

By Alameda County Environmental Health 2:32 pm, Aug 07, 2017

First Semi-Annual 2017 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



August 4, 2017

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 *First Semi-Annual 2017 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 have read and acknowledge the content, recommendations, and/or conclusions contained in the attached report submitted on my behalf to Alameda County Environmental Health's FTP server and the State Water Resources Control Board's GeoTracker™ Website.

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



August 4, 2017

Attention: Mr. Mark Detterman

Alameda County Environmental Health

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

Reference: First Semi-Annual 2017 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 *First Semi-Annual 2017 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, First Semi-Annual 2017 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.

FIRST SEMI-ANNUAL 2017 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Gettler-Ryan Inc. (G-R) performed the First Semi-Annual 2017 groundwater monitoring and sampling event during Second Quarter 2017 on June 29, 2017. G-R's standard operating procedures (SOPs) and field data sheets are included in **Attachment A**. G-R gauged depth-to-

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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 2017 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 2017 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 0.011 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 2017, 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**. A benzene isoconcentration map is shown on **Figure 6**. An isoconcentration map was not developed for 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 2017 groundwater analytical results are presented in the following table.

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Well ID	TPH-GRO (µg/L)	TPH-DRO* (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)
ESL	100	100	1	40	13	20	5
VH-1	3,000	NA	5	0.9	<0.5	2	2
MW-2	2,000	NA	<3	<3	<3	<3	<3
MW-3	1,400	140	<0.5	<0.5	<0.5	<0.5	1
MW-4	79	NA	< 0.5	< 0.5	<0.5	<0.5	<0.5

Table Notes:

µg/L = micrograms per liter

* = using silica gel cleanup

< = constituent was not detected at or above the noted MDL

NA = not analyzed

CONCLUSIONS AND RECOMMENDATIONS

Maximum concentrations of TPH-GRO and benzene are currently observed in well VH-1, located approximately 6 feet from the former gasoline USTs. TPH-GRO is also observed above the ESL in well MW-2, located approximately 3 feet from the former southernmost dispenser island, and well MW-3, located approximately 4 feet from the former waste oil UST. TPH-DRO (with silica gel cleanup) was detected above the ESL in the one well in which it was analyzed (well MW-3).

Hydrographs based on current and historical groundwater elevations and analytical results are included in **Attachment C**. Current and historical groundwater quality data indicate the dissolved-phase petroleum hydrocarbon plume associated with the Site is generally stable or decreasing in overall size and concentration. Concentrations appear to have an inverse relationship with changes in groundwater elevation; however, overall stable or decreasing concentration trends are still observed.

The plume is defined to the southeast by TPH-GRO and BTEX concentrations below LRLs or ESLs in well MW-4. The plume is also delineated to the southwest and west using historical TPH-GRO and BTEX concentrations below LRLs or ESLs in groundwater samples collected from borings HA-1, HA-2, HA-3, SB-3, and SB-4.

Based on a review of historical borings and well logs and hydrologic data, there is no evidence of multiple shallow aquifers (groundwater-bearing zones) at the Site. The previously collected offsite groundwater samples appear representative and adequately define the extent of the dissolved-phase plume.

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

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LIMITATIONS

This document entitled First Semi-Annual 2017 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.

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Former Chevron-branded Service Station 94612 August 4, 2017 Page 5 of 5

Attachments:

Table 1 – Well Details / Screen Interval Assessment – Second Quarter 2017

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 2017

Figure 3 – Groundwater Flow Direction Rose Diagram – Second Quarter 2017

Figure 4 – Site Plan Showing Groundwater Concentrations – Second Quarter 2017

Figure 5 – TPH-GRO Isoconcentration Map – Second Quarter 2017

Figure 6 – Benzene Isoconcentration Map – Second Quarter 2017

Attachment A – Gettler-Ryan Inc. Field Data Sheets and Standard Operating Procedures – Second Quarter 2017

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

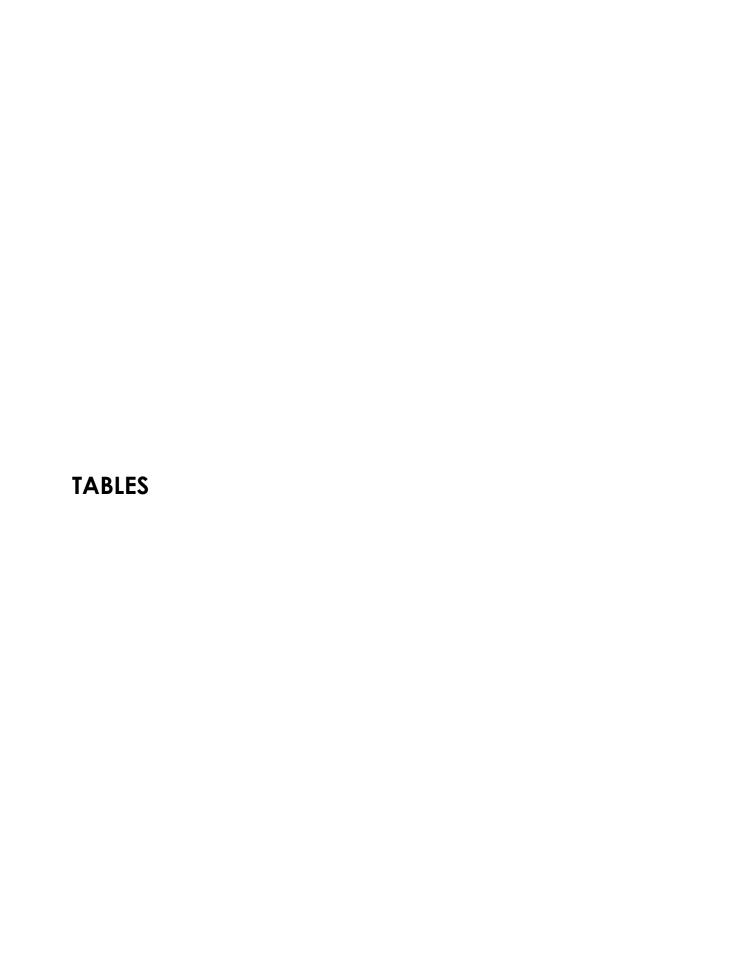


Table 1 Well Details / Screen Interval Assessment Second Quarter 2017

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	8.88	10-30	Depth-to-groundwater above screen interval.
MW-2	02/01/93	Monitoring	2	28.05	20.00	19.46	9.06	5-20	Depth-to-groundwater within screen interval.
MW-3	02/01/93	Monitoring	2	29.04	20.00	17.96	9.16	5-20	Depth-to-groundwater within screen interval.
MW-4	08/15/95	Monitoring	2	27.27	20.00	17.84	8.42	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 June 29, 2017.

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	310/20012	
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	433/245 ¹²	
09/07/99	27.85	9.91	17.71			2,750	57.6	<5.0	6.53	<5.0	297/233 ¹²	
											216 ^{1,12}	
11/24/99	27.85	10.49	17.36			2,550	38	3.18	2.54	5.21		
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 (1)	T (n)	E ((1)	χ (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)
VH-1 (cont)													
05/10/00		27.85	8.09	19.76			1,400 ⁸	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			987 ¹⁰	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	
05/07/01 ¹¹		27.91	8.30	19.61			1,800 ⁶	100	8.2	10	7.9	440/110 ¹²	
08/06/01 ¹¹		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	
05/13/02 ¹¹		27.91	8.70	19.21			2,700	54	4.1	5.6	6.2	100/80 ¹²	
08/09/02 ¹¹		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	
02/04/03 ¹¹		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	
02/02/09 ¹⁴	NP ¹⁸	27.91	9.91	18.00			4,000	7	1	<0.5	1	12	
05/01/09 ¹⁴	NP ¹⁸	27.71	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	7.07	20.68			3,700	24	4	5	5	13	
01/2//10	1.41	۷/.۶۱	7.23	∠∪.66			3,/00	∠4	4	Э	Э	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)	Τ (μg/L)	E (μg/L)	Χ (μg/L)	M†BE (µg/L)	TOG (μg/L)
VH-1 (cont)		(11.)	(11.)	(III3I)	(µ9/L)	(µg/L)	(µ9/L)	(μ9/1)	(µg/L)	(µ9/L)	(µg/L)	(μ9/1)	(µg/L)
08/23/10 ¹⁴	NP ¹⁸	27.91	9.28	18.63			3,600	18	3	2	4	9	
08/22/11 ¹⁴													
	18	27.91	9.28	18.63			3,400	12	2	0.8	3	7	
05/10/12 ¹⁴	NP ¹⁸	27.91	8.26	19.65			3,100	12	3	2	4	6	
05/08/13 ¹⁴	NP ¹⁸	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	
06/29/17 ¹⁴	NP ¹⁸	27.91	8.88	19.03			3,000	5	0.9	<0.5	2	2	
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		27.51	8.92	18.59			3,800	650	76	15	62		
08/26/94		27.51	11.37	16.14			16,000	1,300	270	28	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	9.94	17.57			6,900	190	12	38	37	530	
07/22/97		27.51	11.15	16.36			10,000	18	25	62	41	630	
11/03/97		27.51	11.58	15.93			6,500	260	8.5	26	14	590/9.6 ^{4,12}	
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	220/62 ¹²	
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	
02/09/995		27.51	6.90	20.61			8,070	75.6	<10	<10	<10	397/144 ¹²	
05/13/99		27.51	9.30	18.21			5,890	120	<5.0	12.5	26.6	401/69.4 ¹²	
												260/145 ¹²	
09/07/99		27.51	10.94	16.57			5,820	41.2	<5.0	14.6	<5.0	200/143	

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)
MW-2 (cont)												_
11/24/99	27.51	11.53	15.98			5,940	40.9	<10	10.8	<10	1201,12	
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			3,0008	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	
02/05/01 ¹¹	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	
08/09/02 ¹¹	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	
02/02/09 ¹⁴	28.05	9.97	18.08			3,500	2	0.6	2	1	5	
05/01/0914	28.05	9.70	18.35			3,900	2	1	4	3	4	
						-,	_	•	•	-	-	

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	В (11)	T (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)												
08/10/09 ¹⁴	28.05	10.38	17.67			3,100	2	0.8	2	1	4	
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	
06/29/17 ¹⁴	28.05	9.06	18.99			2,000	<3	<3	<3	<3	<3	
00/27/17	28.05	7.06	16.77			2,000	\3	\3	\3	\3	\3	
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 11/03/93	28.50 28.50	12.00 13.29	16.50 15.21		1,400	910	12 29	3.7 1.9	6.2 0.6	3.8 27		<5,000
02/10/94	28.50	9.63	18.87		<50	5,300 63	< 0.5	0.7	<0.5	<0.5		
05/12/94	28.50	8.77	19.73		84	<50	<0.5	0.5	<0.5	<0.5		
08/26/94	28.50	11.42	17.08			2,100	12	<0.5	5.0	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	
08/01/96	28.50	9.80	18.70		470 ²	980	9.6	<0.5	0.98	2.2	54	
10/30/96	28.50	11.48	17.02		760 ²	2,000	14	<10	<10	<10	140	
02/07/97	28.50	8.60	19.90		61 ²	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	33/6.1 ¹²	
					250 ²						37/7.5 ¹²	
05/08/98	28.50	8.06	20.44		230 290 ²	990	3.6	7.7	0.7	2.2	11/28 ¹²	
07/29/98	28.50	10.25	18.25			1,200	13	<0.5	<0.5	1.4		
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	

	WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	В	T	E	Х	MtBE	TOG
05/13/99	DATE	(ft.)	(ft.)	(msl)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(μg/L)
09707/99	MW-3 (cont)												
11/24/99	05/13/99	28.50	9.12	19.38			615	13.8	1.05	<0.5	<0.5		
02/25/00	09/07/99	28.50	10.73	17.77		528 ²	2,710	<5.0	<5.0	<5.0	<5.0		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	11/24/99	28.50	11.13	17.37		1,070 ²	5,530	<5.0	<5.0	5.59	<5.0		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	02/25/00	28.50	6.28	22.22			189	4.68	<0.5	<0.5	<0.5	11.9/<2.0 ¹²	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	03/01/00	28.50	6.70	21.80		380 ²							
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $		28.50	8.60	19.90		830 ⁷	1,600 ⁶	22	<10	<10	<10		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	07/31/00 ¹¹	28.50	10.07	18.43		490 ⁷		76	10	<5.0	13		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10/30/00 ¹¹	28.50	10.53	17.97		580 ⁹	3,320 ¹⁰	<5.00	<5.00	<5.00	<15.0		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	02/05/01 ¹¹	29.04	9.26	19.78			3,960	<5.00	6.02	<5.00	<5.00		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	05/07/01 ¹¹	29.04	8.75	20.29			2,800 ⁶	61	12	<10	20	230/4912	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		29.04	8.83	20.21		390 ¹³							
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		29.04	10.45	18.59		870 ⁷	1,600 ⁶	39	14	1.3	5.6		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11/12/01 ¹¹	29.04	11.22	17.82		1,400	3,100	3.6	23	2.3	5.6	40/46 ¹²	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		29.04	8.38	20.66		700	4,000	10	<5.0	4.2	5.5		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	05/13/02 ¹¹	29.04	9.20	19.84		730	2,500	18	<5.0	<5.0	5.2		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	08/09/0211	29.04	10.17	18.87		560	2,700	17	<5.0	<5.0	<10		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11/07/02 ¹¹	29.04	11.13	17.91		660	2,600	24	<5.0	2.0	4.8		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	02/04/03 ¹¹	29.04	8.60	20.44		370	2,200	13	1.5	2.7	5.0		
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	05/05/03 ¹¹	29.04	7.82	21.22		580	2,100	14	1.8	2.0	3.9	<20/19 ¹²	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		29.04	10.25	18.79		780	1,800	2	0.6	0.6	1	28	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11/14/03 ^{11,14}	29.04	10.52	18.52		860	2,000	1	0.6	0.6	0.9	30	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	02/13/04 ^{14,15}	29.04	8.28	20.76		590	3,600	1	0.6	1	2	21	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	05/13/04 ¹⁴	29.04	9.17	19.87		670	1,600	1	<0.5	0.5	1	20	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	08/17/04 ¹⁴	29.04	10.25	18.79		900	2,500	1	<0.5	<0.5	0.7	25	
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	11/10/04 ¹⁴	29.04	9.23	19.81		780	1,500	1	0.6	0.5	1	27	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	02/08/05 ¹⁴	29.04	8.12	20.92		530	2,500	1	0.6	2	3	11	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	06/03/05 ¹⁴	29.04	8.57	20.47			1,700	1	<0.5	0.7	1	9	
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	08/05/05 ¹⁴	29.04	10.60	18.44		530 ¹⁶	980	0.6	<0.5	<0.5	0.8	9	
05/31/06 ¹⁴ 29.04 8.53 20.51 480 2,700 0.6 <0.5 <0.5 0.8 4	12/02/05 ¹⁴	29.04	9.58	19.46		1,400 ¹⁷	2,400	1	2	0.8	1	7	
276 316 316 316 316 316 316 316 316 316 31	03/03/06 ¹⁴	29.04	7.58	21.46		530	2,300	0.8	1	<0.5	1	4	
08/18/06 ¹⁴ 29.04 9.71 19.33 410 2,700 <0.5 <0.5 <0.5 0.6 6	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	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	02/09/07 ¹⁴	29.04				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	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	08/10/07 ¹⁴					340		<0.5		<0.5			
11/08/07 ¹⁴ 29.04 10.11 18.93 440 1,400 <0.5 <0.5 <0.5 <0.5 <0.5	11/08/07 ¹⁴	29.04	10.11	18.93		440	1,400	<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	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	05/02/08 ¹⁴	29.04	9.18	19.86		260	1,300	<0.5	<0.5	<0.5	<0.5	2	

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)	MtBE (μg/L)	TOG (μg/L)
MW-3 (cont)	. ,	. ,	. ,	u u. ,	,	u 0, ,				u 0. ,		
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	
02/02/09 ¹⁴	29.04	9.58	19.46		310 ¹⁹	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											3	
01/29/10 ¹⁴	29.04	10.21	18.83		470	1,300	<0.5	<0.5	<0.5	<0.5		
08/23/10 ¹⁴	29.04	7.39	21.65		420	2,600	<0.5	<0.5	2	1	1	
	29.04	9.70	19.34	21	410	2,000	<0.5	<0.5	<0.5	<0.5	2	
08/22/11 ¹⁴	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	<0.5	<0.5	1	
05/02/16 ¹⁴	29.04	8.55	20.49		160 ^{21,22}	2,000	<0.5	<0.5	<0.5	<0.5	0.8	
06/29/17 ¹⁴	29.04	9.16	19.88		140 ^{21,22}	1,400	<0.5	<0.5	<0.5	<0.5	1	
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	27.27	5.60	21.67			<50	<0.5	<0.5	<0.5	<0.5	<2.5	
04/30/96	27.27	7.00	20.27			<50	<0.5	<0.5	<0.5	<0.5	<2.5	
08/01/96	27.27	9.15	18.12			<50	<0.5	<0.5	<0.5	<0.5		
10/30/96 02/07/97	27.27 27.27	10.74 7.80	16.53 19.47			110 80	<0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<2.5	
05/07/97	27.27 27.27	7.80 5.85	21.42			<50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	4.1 <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	
									<0.5	<0.5	<2.5/<2.0 ¹²	
11/06/98	27.27	10.59	16.68			72	<0.5	<0.5			<2.0/<1.1 ¹²	
02/09/99	27.27	5.86	21.41			<50	<0.5	<0.5	<0.5	<0.5		
05/13/99	27.27	7.95	19.32			<50	<0.5	<0.5	<0.5	<0.5	<5.0/<2.0 ¹²	
09/07/99	27.27	9.48	17.79			70.2	<0.5	<0.5	<0.5	<0.5	<2.0/<1.0 ¹²	
11/24/99	27.27	10.05	17.22			227	<0.5	<0.5	<0.5	<0.5	<0.5 ¹²	
02/25/00	27.27	INACCESSIBLI									 -0 54 -0 5 ¹²	
03/01/00	27.27	6.17	21.10	 (ED OVED WELL		<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0 ¹²	
05/10/00	27.27			(ED OVER WELI							 <2.5/<2.0 ¹²	
07/31/00	27.27	9.37	17.90			<50	<0.50	<0.50	<0.50	< 0.50	<2.5/<2.0	

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)
MW-4 (cont)												
10/30/00	27.27	9.47	17.80			54.0 ¹⁰	<0.500	< 0.500	< 0.500	<1.50	<2.50/<2.012	
02/05/01	27.27	INACCESSIBI	LE - CAR PARK	ED OVER WELL								
05/07/01	27.27	7.81	19.46			<50	<0.50	<0.50	<0.50	< 0.50	<2.5/<2.0 ¹²	
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/<212	
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	
02/08/0514	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	17.19			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	
02/02/09 ¹⁴	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	9.50 6.57	20.70			<50 <50	<0.5	<0.5	<0.5		<0.5 <0.5	
08/23/10 ¹⁴	27.27 27.27	6.57 8.96	18.31					<0.5 <0.5		<0.5 <0.5	<0.5 <0.5	
08/22/11 ¹⁴						<50	<0.5		<0.5			
00/22/11	27.27	8.85	18.42			<50	<0.5	<0.5	< 0.5	<0.5	<0.5	

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-4 (cont)												
05/10/12 ¹⁴	27.27	7.55	19.72			<50	<0.5	<0.5	<0.5	< 0.5	<0.5	
05/08/13 ¹⁴	27.27	8.58	18.69			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
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				<0.5	<0.5	<0.5	<0.5	<0.5	
						<50						
06/29/17 ¹⁴	27.27	8.42	18.85			79	<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 05/12/94					<50 84	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5		
08/26/94						<50 <50	<0.5	<0.5 <0.5	<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 05/07/97						<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<2.5 <2.5	
07/22/97						<50	<0.5	<0.5	<0.5	<0.5	<2.5 <2.5	
01/28/98	_					<50	<0.5	<0.5	<0.5	<0.5	<2.0 ¹²	
05/08/98							~0.5 		<0.5 		<2.0 ¹²	
07/29/98						 <50	<0.5	<0.5	<0.5	 <0.5	<2.0 ¹²	
11/06/98						<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<2.5	
02/09/99						<50	<0.5	<0.5	<0.5	<0.5	<2.0	
											<5.0/<2.0 ¹²	
05/13/99						<50	<0.5	< 0.5	<0.5	< 0.5		
09/07/99						<50	<0.5	<0.5	<0.5	<0.5	<2.0	
11/24/99 02/25/00						<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<2.5 <5.0	
02/25/00						<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<5.0 <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	

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)
TRIP BLANK (cont)												<u>.</u>
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	
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						<50	<0.50	<0.50	<0.50	<1.5	<2.5 <2.5	
05/13/02						<50	<0.50	<0.50	<0.50	<1.5	<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												
08/05/05 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
12/02/05 ¹⁴						<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/03/06 ¹⁴						<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	
02/09/0714						<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	<0.5	
05/01/09 ¹⁴						<50	<0.5	< 0.5	< 0.5	<0.5	<0.5	
08/10/09 ¹⁴						<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	
	•	-				~JU	٠٠.٥	٠٠.٥	٠٠.٥	٠٠.٥	٠٠.٥	

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)
QA (cont)												
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	
06/29/1714						<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 CasingDRO = Diesel Range OrganicsTOG = Total Oil and Grease(ft.) = FeetGRO = Gasoline Range Organics $(\mu g/L)$ = Micrograms per literGWE = Groundwater ElevationB = BenzeneNP = 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 agsoline C6-C12 + unidentified hydrocarbons <C6.
- 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

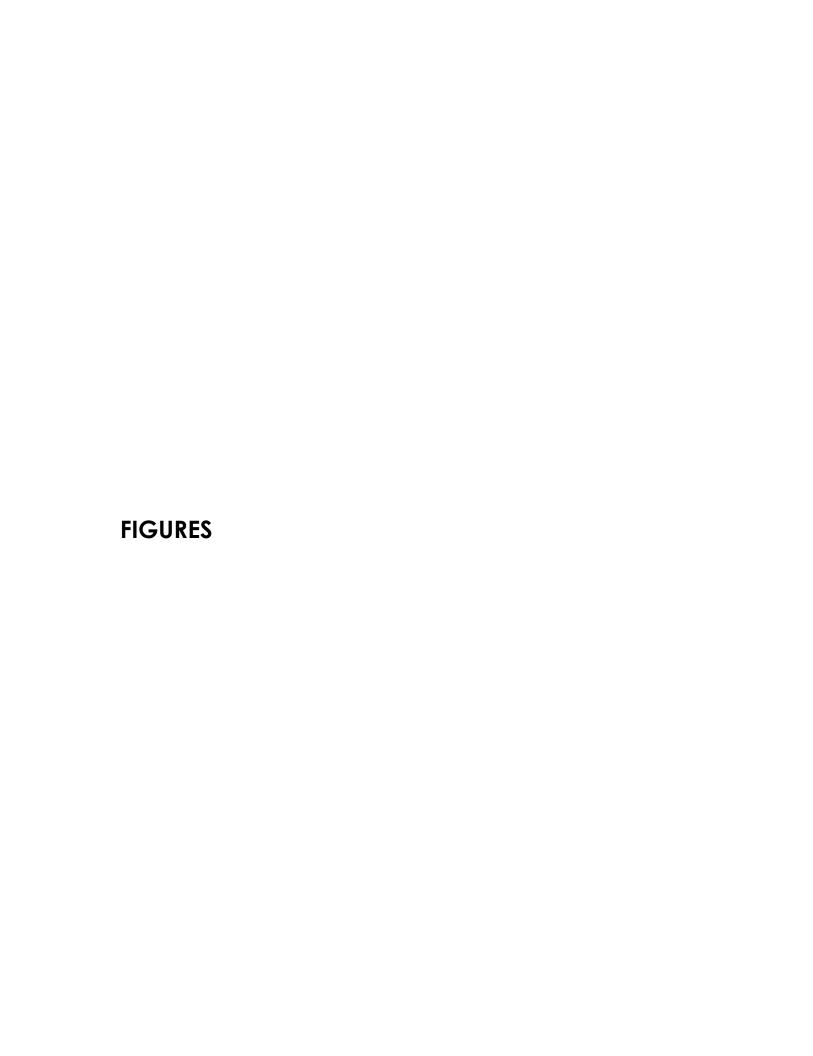
Table 6 Dissolved Oxygen Levels

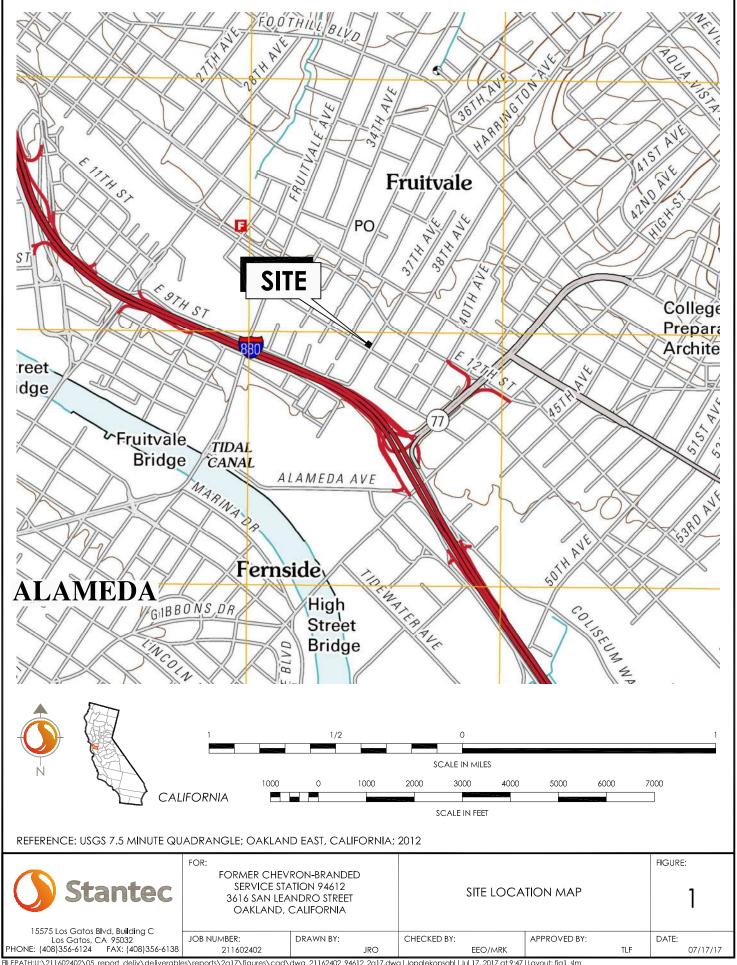
Former Chevron-branded Service Station 94612 3616 San Leandro Street Oakland, California

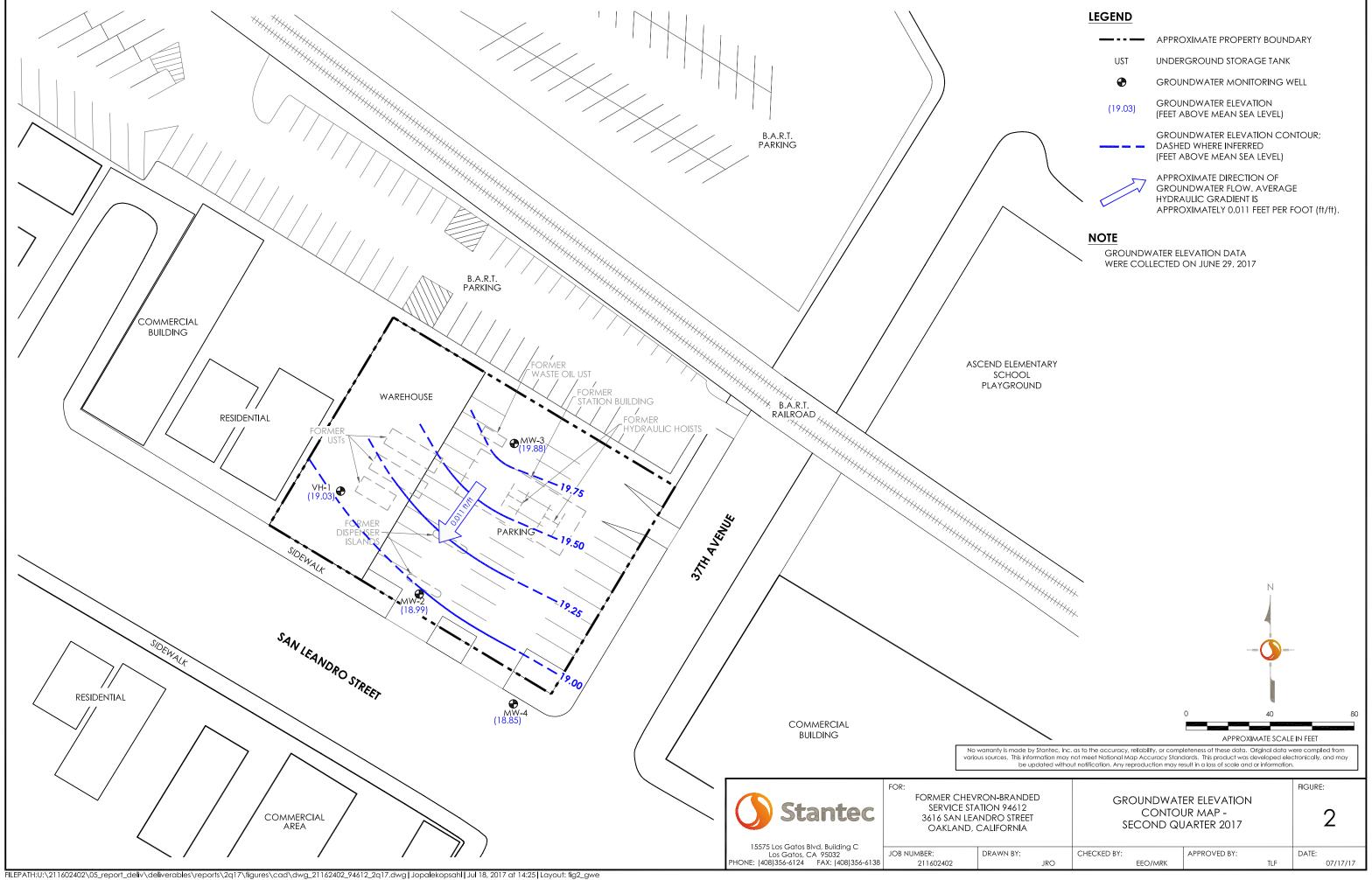
DATE	PRE-PURGE D.O.
PAIL	(mg/L)
05/10/00	0.90
07/31/00	1.25
10/30/00	1.97
05/07/01	1.10
08/06/01	1.40
11/12/01	0.90
02/11/02	1.10
05/13/02	0.70
05/10/00	0.57
	1.26
	1.25
	0.90
	1.10
	0.80
	0.60
05/13/02	0.80
05/10/00	1.56
	1.46
	1.18
	0.70
	0.90
	0.50
	0.80
05/13/02	1.80
07/21/00	0 / 4
	0.64 0.97
	0.50
	0.50
	1.00
	1.00
	2.90
03/13/02	∠.7∪
	05/10/00 07/31/00 10/30/00 05/07/01 08/06/01 11/12/01 02/11/02 05/13/02 05/10/00 07/31/00 10/30/00 05/07/01 08/06/01 11/12/01 02/11/02 05/13/02

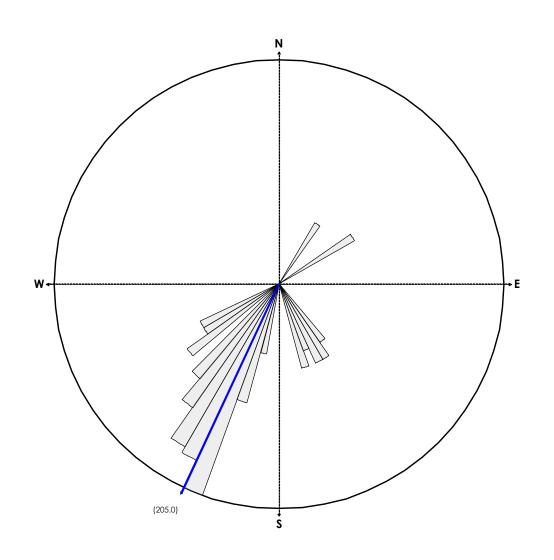
EXPLANATIONS:

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









EQUAL AREA PLOT

Number of Points 65

Class Size 5

Vector Mean 205.02

Vector Magnitude 54.61

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 2017 3

07/17/17

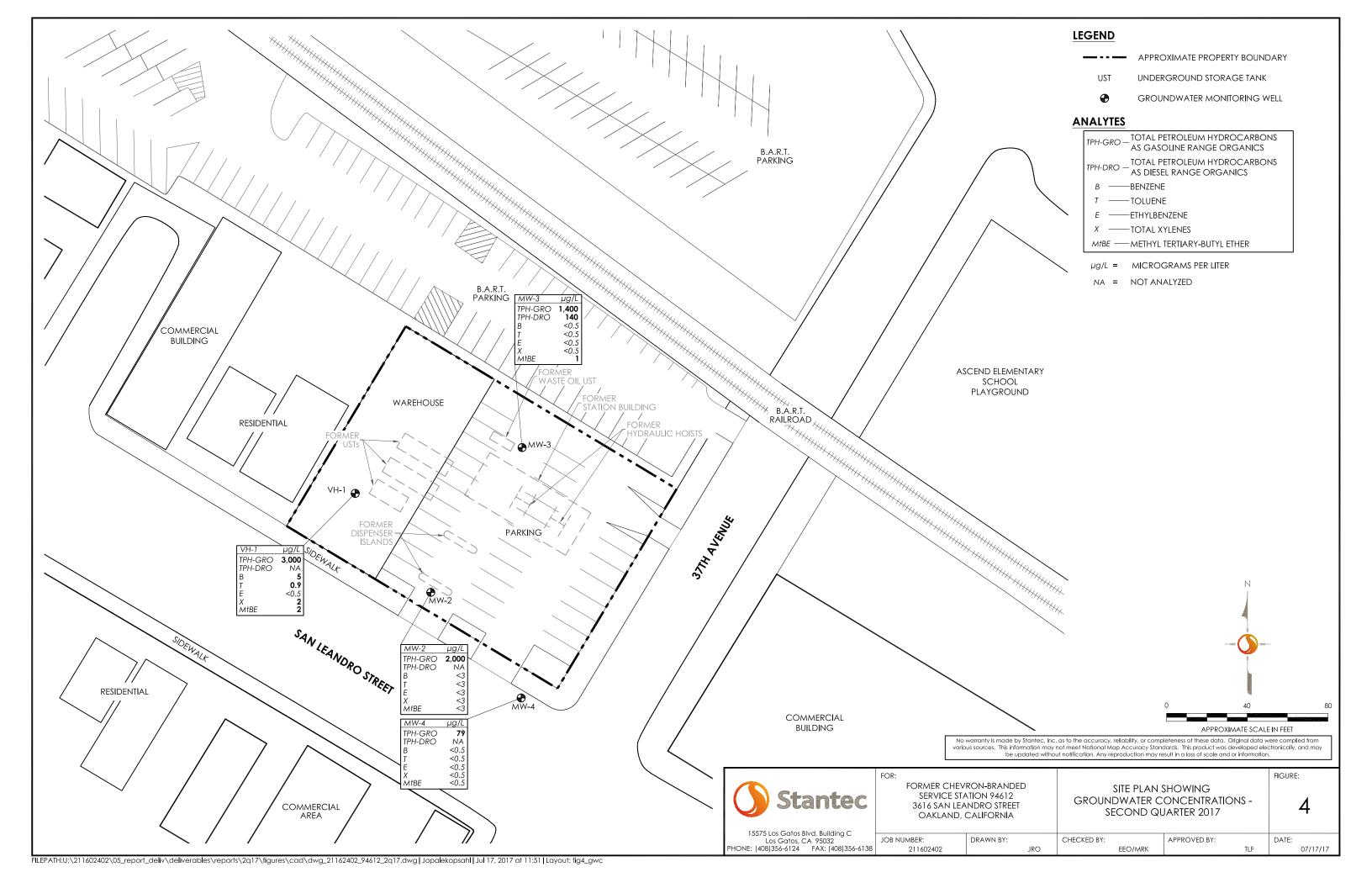
FIGURE:

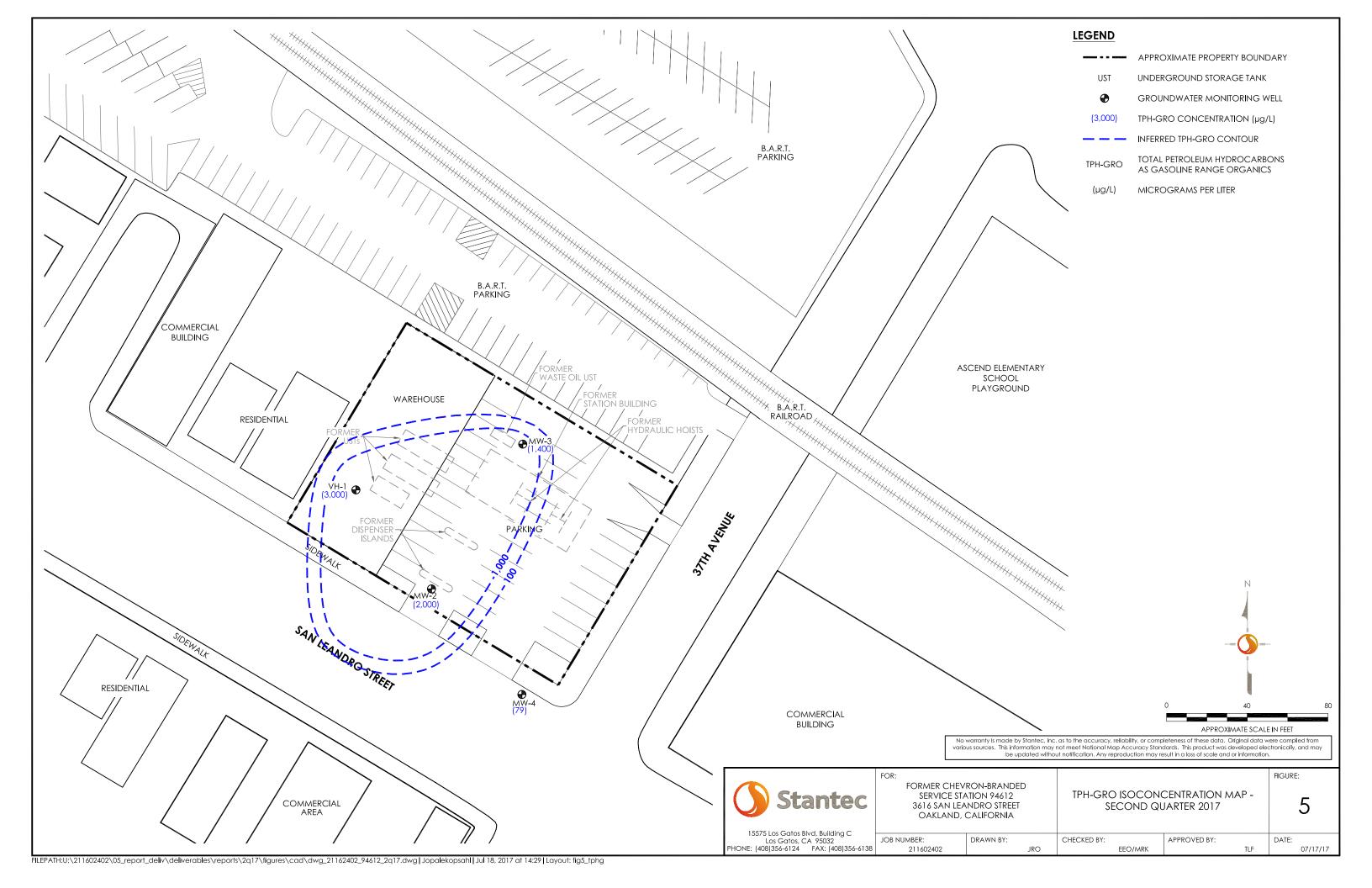
 JOB NUMBER:
 DRAWN BY:
 CHECKED BY:

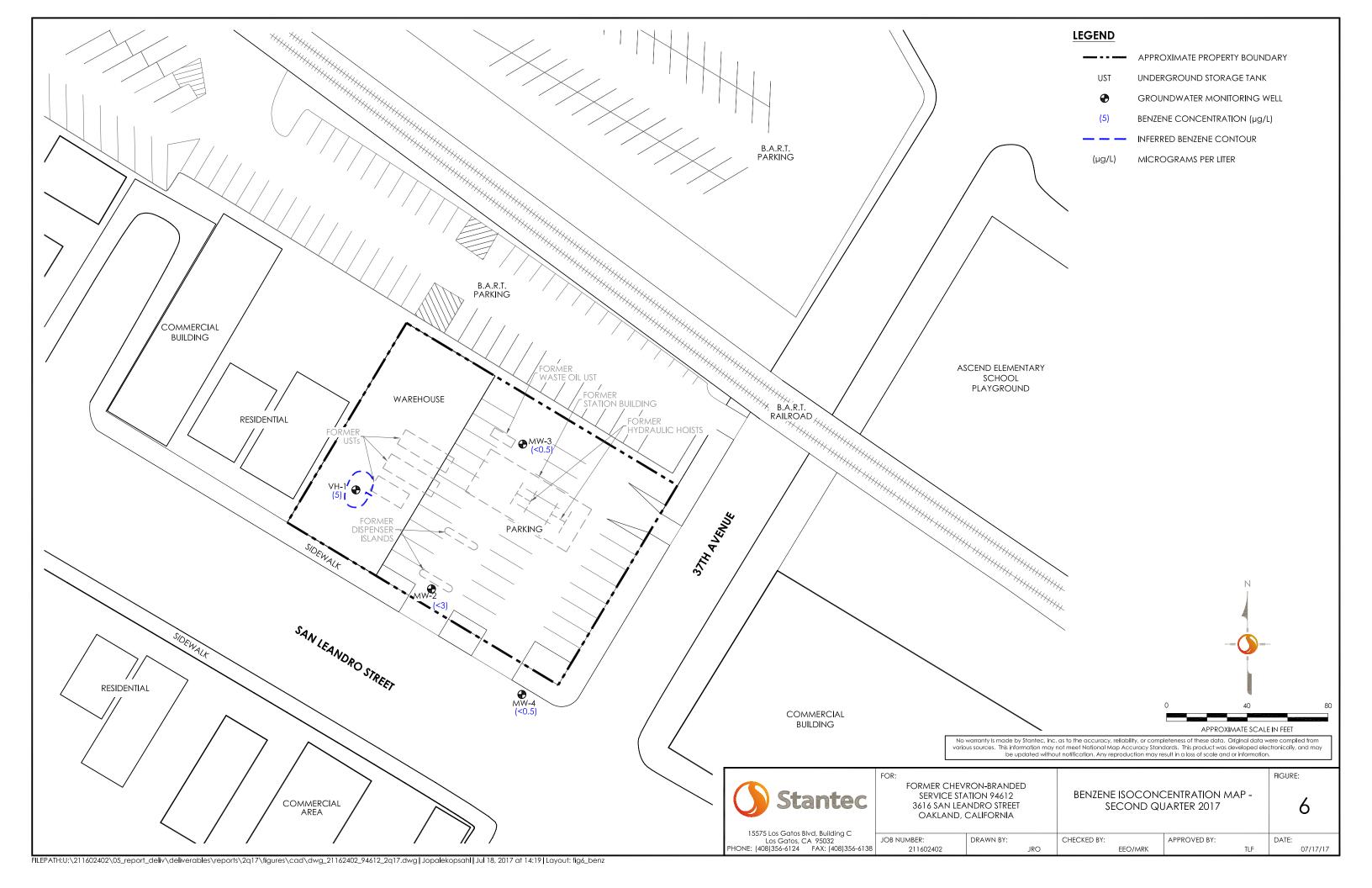
 211602402
 JRO
 EEO/

APPROVED BY: DATE:

TLF







ATTACHMENT A
Gettler-Ryan Inc. Field Data Sheets and Standard
Operating Procedures – Second Quarter 2017

20

TRANSMITTAL

July 10, 2017 G-R #17156473

TO:

Mr. Travis Flora

Stantec

15575 Los Gatos Boulevard

Los Gatos, CA 95032

FROM:

Deanna L. Harding

Project Manager

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 June 29, 2017

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.

WELL CONDITION STATUS SHEET

Client/						,,,,,	•	00 01	130000		
Facility #:	Chevror	ı #9-4612					Job#:	1715647	73		1041
Site Address:	3616 Sa	n Leandro	Street			-	Event Date:	6.29.17			
City:	Oakland	I, CA				-	Sampler:		FT		-
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/Ø	REPLACE CAP Y	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken
V4-1	DIL	MA		→	OLL	,	\rightarrow	1	1	10 x8 YTILITY BOX	
MWN	DIL		> >	S22	COL		->			monusor 8" 2	
mw-2 mw-3	DIL		\rightarrow	5=2	0 K		<u>-></u>			1. 2, 1.	
11W-4	014						\rightarrow	4	4	Enco 78"/2	
							•				
Comments					***						

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. Total well depths are measured annually.

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.



Site Address: 3616 San Leandro Street Event Date: 6.29.7 (inclusion of the content of the conte	/e)
City: Oakland, CA Sampler: FT Well ID VH - I Date Monitored: 6 · 29 · N Well Diameter 2 / (3) in. Volume 3/4" = 0.02 1" = 0.04 2" = 0.17 3" = 0.38 Factor (VF) 4" = 0.66 5" = 1.02 6" = 1.50 12" = 5.80 Depth to Water 8 · 88 ft. Check if water column is less then 0.50 ft. 20 · 09 xVF = x3 case volume = Estimated Purge Volume: gal. Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: gal.	<u> </u>
Well Diameter 2 / 6 in. Volume 3/4"= 0.02 1"= 0.04 2"= 0.17 3"= 0.38 Factor (VF) 3"= 0.38 Factor (VF) Depth to Water 9.88 ft. Check if water column is less then 0.50 ft. 20.09 xVF = x3 case volume = Estimated Purge Volume: gal. Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:	
Well Diameter 2 / ② in. Volume 3/4"= 0.02 1"= 0.04 2"= 0.17 3"= 0.38 Total Depth 28.97 ft. Volume Factor (VF) 4"= 0.66 5"= 1.02 6"= 1.50 12"= 5.80 Depth to Water 8.88 ft. Check if water column is less then 0.50 ft. 20.09 xVF = x3 case volume = Estimated Purge Volume: gal. Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:	
Total Depth 28.97 ft. Depth to Water Volume	
Depth to Water State	
20.09 xVF = x3 case volume = Estimated Purge Volume: gal. Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:	
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]:	
Time Started: (240	·
Time Committee to the control of the	0 hrs)
Don'th to Product:	00 hrs)
Disposable Bailer Disposable Bailer Depth to Product: Depth to Water:	∠_n ft
Statistics Steel Ballet	—" *
Visual Confirmation/Description:	"
Peristatic Pump Peristatic Pump	
QED Bladder Pump QED Bladder Pump Skimmer / Abserbant Sock (circle one)	
Other: Amt Removed from Skimmer:	ltr
Amt Removed from Well:	_ ltr
Water Removed:	_ ltr
Start Time (purge): - Weather Conditions:	
Approx. Flow Rate:gpm. Sediment Description:	
Did well de-water? If yes, Time: Volume: gal. DTW @ Sampling:	
Time Volume (gal.) pH (μS / mS (Conductivity Temperature D.O. ORP (2400 hr.) (mV)	
LABORATORY INFORMATION	
SAMPLE ID (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES	
VH-\ x voa vial YES HCL EUROFINS TPH-GRO(8015)/BTEX+MTBE(8260)	
X 500ml ambers YES NP EUROFINS TPH-DRO w/sgc COLUMN	
COMMENTS: NO PLANE EN 1916 TAVE	
COMMENTS: NO PURVE SAMPLE TAKEN, WELL IS LOCA	TED
COMMENTS: NO PURITE SAMPLE TAKEN, WELL IS LOCALIN BUILDING RESTROOM.	TED
COMMENTS: NO PULLUE SAMPLE TAKEN, WELL IS LOCA IN BUILDING RESTROOM.	TED



Site Address: Sample Samp	Client/Facility#:	Chevron #9-461	12	Job Number:	17156473	
Date	Site Address:	3616 San Lean	dro Street	Event Date:	6.29.5	(inclusive)
Well ID	City:	Oakland, CA		Sampler:	•	· · ·
Wealth Disposable Bailer Disposable Bail				· · · · · · · · · · · · · · · · · · ·		
Total Depth	Well ID	MW-2		Date Monitored:	6.29.1	<u>n</u>
Total Depth to Water Depth to Water	Well Diameter	2/4 in.		Volume 3/4"= 0	.02 1"= 0.04 2"=	0.17 3"= 0.38
Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTW):	Total Depth	19.46 ft.		Factor (VF) 4"= 0.		
Depth to Water w/ 80% Recharge ((Height of Water Column x 0.20) + DTWJ: 1.4 Purge Equipment: Disposable Bailer Disposable Bailer Stack Pump Metal Filters Stack Pump Peristaltic Pump QED Bladder Pump Other: Start Time (purge): Sample Time/Date: Approx. Flow Rate: Did well de-water? Volume (gal.) Disposable Bailer Pressure Bailer	Depth to Water					
Purge Equipment: Disposable Bailer Disposable Bailer Disposable Bailer Disposable Bailer Disposable Bailer Pressure Bailer Pre						me: 5.6 gal.
Purge Equipment: Disposable Bailer Disposable Bailer Stack Pump Peristaltic Pump Other: Other: Weather Conditions: Water Color: Time (purge): Sampling Equipment: Disposable Bailer Pressure Bailer Pressure Bailer Metal Filters Peristaltic Pump OED Bladder Pump Other: Other: Weather Conditions: Water Color: Transported from Well: Titr Water Removed from Well: Total Configuration Total Configuration Total Configuration The Visual C	Depth to Water	w/ 80% Recharge [(He	eight of Water Column x	0.20) + DTW]: 11 · 14		(2400 hrs)
Depth to Water: Stainless Steel Bailer Pressure Bailer Pre	Purge Equipment:		Sampling Equip	ment:		
Stack Pump Metal Filters Hydrocarbon Thickness:	Disposable Bailer		Disposable Baile			
Peristaltic Pump OED Bladder Pump Other: Other:	Stainless Steel Baile	er	Pressure Bailer		· ·	
CED Bladder Pump Other: CED Bladder Pump Other Itr Mater Removed from Skimmer: Itr Itr Mater Removed Itr Mater Removed	Stack Pump		Metal Filters			
Other: Other:	Peristaltic Pump		Peristaltic Pump		Visual Confirm	ation/Description:
Conductivity Cond	QED Bladder Pump		QED Bladder Pui	mp	Skimmer / Alas	orbant Sock (circle one)
Start Time (purge):	Other:		Other:			
Start Time (purge):						
Sample Time/Date:					Water Remove	ed: Itr
Sample Time/Date:						
Approx. Flow Rate:	Start Time (purge	e): <u>1500</u>	Weathe	er Conditions:	SUNNL	
Approx. Flow Rate:	Sample Time/Da	ate: 1520 /6.7	16. 0 Water (Color: - LT. 6An.	Odor: 1 N	SULHT
Did well de-water? No			-	ent Description:	5. 51 LT:	
Time	Did well de-wate	r? No If		· · · · · · · · · · · · · · · · · · ·	gal. DTW @ Sa	impling: 4.20
Composition						
1503 1.5 7.18 700 214 706 21.2 709 21.2 7.21 709 21.2 7.21		Volume (gal.)		² l'emperature		
Sample id) (, , , ,	(mg/L)	(mv)
LABORATORY INFORMATION SAMPLE ID (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES WW-2 (x voa vial YES HCL EUROFINS TPH-GRO(8015)/BTEX+MTBE(8260) x 500ml ambers YES NP EUROFINS TPH-DRO w/sgc COLUMN		1.5 1.		114		
SAMPLE ID (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES X voa vial YES HCL EUROFINS TPH-GRO(8015)/BTEX+MTBE(8260) X 500ml ambers YES NP EUROFINS TPH-DRO w/sgc COLUMN		<u> 30</u> 7	21 708	21.2		
SAMPLE ID (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES Laboratory Container System of the container of the contai	1509	<u>40</u> 7.	22 715	21.1		
SAMPLE ID (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES Laboratory Container System of the container of the contai						
SAMPLE ID (#) CONTAINER REFRIG. PRESERV. TYPE LABORATORY ANALYSES Laboratory Container Street Container Str			LABORATO	RY INFORMATION		
x 500ml ambers YES NP EUROFINS TPH-DRO w/sgc COLUMN		(#) CONTAINER R				ANALYSES
	MW-2					
COMMENTS:		x 500ml ambers	YES NP	EUROFINS	TPH-DRO w/sgc COL	UMN
COMMENTS:						
COMMENTS:						
COMMENTS:						
COMMENTS:						
COMMENTS:					 	
COMMENTS:		L		<u> </u>		
	COMMENTS:					
Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Lock: Add/Replaced Plug:	5			N .	27	



Client/Facility#:	Chevron #9-4	612		Job Number:	17156473	
Site Address:	3616 San Lea	ndro St	reet	Event Date:	6.29.1	(inclusive)
City:	Oakland, CA	-		Sampler:	FT	(**************************************
Well ID	MW-3			Date Monitored:	6.29.	17
Well Diameter	(2)/ 4 in.		1/0	olume 3/4"= 0	.02 1"= 0.04 2"= 0	.17 3"= 0.38
Total Depth	17-96 ft.			ctor (VF) 4"= 0		
Depth to Water	9.16 ft.	Пс	ـــــ heck if water colu	mn is less then 0.50) ft.	140
•		xVF			Estimated Purge Volume	e:_ 4.0 gal.
Depth to Water	w/ 80% Recharge [(Height of W				
					Time Started:	(2400 hrs) :(2400 hrs)
Purge Equipment:			ampling Equipment	!: /	· ·	(2400 hrs) t: ft
Disposable Bailer			sposable Bailer		Depth to Water:	
Stainless Steel Baile	er		essure Bailer		Hydrocarbon Thi	
Stack Pump			etal Filters		Visual Confirmat	
Peristaltic Pump			eristaltic Pump			
QED Bladder Pump Other:	4		ED Bladder Pump	·		bant Sock (circle one)
Other.		Oi	her:			om Skimmer: Itr
						om Well:Itr
					vvaler Removed.	·
Otant Times (1525		NA		<u></u>	
Start Time (purge		0.0	Weather Co	_	SUNTY	
	ate: 1554 /6.			r: <u>LT. buy</u>	_Odor: 🔗 / N	SLIGHT
Approx. Flow Ra		gpm.	Sediment D		S. SILTY	
Did well de-wate	er? <u>No</u>	If yes, Tin	ne:\	/olume:	gal. DTW @ San	pling: <u>9.35</u>
Time			Conductivity	Temperature	D.O.	ORP
(2400 hr.)	Volume (gal.)	pН	(µS)/ mS µmhos/cm)	(O/F)	(mg/L)	(mV)
1538	1.5	723	C78	21.3		
1541	3.0	7.26	685	21.1		
1544	4.0	7.28	1090	20.9		
					7	
		L	ABORATORY	INFORMATION		
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPI			ANALYSES
MW-3	x voa vial	YES YES	HCL NP	EUROFINS	TPH-GRO(8015)/BTEX	
	X 500illi allibers	IES	INP	EUROFINS	TPH-DRO w/sgc COLU	MIN
L						
COMMENTS:						
Add/Replaced Ga	asket:	Add/Replace	d Bolt:	Add/Replaced Loc	rk. ∇44/B	enlaced Plug



Client/Facility#:	Chevron #9-461	2	Job Number:	17156473	
Site Address:	3616 San Leand	Iro Street	Event Date:	6.29.17	(inclusive)
City:	Oakland, CA		Sampler:	Pr	(,
Well ID	MW-4		Date Monitored:	6.29.17	
Well Diameter	(2)/ 4 in.		Volume 3/4"= 0		
Total Depth	17-84 ft.		Volume 3/4"= 0 Factor (VF) 4"= 0	_ ::::	= 0.38 = 5.80
Depth to Water	8.42 ft.	Check if water of	column is less then 0.50	O ff	
	9.42 XVF			Estimated Purge Volume: 5.0	gai.
Depth to Water	w/ 80% Recharge [(He				
Duras Equipment		Complian Faulus		Time Started: Time Completed:	(2400 hrs) (2400 hrs)
Purge Equipment:		Sampling Equip		Depth to Product:	t ft
Disposable Bailer Stainless Steel Baile		Disposable Bailer		Depth to Water:	ft
Stack Pump		Pressure Bailer		Hydrocarbon Thickness	ft
Peristaltic Pump		Metal Filters		Visual Confirmation/Descri	iption:
QED Bladder Pump		Peristaltic Pump			·
Other:		QED Bladder Pun	np	Skimmer / Mosorbant Sock	
Other.		Other:		Amt Removed from Skimn	
				Amt Removed from Well:_	
				Water Removed:	ftr
Stort Time /purse	» 11 to	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	- Canditiana.	Ch A A - L	
Start Time (purge			r Conditions:	SUNY	·
	ate: 1630 1674		Color: RRN	Odor: Y / 🚳	
Approx. Flow Ra			nt Description:	S. SILTY	
Did well de-wate	r? <u>No</u> If y	es, Time:	Volume:	gal. DTW @ Sampling: _	8.54
Time		Conductivity	y Temperature	D.O. ORP	
(2400 hr.)	Volume (gal.) p	H (LS) mS	(C) E \	(mg/L) (mV)	
1613	1.5 7.	μmhos/cm)	31.5	()	
		5 537		/	/
1616	3.0 7.	32 -331	21.2		
1620	5.0 7-	<u> </u>	21,3		

p			RY INFORMATION		
SAMPLEID		YES PRESERV. 1			
1-10-01		YES NP	EUROFINS EUROFINS	TPH-GRO(8015)/BTEX+MTBE(8: TPH-DRO w/sgc COLUMN	260)
				THE DITCH WAGE COLONING	
			<u></u>		
COMMENTS:	****				
Add/Replaced Ga	sket: Add/	Replaced Bolt:	_ Add/Replaced Lo	ck: Add/Replaced F	Plua:

Chevron California Region Analysis Request/Chain of Custody

eurofins Lancaster Labor Environmental	ratories		Acct.	#	For Eurofins Lancaster Laboratories Environmer Group # Sample #_ Instructions on reverse side correspond with circled nur										only					_ /01						
Client In							Ma	trix		Г				Ar	alys	es l	Requ	ıest	ed				SCF	₹#:		
Facility # SS#9-4612-OML G-R#171564	73 Glob	WBS al ID#TO	600100	333																		ı		JI-000		
Site Address 3616 SAN LEANDRO STREET,						<u></u>	囟						<u>-</u>	四										Results in Dry We	-	
Cheyron PM STANTECTF		Lead Consu	iltant			Sediment	Ground	Surface			8260 🔯		Gel Cleanup	Cleanup										Must meet lowest imits possible for		on
Consultant/Office Getter-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568				568	Sedi	Gro	Sur		of Containers	826	8260		Gel			9	9					c	compounds 8021 MTBE Conf			
Consultant Project Mgr. Deanna L. Harding, deanna@g	rinc.cor	n								Cont	8021	5	ut Silica	with Silica		"	Method	Method						Confirm highest h	-	60
Consultant Phone # (925) 551-7444 x180					Potable	NPDES	Ąi			8015	TPH-DRO 8015 without	15 with	_	Oxygenates							□F	Run oxy's Run oxy's	s on high	- 1		
Sampler Flaget.					Composite					Total Number	+ MTBE	8	RO 80	TPH-DRO 8015	8260 Full Scan	ő	Lead	red Lead								
Sample Identification	Soil Depth	Colle	ected Time	Grab	omo	Soil		water	ē	otal	BTEX	TPH-GRO	PH-D	PH-D	260 F		Total L	Dissolved						Remai	rke	
QA	Deptii	17.6.29	-	0	0	S	1	<u>></u>		5	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	X	<u> -</u>	<u> </u>	80		<u> -</u>	Ω					Т	PH-DRO W		LICA
VH-I		1	1645	X			1			6	Ż	X											(GEL REQUE		
MW-2			1520	X						6	X	X								-:				GRAM CO		
MW- 3			1554	X						8	X	X		X									C	APRIC ACID		
MW-4		4	630	X			4	_		6	X	X												SURRO	SAIE	'
				Ĺ			`			L	_															
- 18 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1							<u> </u>		_	┡	⊢										Ш					
						-	<u> </u>			\vdash	\vdash	ļ									-					
			/						-	-	├	-										\vdash				
Turnaround Time Requested ((TAT) (plea	ase circle)		Reling	uished	i by					Date		<u> </u>	Time			Recer	ved by	7	_				Date	Time	
Standard 5 day		4 day			ب	1	1			p>		6.	30					k	/	<u>~</u>	1	ul		6/30/17	<u> </u>	30
72 hour 48 hour		24 hour		Reling	j uished	d by	(J			Date			Time			Recei	ved by					ľ	Date	Time	
Data Package (circle if required)		ED	F/EDD	Relino	uished	by	-				Date			Time			Recei	ved by	/					Date	Time	
Type I - Full Type VI (I	Raw Data)				2.1		-0.			S															The	
EDD (circle if required)				1	•		-	mmer Fe				Ot	her_				Recei	ved by	y				١	Date	Time	
EDFFLAT (default) Other:				\vdash												_	<u> </u>	ıota:	4. C	ools	lote	o+2		Ves		No
EDFFLAT (default) Other:					16	empe	erati	ure L	por	ı Ke	ceipt				°C		Custody Seals Intact? 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: July 14, 2017

Project: 94612

Submittal Date: 07/01/2017 Group Number: 1820664 PO Number: 0015235605 Release Number: CMACLEOD State of Sample Origin: CA

Lancaster Labs
<u>(LL) #</u>
9083350
9083351
9083352
9083353
9083354

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 current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/. To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Stantec	Attn: Erin O'Malley
Electronic Copy To	Stantec	Attn: Marisa Kaffenberger
Electronic Copy To	Stantec	Attn: Travis Flora
Electronic Copy To	Stantec	Attn: Laura Viesselman
Electronic Copy To	Gettler-Ryan 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-170629 NA Water

QA-T-170629 NA Water LL Sample # WW 9083350 Facility# 94612 Job# 17156473 GRD LL Group # 1820664 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 06/29/2017 Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 07/01/2017 09:50 Reported: 07/14/2017 19:40

SLOQA

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles SW-8	46 8260B	ug/l	ug/1	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl Eth	er 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-8	46 8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C1	2 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	D171911AA	07/10/2017 14:	35 Anthony H Downey	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171911AA	07/10/2017 14:	35 Anthony H Downey	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	17187A20A	07/06/2017 12:	L8 Brett W Kenyon	1
	C6-C12						
01146	GC VOA Water Prep	SW-846 5030B	1	17187A20A	07/06/2017 12:	L8 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-170629 Grab Groundwater

LL Sample # WW 9083351 Facility# 94612 Job# 17156473 GRD LL Group # 1820664 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 06/29/2017 16:45 by FT Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 07/01/2017 09:50 Reported: 07/14/2017 19:40

SLOV1

CAT No.	Analysis Name		CAS Number	Result	Method Detection Limit	Dilution Factor
GC/MS	Volatiles S	W-846 8	8260B	ug/l	ug/l	
10945	Benzene		71-43-2	5	0.5	1
10945	Ethylbenzene		100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl	Ether	1634-04-4	2	0.5	1
10945	Toluene		108-88-3	0.9	0.5	1
10945	Xylene (Total)		1330-20-7	2	0.5	1
GC Vol	latiles S	W-846 8	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water Co	5-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	D171911AA	07/10/2017 14:59	Anthony H Downey	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171911AA	07/10/2017 14:59	Anthony H Downey	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	17187A20A	07/06/2017 14:36	Brett W Kenyon	1
	C6-C12						
01146	GC VOA Water Prep	SW-846 5030B	1	17187A20A	07/06/2017 14:36	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: MW-2-W-170629 Grab Groundwater

LL Sample # WW 9083352 Facility# 94612 Job# 17156473 GRD LL Group # 1820664 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 06/29/2017 15:20 by FT Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 07/01/2017 09:50 Reported: 07/14/2017 19:40

SLOM2

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.	3	5
10945	Ethylbenzene	100-41-4	N.D.	3	5
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	3	5
10945	Toluene	108-88-3	N.D.	3	5
10945	Xylene (Total)	1330-20-7	N.D.	3	5
GC Vol	latiles SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	2,000	250	5

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	D171911AA	07/10/2017 15:23	Anthony H Downey	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171911AA	07/10/2017 15:23	Anthony H Downey	5
01728	TPH-GRO N. CA water	SW-846 8015B	1	17187A20A	07/06/2017 20:34	Brett W Kenyon	5
	C6-C12						
01146	GC VOA Water Prep	SW-846 5030B	1	17187A20A	07/06/2017 20:34	Brett W Kenyon	5



Analysis Report

LL Sample # WW 9083353

LL Group # 1820664

Account # 10906

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

Sample Description: MW-3-W-170629 Grab Groundwater

Facility# 94612 Job# 17156473 GRD 3616 San Leandro-Oakland T0600100333

Project Name: 94612

by FT

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Chevron

Submitted: 07/01/2017 09:50 Reported: 07/14/2017 19:40

Collected: 06/29/2017 15:54

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	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 Vo	latiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	1,400	50	1
	troleum carbons w/Si	SW-846	8015B	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 The reverse surroga	•		140 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	D171911AA	07/10/2017	15:47	Anthony H Downey	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171911AA	07/10/2017	15:47	Anthony H Downey	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17187A20A	07/06/2017	15:04	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	17187A20A	07/06/2017	15:04	Brett W Kenyon	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	171870014A	07/12/2017	15:52	Thomas C Wildermuth	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	171870014A	07/06/2017	23:45	Sherry L Morrow	1



Analysis Report

LL Sample # WW 9083354

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

Sample Description: MW-4-W-170629 Grab Groundwater

Facility# 94612 Job# 17156473 GRD LL Group # 1820664 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 06/29/2017 16:30 by FT Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 07/01/2017 09:50 Reported: 07/14/2017 19:40

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.	79	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	D171911AA	07/10/2017 16:11	Anthony H Downey	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D171911AA	07/10/2017 16:11	Anthony H Downey	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	17187A20A	07/06/2017 15:31	Brett W Kenyon	1
	C6-C12						
01146	GC VOA Water Prep	SW-846 5030B	1	17187A20A	07/06/2017 15:31	Brett W Kenyon	1

Analysis Report

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Quality Control Summary

Client Name: Chevron Group Number: 1820664

Reported: 07/14/2017 19:40

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: D171911AA Benzene Ethylbenzene Methyl Tertiary Butyl Ether Toluene Xylene (Total)	N.D. N.D. N.D.	(s): 9083350-9083354 0.5 0.5 0.5 0.5
Batch number: 17187A20A TPH-GRO N. CA water C6-C12	Sample number N.D.	(s): 9083350-9083354 50
Batch number: 171870014A TPH-DRO CA C10-C28 w/ Si Gel	Sample number N.D.	(s): 9083353 32

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: D171911AA	Sample numbe	r(s): 90833	350-9083354						
Benzene	20	17.4			87		78-120		
Ethylbenzene	20	17.47			87		78-120		
Methyl Tertiary Butyl Ether	20	19.35			97		75-120		
Toluene	20	17.94			90		80-120		
Xylene (Total)	60	55.12			92		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 17187A20A	Sample numbe	r(s): 90833	350-9083354						
TPH-GRO N. CA water C6-C12	1100	991.96	1100	989.13	90	90	80-120	0	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 171870014A	Sample numbe	r(s): 90833	353						
TPH-DRO CA C10-C28 w/ Si Gel	1600	1159.2	1600	1235.71	72	77	40-105	6	20

P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

^{*-} 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: 1820664

Reported: 07/14/2017 19:40

MS/MSD

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

Analysis Name	Unspiked Conc ug/1	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: D171911AA	Sample numb	er(s): 9083	350-9083	354 UNSPK:	P083335					
Benzene	0.524	20	21.3	20	20.93	104	102	78-120	2	30
Ethylbenzene	N.D.	20	21.92	20	21.49	110	107	78-120	2	30
Methyl Tertiary Butyl Ether	N.D.	20	21.7	20	21.61	109	108	75-120	0	30
Toluene	N.D.	20	20.66	20	20.89	103	104	80-120	1	30
Xylene (Total)	N.D.	60	64.52	60	64.27	108	107	80-120	0	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: D171911AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9083350	105	98	97	93
9083351	100	95	99	103
9083352	102	96	99	98
9083353	102	95	98	102
9083354	105	98	97	96
Blank	105	102	97	96
LCS	102	97	98	100
MS	102	99	98	107
MSD	101	98	100	110
Limits:	80-116	77-113	80-113	78-113

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

Batch number: 17187A20A

9083350 92 9083351 132 9083352 95 9083353 96 9083354 90 Blank 86 LCS 97 LCSD 97		Trifluorotoluene-F
9083352 95 9083353 96 9083354 90 Blank 86 LCS 97	9083350	92
9083353 96 9083354 90 Blank 86 LCS 97	9083351	132
9083354 90 Blank 86 LCS 97	9083352	95
Blank 86 LCS 97	9083353	96
LCS 97	9083354	90
	Blank	86
LCSD 97	LCS	97
	LCSD	97

Limits: 63-135

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

Batch number: 171870014A

*- 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.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.



Analysis Report

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Quality Control Summary

Client Name: Chevron Group Number: 1820664

Reported: 07/14/2017 19:40

Surrogate Quality Control (continued)

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

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

Batch number: 171870014A

	Orthoterphenyl	
9083353	84	_
Blank	86	
LCS	86	
LCSD	95	
Limits:	42-126	

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

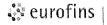
^{*-} Outside of specification

⁽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:

187906

Group Number(s): 1820664

Client: CALIFORNIA OFFICE

Delivery and Receipt Information

Delivery Method:

BASC

Arrival Timestamp:

07/01/2017 9:50

Number of Packages:

<u>4</u>

Number of Projects:

<u>5</u>

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:

Paperwork Enclosed:

Yes

VOA Vial Headspace ≥ 6mm:

No

Samples Chilled:

Yes Yes Total Trip Blank Qty:

2 HCL

Samples Intact:

Yes

Trip Blank Type:
Air Quality Samples Present:

No

Missing Samples:

No No

Extra Samples:

No

Unpacked by Nicole Reiff (25684) at 12:06 on 07/01/2017

Discrepancy in Container Qty on COC:

Samples Chilled Details

Thermometer Types:

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler#	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	5.4	DT	Wet	Υ	Bagged	N
2	DT146	2.4	DT	Wet	Υ	Bagged	N
3	DT146	4.3	DT	Wet	Υ	Bagged	N
4	DT146	0.8	DT	Wet	Y	Bagged	N



Explanation of Symbols and Abbreviations

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

BMQL Below Minimum Quantitation Level mq milligram(s) degrees Celsius mĹ milliliter(s) cfu colony forming units MPN Most Probable Number **CP Units** cobalt-chloroplatinate units N.D. none detected F degrees Fahrenheit ng nanogram(s) nephelometric turbidity units gram(s) NTU g IÚ International Units pg/L picogram/liter kilogram(s) RLReporting Limit kg **TNTC** liter(s) Too Numerous To Count lb. pound(s) microgram(s) μg μĹ microliter(s) m3 cubic meter(s) milliequivalents umhos/cm micromhos/cm meg

< 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 Besults 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:

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...

W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

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.

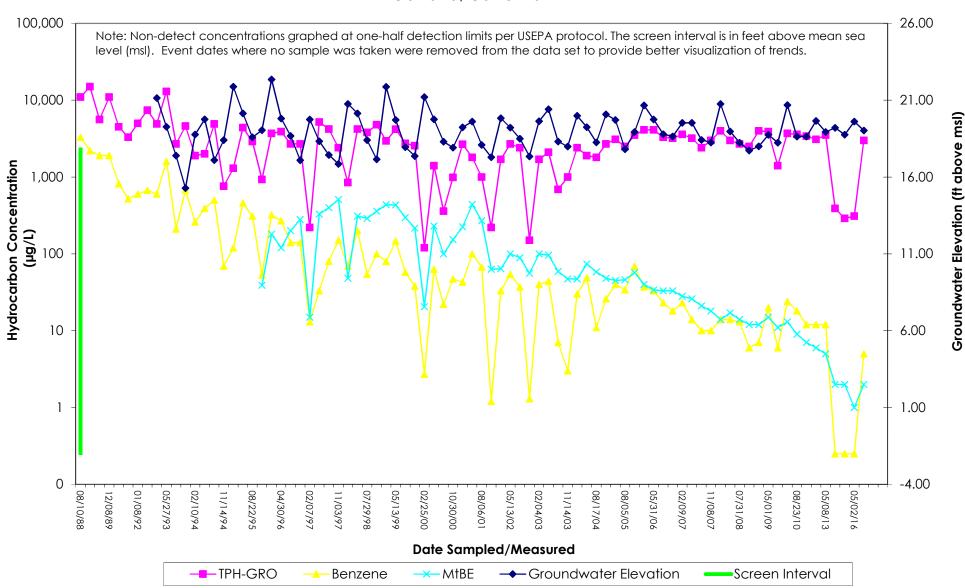
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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

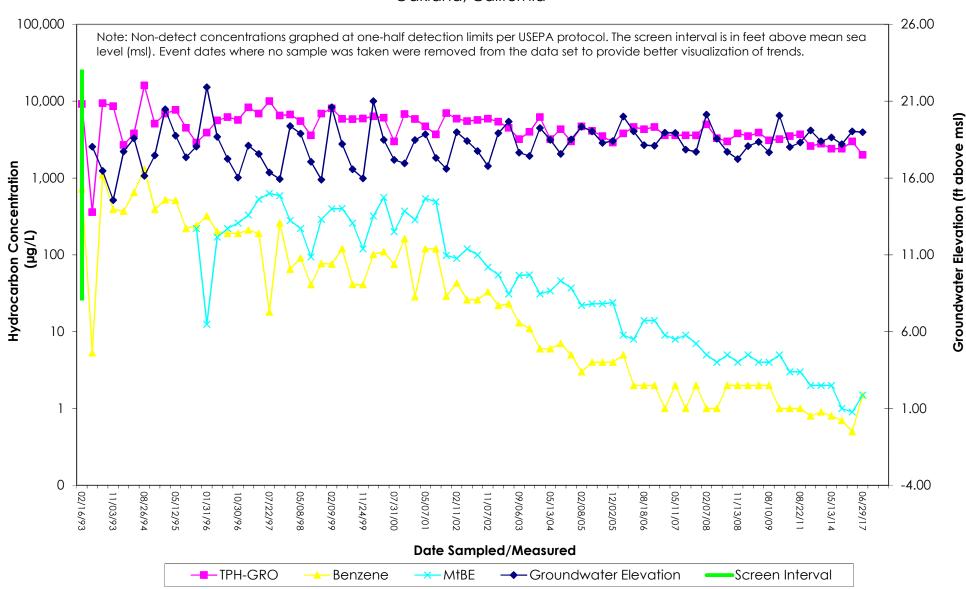
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ATTACHMENT C Hydrographs

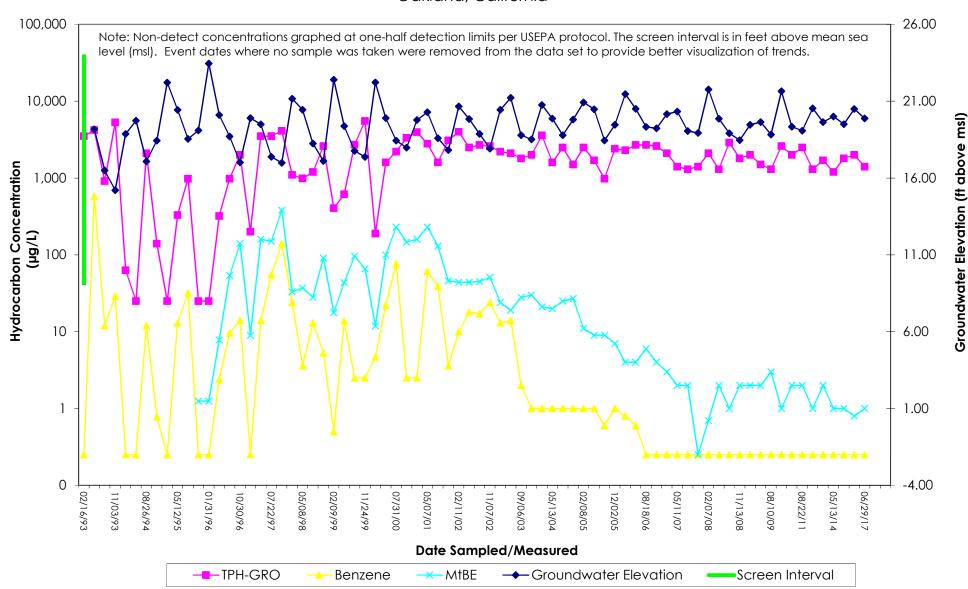
VH-1 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



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

