTS:					
Add/Replaced Ga	sket: Add/F	Replaced Bolt:	Add/Replaced Loc	k: Add/Replac	ced Plua:



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #9-4	4612		Job Number:	386473	
Site Address:	3616 San Lea	andro St	reet	Event Date:	5-2-46	(inclusive)
City:	Oakland, CA			Sampler:	AW	,
Well ID	MW-3		D	ate Monitored:	5-2-16	
Well Diameter	(2)/ 4 in.	-	Volum	ne 3/4"= 0.		3"= 0.38
Total Depth	17.96 ft.	-		r (VF) 4"= 0.		
Depth to Water	8.55 ft.	xVF C	heck if water column		ft. Estimated Purge Volume:	5.0 gal.
Depth to Water	w/ 80% Recharge	[(Height of W	/ater Column x 0.20) +		Time Started:	(2400 hrs)
Purge Equipment:		S	ampling Equipment:		Time Completed:	
Disposable Bailer		D	isposable Bailer			ft
Stainless Steel Baile	er		ressure Bailer			ft ness: ft
Stack Pump			etal Filters		Visual Confirmation	
Peristaltic Pump QED Bladder Pump			eristaltic Pump ED Bladder Pump			
Other:			ther:		Skimmer / Absorba	,
						Skimmer: Itr Well: Itr
					Water Removed:	
Start Time (purg	e): 0705		Weather Con	ditions:	Down	
	ate: 0735 /	C-2-16	Water Color:	_	Odor: 1 N	Slant
Approx. Flow Ra		gpm.	Sediment Des		Clea	
Did well de-wate		If yes, Tin			_ gal. DTW @ Sampl	
Time (2400 hr.)	Volume (gal.)	pН	Conductivity (AS) mS umhos/cm)	Temperature	D.O.	ORP (mV)
0710	1.5	7.64	478	17.9		
0715	3.0	7.60	499	18-2		<u>. </u>
0720	6.0	7.57	514	18-3		
CAMPIE	L (#) CONTAINED		ABORATORY IN			
SAMPLE ID	(#) CONTAINER 6 x voa vial	REFRIG. YES	PRESERV. TYPE HCL	LABORATORY LANCASTER	TPH-GRO(8015)/BTEX+M	TRE(9260)
	2 x 500ml ambers	YES	NP NP	LANCASTER	TPH-DRO w/sgc COLUMN	

COMMENTS:						
- J						
	· · · · · · · · · · · · · · · · · · ·					

Add/Replaced Ga	asket:	Add/Replace	d Bolt:	Add/Replaced Loc	k: Add/Rep	aced Plug:



WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#:	Chevron #9-4	1612		Job Number:	386473		
Site Address:	3616 San Lea	andro St	reet	Event Date:	5/2/16		(inclusive)
City:	Oakland, CA			Sampler:	AW		•
Well ID	Mw-4		D	ate Monitored:	5-2-16)	
Well Diameter	②/4 in.		Volum	ne 3/4"= 0.		= 0.17 3"= 0.3	
Total Depth	17-85 ft.			r (VF) 4"= 0.	_	= 1.50 12"= 5.8	- 1
Depth to Water		xVF	heck if water column	x3 case volume =	Estimated Purge Vol	ume: 5.5	gal.
Depth to Water v	w/ 80% Recharge	(Height of V	/ater Column x 0.20) +	DTW]: <u> 4.68</u>	Time Started		
Purge Equipment:		s	ampiing Equipment:			ted:	
Disposable Bailer		D	isposable Bailer			luct:	
Stainless Steel Baile	г	Р	ressure Bailer			er:	
Stack Pump		M	letal Filters			Thickness: nation/Description	
Peristaltic Pump	-		eristaltic Pump		Violati Commi	nation becomption	1.
QED Bladder Pump			ED Bladder Pump		Skimmer / Ab	sorbant Sock (cir	cle one)
Other:		0	ther:			d from Skimmer:_	
						d from Well:	
					vvater Remov	/ed:	ltr
Start Time (purge	0745		Weather Con-	ditions:	Clay	.	
	te: 0815 / S	5-2-16	Water Color:	Clear	Odor: Y /	/	
Approx. Flow Ra		gpm.	Sediment Des		Gew		
Did well de-water			ne: Vol				19
Time (2400 hr.)	Volume (gal.)	рН	Conductivity (18/ mS µmhos/cm)	Temperature	D.O. (mg/L)	ORP (mV)	
0750		7-61	384	_17-8			
0755		7.64	399	17.8			
<u> </u>	<u> </u>	7.66	420	180			
SAMPLE ID	(#) CONTAINER	REFRIG.	LABORATORY IN PRESERV. TYPE	FORMATION LABORATORY	T	ANALYSES	
MW-4	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BT		
	x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc CO		

COMMENTS:							
							
<u></u>							
Add/Replaced Gas	sket:	Add/Replace	d Bolt:	Add/Replaced Loc	k: Ad	d/Replaced Plug:	

Chevron California Region Analysis Request/Chain of Custody

seurofins 5 pc Lancas Labora			Ac	cct.#_				G	Group) #				San	mple i	es use #_ circled nu							_	
1) Client	Informatio					4)	Matr	rix			5)			Ar	nalys	ses F	Requ	uest	ed	1		3 8	SCR #:	
Facility 3:#9-4612-OML G-R#3864 Site 86465 SAN LEANDRO STRE Cherry PM STANTECTF	473 Globa ET, OAKL		A	33		ut -							☐ dnui	N N									Results in Dry Wei	needed
Conglight Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 9456				456	Sediment	Ground	Surface		iners	8260 🖄	8260	TPH-DRO 8015 without Silica Gel Cleanup	Gel Cleanup									Must meet lowest limits possible for a compounds	8260	
Consultant Project Marding, deanna	@grinc.ca	om					1			Conta	8021	8015 🖾	out Silice	Silica G			Method	Method					8021 MTBE Confir Confirm highest hir Confirm all hits by	it by 8260
Consultant Phone # 7444 x180						-	Potable	NPDES	Air	per of	1	801	15 witho	15 with 9		Oxygenates							Run oxy's	on highest hit
Sampler Alex Work	1 0211	1 00	£ = .4	3	Composite		1			Total Number of Containers	BTEX + MTBE) SF0	JRO 80	TPH-DRO 8015 with Silica	8260 Full Scan	ő	Lead	Dissolved Lead						
2 Sample Identification	Soil Depth		lected Time	Grab	Go	Soil	Water		ō	Tota	BTEX	TPH-GRO	TPH-[TPH-[8260		Total Lead	Dissol				6) Remar	'ks
QA VH-1 MW-2 MW-3 MW-4		5-2-16	0635 0635 0655 0.735 0815	XXXXX XXXXX	quisheo		× × × × × × × × × × × × × × × × × × ×			10686 1086	Date			Time				ved by					TPH-DRO WIT GEL REQUES GRAM COI CLEAN-UP CAPRIC ACID I SURROG	TH SILICA STING 10 LUMN WITH REVERSE SATE
7 Turnaround Time Requested Standard 5 day 72 hour 48 hou		4 day	OF/EDD	Relinq	quished	ed by		2		102225-02	S- Date	-2-1	6	l	945	5	Receiv	ved by	Sa	ley	M		OZMAY16	[J
Data Package (circle if required) Type I - Full	ŀ	D (circle if re			•	•	y Comm		ial Car edEx			Ot	her _	,	,		Receiv	ved by					Date	Time
Type VI (Raw Data)	Othe	er:			T	emp	eratur	re Ur	pon	Rec	eipt				°C		Cı	ustoc	dy Seal	s Int	act?		Yes	No

ATTACHMENT B
Certified Laboratory Analysis Reports and
Chain-of-Custody Documents



Analysis Report

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

ANALYTICAL RESULTS

Prepared by:

Prepared for:

Eurofins Lancaster Laboratories Environmental 2425 New Holland Pike Lancaster, PA 17601 Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

Report Date: May 20, 2016

Project: 94612

Submittal Date: 05/03/2016 Group Number: 1656412 PO Number: 0015188594 Release Number: CMACLEOD State of Sample Origin: CA

	Lancaster Labs
Client Sample Description	<u>(LL) #</u>
QA-T-160502 NA Water	8360873
VH-1-W-160502 Grab Groundwater	8360874
MW-2-W-160502 Grab Groundwater	8360875
MW-3-W-160502 Grab Groundwater	8360876
MW-4-W-160502 Grab Groundwater	8360877

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

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/.

Electronic Copy To	Stantec International	Attn: Travis Flora
Electronic Copy To	Stantec	Attn: Marisa Kaffenberger
Electronic Copy To	Stantec	Attn: Erin O'Malley
Electronic Copy To	Stantec	Attn: Laura Viesselman
Electronic Copy To	Gettler-Rvan Inc.	Attn: Gettler Ryan

Analysis Report

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Respectfully Submitted,

Amek Carter Specialist

(717) 556-7252



Analysis Report

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

Sample Description: QA-T-160502 NA Water

QA-T-160502 NA Water LL Sample # WW 8360873 Facility# 94612 Job# 386473 GRD LL Group # 1656412 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 05/02/2016 Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/03/2016 09:30 Reported: 05/20/2016 15:36

SLOQA

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Vol	latiles SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z161251AA	05/04/2016 19	9:38	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z161251AA	05/04/2016 19	9:38	Hu Yang	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	16126A20A	05/05/2016 13	3:49	Brett W Kenyon	1
	C6-C12							
01146	GC VOA Water Prep	SW-846 5030B	1	16126A20A	05/05/2016 13	3:49	Brett W Kenyon	1



Analysis Report

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

Sample Description: VH-1-W-160502 Grab Groundwater

LL Sample # WW 8360874 LL Group # 1656412 Facility# 94612 Job# 386473 GRD 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 05/02/2016 08:35 by AW Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/03/2016 09:30 Reported: 05/20/2016 15:36

SLOV1

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-	-846 8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl E	ther 1634-04-4	1	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Vol	latiles SW-	-846 8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-	C12 n.a.	310	50	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z161251AA	05/04/2016 21:38	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z161251AA	05/04/2016 21:38	Hu Yang	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	16126A20A	05/05/2016 16:08	Brett W Kenyon	1
	C6-C12						
01146	GC VOA Water Prep	SW-846 5030B	1	16126A20A	05/05/2016 16:08	Brett W Kenyon	1



Analysis Report

LL Sample # WW 8360875

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Sample Description: MW-2-W-160502 Grab Groundwater

Facility# 94612 Job# 386473 GRD LL Group # 1656412 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 05/02/2016 06:55 by AW Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/03/2016 09:30 Reported: 05/20/2016 15:36

SLOM2

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles SV	W-846 8	3260B	ug/l	ug/l	
10945	Benzene		71-43-2	0.5	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl	Ether	1634-04-4	0.9	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vol	latiles SV	W-846 8	015B	ug/l	ug/l	
01728	TPH-GRO N. CA water C6	-C12	n.a.	3,000	50	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z161261AA	05/05/2016 20:	:37	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z161261AA	05/05/2016 20:	:37	Hu Yang	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	16127A20A	05/10/2016 05:	:21	Jeremy C Giffin	1
	C6-C12							
01146	GC VOA Water Prep	SW-846 5030B	1	16127A20A	05/10/2016 05:	:21	Jeremy C Giffin	1



Analysis Report

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

Sample Description: MW-3-W-160502 Grab Groundwater

LL Sample # WW 8360876 Facility# 94612 Job# 386473 GRD LL Group # 1656412 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 05/02/2016 07:35 by AW Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/03/2016 09:30 Reported: 05/20/2016 15:36

SLOM3

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles	SW-846	8260B	ug/l	ug/l	
10945	Benzene		71-43-2	N.D.	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Methyl Tertiary But	yl Ether	1634-04-4	0.8	0.5	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Vo	latiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	2,000	50	1
GC Pet	troleum	SW-846	8015B	ug/l	ug/l	
Hydro 06610	Carbons w/Si TPH-DRO CA C10-C28 The reverse surroga	,		160 c at <1%.	50	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z161251AA	05/04/2016	22:02	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z161251AA	05/04/2016	22:02	Hu Yang	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	16126A20A	05/05/2016	17:04	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	16126A20A	05/05/2016	17:04	Brett W Kenyon	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	161260024A	05/10/2016	11:12	Christine E Dolman	. 1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	161260024A	05/06/2016	08:30	Kayla Yuditsky	1



Analysis Report

LL Sample # WW 8360877

10906

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Sample Description: MW-4-W-160502 Grab Groundwater

LL Group # 1656412 Facility# 94612 Job# 386473 GRD 3616 San Leandro-Oakland T0600100333 Account

Project Name: 94612

Collected: 05/02/2016 08:15 by AW Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/03/2016 09:30 Reported: 05/20/2016 15:36

SLOM4

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-846	8260B	ug/l	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	N.D.	0.5	1
10945	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Vol	latiles SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

Sample Comments

CA ELAP Lab Certification No. 2792

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	Z161251AA	05/04/2016 22:26	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z161251AA	05/04/2016 22:26	Hu Yang	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	16126A20A	05/05/2016 17:31	Brett W Kenyon	1
	C6-C12						
01146	GC VOA Water Prep	SW-846 5030B	1	16126A20A	05/05/2016 17:31	Brett W Kenyon	1

Analysis Report

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Quality Control Summary

Client Name: Chevron Group Number: 1656412

Reported: 05/20/2016 15:36

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: Z161251AA	Sample number(s):	8360873-8360874,8360876-8360877
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Methyl Tertiary Butyl Ether	N.D.	0.5
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
Batch number: Z161261AA	Sample number(s):	8360875
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Methyl Tertiary Butyl Ether	N.D.	0.5
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
Batch number: 16126A20A TPH-GRO N. CA water C6-C12	<pre>Sample number(s): N.D.</pre>	8360873-8360874,8360876-8360877 50
Batch number: 16127A20A TPH-GRO N. CA water C6-C12	<pre>Sample number(s): N.D.</pre>	8360875 50
Batch number: 161260024A TPH-DRO CA C10-C28 w/ Si Gel	<pre>Sample number(s): N.D.</pre>	8360876 50

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Z161251AA	Sample number	r(s): 8360	873-8360874,836	60876-8360	877				
Benzene	20	19.35			97		78-120		
Ethylbenzene	20	18.81			94		78-120		
Methyl Tertiary Butyl Ether	20	19.4			97		75-120		
Toluene	20	19.34			97		80-120		
Xylene (Total)	60	59.28			99		80-120		
Batch number: Z161261AA	Sample number	r(s): 8360	875						
Benzene	20	19.29			96		78-120		
Ethylbenzene	20	18.74			94		78-120		
Methyl Tertiary Butyl Ether	20	19.56			98		75-120		
Toluene	20	19.74			99		80-120		
Xylene (Total)	60	58.7			98		80-120		

^{*-} Outside of specification

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.

Analysis Report

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Quality Control Summary

Client Name: Chevron Group Number: 1656412

Reported: 05/20/2016 15:36

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 16126A20A	Sample numbe	r(s): 83608	373-8360874,83	60876-8360	877				
TPH-GRO N. CA water C6-C12	1100	1129.61	1100	1123.76	103	102	77-120	1	30
Batch number: 16127A20A	Sample numbe	r(s): 83608	375						
TPH-GRO N. CA water C6-C12	1100	1123.5	1100	1122.43	102	102	77-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 161260024A	Sample numbe	r(s): 83608	376						
TPH-DRO CA C10-C28 w/ Si Gel	1600	1034.79	1600	1144.76	65	72	40-105	10	20

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Z161251AA	Sample numb	er(s): 8360	873-8360	874,8360876-	8360877	JNSPK: P3	361513			
Benzene	N.D.	20	19.55	20	20.01	98	100	78-120	2	30
Ethylbenzene	N.D.	20	19.29	20	19.81	96	99	78-120	3	30
Methyl Tertiary Butyl Ether	26.55	20	44.47	20	44.62	90	90	75-120	0	30
Toluene	N.D.	20	20.04	20	20.55	100	103	80-120	3	30
Xylene (Total)	N.D.	60	60.08	60	61.54	100	103	80-120	2	30
Batch number: Z161261AA	Sample numb	er(s): 8360	875 UNSP	K: P362780						
Benzene	N.D.	20	19.59	20	19.61	98	98	78-120	0	30
Ethylbenzene	N.D.	20	18.97	20	19.22	95	96	78-120	1	30
Methyl Tertiary Butyl Ether	N.D.	20	18.45	20	18.98	92	95	75-120	3	30
Toluene	N.D.	20	20	20	20.06	100	100	80-120	0	30
Xylene (Total)	N.D.	60	58.83	60	59.69	98	99	80-120	1	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE Batch number: Z161251AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8360873	102	100	96	91
8360874	98	97	95	92
8360876	97	95	96	97
8360877	102	100	95	89
Blank	101	98	96	90
LCS	99	99	95	96

^{*-} Outside of specification

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.



Analysis Report

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Quality Control Summary

Client Name: Chevron Group Number: 1656412

Reported: 05/20/2016 15:36

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
MS	99	100	95	96
MSD	99	101	97	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE Batch number: Z161261AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8360875	97	95	97	94
Blank	99	98	92	92
LCS	98	99	96	96
MS	98	99	96	96
MSD	97	98	95	95
T.imits.	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12

Batch number: 16126A20A
Trifluorotoluene-F

8360873 95
8360874 100
8360876 115
8360877 93
Blank 83
LCS 101

102

Limits: 63-135

LCSD

Analysis Name: TPH-GRO N. CA water C6-C12 Batch number: 16127A20A

Trifluorotoluene-F

8360875 131

Blank 90

LCS 98

LCSD 99

Limits: 63-135

Analysis Name: TPH-DRO CA C10-C28 w/ Si Gel

Batch number: 161260024A

Orthoterphenyl

8360876 71

Blank 73

LCS 73

LCSD 80

Limits: 42-126

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.



Analysis Report

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Quality Control Summary

Client Name: Chevron Group Number: 1656412

Reported: 05/20/2016 15:36

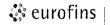
^{*-} Outside of specification

⁽¹⁾ The result for one or both determinations was less than five times the LOQ.

⁽²⁾ The unspiked result was more than four times the spike added.

Chevron California Region Analysis Request/Chain of Custody

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Sample Administration Receipt Documentation Log

Doc Log ID:

145051

Group Number(s): 1656412

Client: CA Office

San Leandro Street

Delivery and Receipt Information

Delivery Method:

BASC

Arrival Timestamp:

05/03/2016 9:30

Number of Packages:

3

Number of Projects:

2

State/Province of Origin:

<u>CA</u>

Arrival Condition Summary

Shipping Container Sealed:

Yes

Sample IDs on COC match Containers:

Yes

Custody Seal Present:

Yes

Sample Date/Times match COC:

Yes

Custody Seal Intact:

Yes

VOA Vial Headspace ≥ 6mm:

No

Samples Chilled:

Yes

Total Trip Blank Qty:

2

Paperwork Enclosed:

Yes

Trip Blank Type:

HCL No

Samples Intact:

Extra Samples:

Yes

Air Quality Samples Present:

Missing Samples: No

No

Discrepancy in Container Qty on COC:

No

Unpacked by Timothy Cubberley (6520) at 11:50 on 05/03/2016

Samples Chilled Details: San Leandro Street

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	<u>lce Type</u>	Ice Present?	<u>Ice Container</u>	Elevated Temp?
1	DT131	1.3	DT	Wet	Υ	Bagged	N
2	DT131	1.6	DT	Wet	Υ	Bagged	N
3	DT131	0.9	DT	Wet	Υ	Bagged	N



Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
С	degrees Celsius	F	degrees Fahrenheit
meq	milliequivalents	lb.	pound(s)
g	gram(s)	kg	kilogram(s)
μg	microgram(s)	mg	milligram(s)
mL	milliliter(s)	Ĺ	liter(s)
m3	cubic meter(s)	μL	microliter(s)
		pg/L	picogram/liter

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an

as-received basis.

Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)

P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.

U - Analyte was not detected at the value indicated

V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference...

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

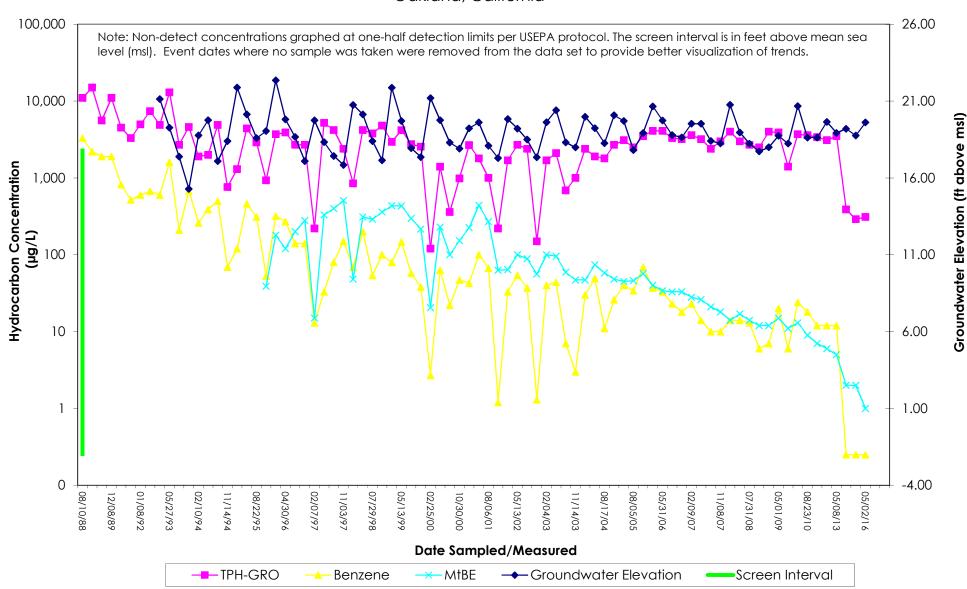
This report shall not be reproduced except in full, without the written approval of the laboratory.

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

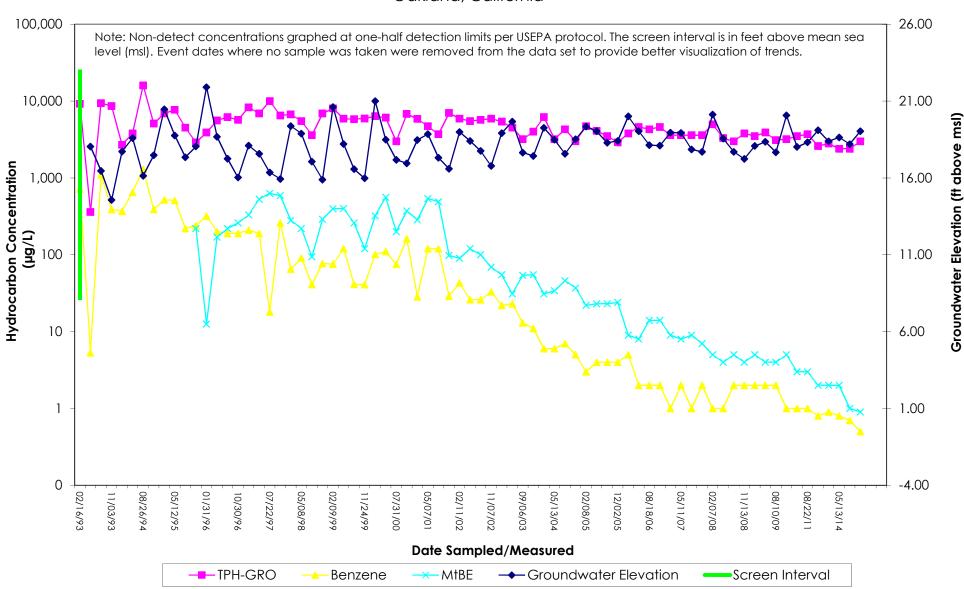
WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

ATTACHMENT C Hydrographs

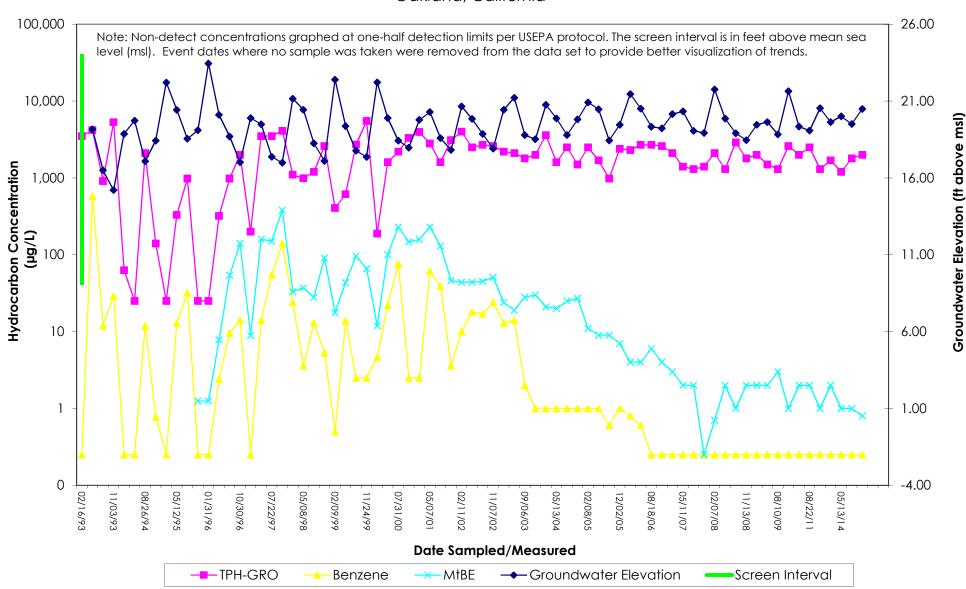
VH-1 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



MW-2 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



MW-3 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



MW-4 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

