

By Alameda County Environmental Health 11:10 am, Jul 14, 2015

Second Quarter 2015 Annual Groundwater Monitoring Report

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



Prepared for: Chevron Environmental Management Company 6101 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
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Chevron Environmental Management Company 6101 Bollinger Canyon Road San Ramon, CA 94583 Tel (925) 790-6506 CMacleod@chevron.com

July 13, 2015

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 2015 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 13, 2015

Attention: Mr. Mark Detterman

Alameda County Environmental Health

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

Reference: Second Quarter 2015 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 2015 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 2015 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 2015 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Gettler-Ryan Inc. (G-R) performed the Second Quarter 2015 groundwater monitoring and sampling event on May 14, 2015. 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 this quarter. 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 2015 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 entire screen interval is currently submerged. Current and historical groundwater elevation data are presented in **Table 2**. A groundwater elevation contour map (based on Second Quarter 2015 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 0.016 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) both with and without silica gel cleanup using US EPA Method 8015B (SW-846).

Groundwater Analytical Results

During Second Quarter 2015, groundwater samples were collected from four Site wells (VH-1, MW-2, MW-3, and MW-4). Current and historical groundwater analytical results 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) for groundwater that is a current or potential source of drinking water or method detection limits (MDLs). An isoconcentration map was not developed for TPH-DRO because it was only analyzed at one well this quarter.

Certified laboratory analysis reports and chain-of-custody documents are presented as **Attachment B**. Hydrographs based on current and historical groundwater elevations and

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analytical results are included in **Attachment C**. A summary of Second Quarter 2015 groundwater analytical results follows:

- TPH-GRO was detected in three Site wells, at concentrations of 290 micrograms per liter (μg/L; well VH-1), 1,800 μg/L (well MW-3), and 2,400 μg/L (well MW-2), which are within historical limits for each respective well.
- TPH-DRO (with silica gel cleanup) was detected in the one Site well in which it was analyzed (well MW-3), at a concentration of 120 μg/L, which is within historical limits for this well.
- **Benzene** was detected in one Site well, at a concentration of 0.7 μ g/L (well MW-2), which is a historical low for this well.
- **Toluene** was not detected above the MDL (0.5 μ g/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 1 µg/L (wells MW-2 and MW-3) and 2 µg/L (well VH-1). The concentration in well MW-3 is within historical limits, the concentration in well VH-1 is equal to the historical low, and the concentration in well MW-2 is a historical low.

CONCLUSIONS AND RECOMMENDATIONS

Concentrations were conservatively compared to ESLs for groundwater that is a current or potential source of drinking water, and TPH-GRO and TPH-DRO (with silica gel cleanup) were observed above ESLs as follows:

- TPH-GRO concentrations exceed the ESL of 100 µg/L in wells VH-1, MW-2, and MW-3; and
- The TPH-DRO (with silica gel cleanup) concentration exceeds the ESL of 100 μg/L in well MW-3.

Maximum concentrations of TPH-GRO, BTEX compounds, and MtBE 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, the maximum concentration of TPH-GRO was observed in well MW-2, located approximately 3 feet from the former southernmost dispenser island, and concentrations of BTEX compounds and MtBE are observed below ESLs or MDLs in all four Site wells. TPH-DRO (with silica gel cleanup) was detected above the ESL in the one well in which it was analyzed (well MW-3), located approximately 4 feet from the former waste oil UST. The current groundwater monitoring and sampling plan should continue.

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. ACEH concurred with the proposed scope of the data gap work plan, provided that requested modifications were addressed and incorporated during field implementation. Requested modifications included an updated well survey using California

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Department of Water Resources (DWR) and Alameda County Public Works (ACPW) databases, ensuring the off-Site soil borings are positioned down-gradient of wells VH-1 and MW-2 along the predominant direction of groundwater flow, ensuring soil samples are collected and analyzed for signs of contamination and changes in lithology, and that special efforts and equipment are utilized to collect representative groundwater samples at a depth corresponding to the deep granular layer beneath the Site. During a meeting with Chevron and Stantec on May 8, 2014, ACEH extended the due date of the Soil and Groundwater Investigation Report to September 26, 2014. In addition, 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 locations of soil borings SB-5 and SB-6. 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 soil borings SB-5 and SB-6 to the private properties down-gradient from each of the previously proposed soil boring locations.

Additional time is necessary to acquire access to the private properties before field work can be initiated. Therefore, in a letter dated March 27, 2015, Stantec requested an additional extension on the Soil and Groundwater Investigation Report. ACEH approved the latest extension request in an email dated April 24, 2015, and the current due date for the Soil and Groundwater Investigation Report is July 31, 2015. Access to the private properties has not yet been established, so an additional extension request was submitted July 13, 2015.

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 2015 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
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Senior Geologist

Former Chevron-branded Service Station 94612 July 13, 2015 Page 6 of 6

Attachments:

Table 1 – Well Details / Screen Interval Assessment – Second Quarter 2015

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 2015

Figure 3 – Groundwater Flow Direction Rose Diagram – Second Quarter 2015

Figure 4 – Site Plan Showing Groundwater Concentrations – Second Quarter 2015

Figure 5 – TPH-GRO Isoconcentration Map – Second Quarter 2015

Attachment A – Gettler-Ryan Inc. Field Data Sheets and Standard Operating Procedures – Second Quarter 2015

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

cc:

Ms. Carryl MacLeod, Chevron Environmental Management Company, 6101 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 2015

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 (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	28.98	9.15	10-30	Depth-to-groundwater above screen interval.
MW-2	02/01/93	Monitoring	2	28.05	20.00	19.45	9.85	5-20	Depth-to-groundwater within screen interval.
MW-3	02/01/93	Monitoring	2	29.04	20.00	17.97	9.53	5-20	Depth-to-groundwater within screen interval.
MW-4	08/15/95	Monitoring	2	27.27	20.00	17.85	8.81	7-20	Depth-to-groundwater within screen interval.

Notes:

bgs = below ground surface

msl = mean sea level

TOC = top of casing

¹ = As measured prior to groundwater sampling on May 14, 2015.

WELL ID/ DATE	TOC* (ff.)	DTW (ff.)	GWE (msl)	TPH-MO (µg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	MtBE (μg/L)	TOG (µg/L)
DAIE			(IIISI)									
	Groundwa	iter ESL		100	100	100	1	40	30	20	5	100
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	3.76 8.14	19.71			2,930 4,180	79.3 147	12.8	16.5	20.3	433/245 ¹²	
											297/233 ¹²	
09/07/99	27.85	9.91	17.94			2,750	57.6	<5.0	6.53	<5.0		
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/ DATE		TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	B	T	E	X	MtBE	TOG
JAIL		(ft.)	(ft.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
		Groundy	vater ESL		100	100	100	1	40	30	20	5	100
/H-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			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			1,000 ⁶	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	
08/09/0211		27.91	9.41	18.50			2,400	37	2.4	1.2	3.4	86/8912	
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	100/5312	
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										
02/08/0514		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	
D5/11/07 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	27.91	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	27.71	7.23	20.68			3,700	24	4	5	5	13	

WELL ID/ DATE		TOC* (ff.)	DTW (ff.)	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)	MtBE (μg/L)	TOG (μg/L)
		Groundwa			100	100	100	1	40	30	20	5	100
VH-1 (cont)													
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	
05/10/1214	NP ¹⁸	27.91	8.26	19.65			3,100	12	3	2	4	6	
05/08/13 ¹⁴	NP ¹⁸	27.71	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	
MW-2													
02/16/93		27.51	7.40				9,200	720	110	250	170		
03/26/93 05/27/93		27.51 27.51	7.62 9.47	19.89 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 12/19/95		27.51 27.51	10.16 9.46	17.35 18.05			4,500 2,900	220 240	16 <10	61 19	47 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	220/6212	
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	
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		
11/24/99		27.51	11.53	15.98			5,940	40.9	<10	10.8	<10	120 ^{1,12}	
02/25/00		27.51	6.51	21.00			6,370	101	9.37	39.8	33.2	321/12112	

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)	TOG (μg/L)
DAIL	Groundwa		(III3I)	100	100	100	μ <u>φ/ι)</u> 1	(μg/L) 40	30	20	(μg/ι) 5	100
	Ciconawa	iei Lui		100	100	100		40		20		
MW-2 (cont)	07.51	0.00	10.40			6,100 ⁸	110	10	07	21	560/120 ¹²	
05/10/00 07/31/00 ¹¹	27.51	9.02	18.49			3,000 ⁸	110	13	27	31	200/130 ¹²	
10/30/00 ¹¹	27.51	10.33	17.18			6,810 ¹⁰	75	14	28	28	372/140 ¹²	
02/05/01 ¹¹	27.51	10.56	16.95				162	<5.00	8.05	<15.0	285/140 ¹²	
05/07/01 ¹¹	28.05	9.58	18.47			5,860 4,700 ⁶	28.4	6.86	16.2	11.8	540/88 ¹²	
08/06/01 ¹¹	28.05	9.20	18.85				120	15	30	42	490/110 ¹²	
	28.05	10.74	17.31			3,700 ⁶	120	<20	28	33	93/98 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		
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	100/69 ¹²	
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	
03/03/0614	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	
02/09/0714	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	
05/01/09 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	
01/29/10 ¹⁴	28.05	7.98	20.07			3,200	1	0.8	2	1	5	

WELL ID/ DATE	TOC* (ff.)	DTW (ft.)	GWE (msl)	TPH-MO (μg/L)	TPH-DRO (µg/L)	TPH-GRO (µg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	MtBE (µg/L)	TOG (μg/L)
	Groundwa			100	100	100	1	40	30	20	5	100
MW-2 (cont)												
08/23/1014	28.05	10.03	18.02			3,500	1	0.6	1	0.7	3	
08/22/1114	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												
03/14/13	28.05	9.85	18.20			2,400	0.7	<0.5	<0.5	<0.5	1	
MW-3												
02/16/93	28.50 28.50	 7.18	21.32			3,500	<0.5 	8.1	4.6	7.7		
03/26/93 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	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 02/01/95	28.50 28.50	10.07 6.29	18.43 22.21		 <50	140 <50	0.78 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5		
	28.50		20.43		540 ²	330	13		1.9			
05/12/95		8.07			550 ²			1.1		0.69		
08/22/95	28.50	9.95	18.55			980	32	<1.0	<1.0	<1.0		
12/19/95 01/31/96	28.50 28.50	9.40 5.05	19.10 23.45		<50 <50	<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<2.5 <2.5	
					240 ²							
04/30/96	28.50	8.40	20.10		470 ²	320	2.4	<0.5	0.75	<0.5	7.8	
08/01/96	28.50	9.80	18.70			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	
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	
		9.12									43.5/21.2 ¹²	
05/13/99	28.50		19.38		 528 ²	615	13.8	1.05	<0.5	<0.5	96.3/57.9 ¹²	
09/07/99	28.50	10.73	17.77			2,710	<5.0	<5.0	<5.0	<5.0	66 ^{1,12}	
11/24/99	28.50	11.13	17.37		1,070 ²	5,530	<5.0	<5.0	5.59	<5.0		
02/25/00	28.50	6.28	22.22			189	4.68	<0.5	<0.5	<0.5	11.9/<2.012	

WELL ID/ DATE	TOC* (ff.)	DTW (ff.)	GWE (msl)	TPH-MO (μg/L)	TPH-DRO (μg/L)	TPH-GRO (µg/L)	B (µg/L)	T (μg/L)	E (µg/L)	Χ (μg/L)	M†BE (μg/L)	TOG (µg/L)
PAIL	Groundwa		(may	100	100	100	1	40	30	20	5	100
MW-3 (cont)												
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	100/5112	
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 ⁹	3,320 ¹⁰	<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	
05/07/01 ¹¹	29.04	8.75	20.29			2,800 ⁶	61	12	<10	20	230/49 ¹²	
05/10/01 ¹¹	29.04	8.83	20.21		390 ¹³							
08/06/01 ¹¹	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	40/46 ¹²	
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	44/32 ¹²	
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 <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	<20/19 ¹²	
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	0.6	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	7.20 9.18	19.86		260	1,300	<0.5	<0.5	<0.5	<0.5	2	
07/31/08 ¹⁴	29.04 29.04	10.13	18.91		500	2,900	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	1	
11/13/08 ¹⁴	29.04 29.04	10.13	18.46		880	1,800	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	2	
02/02/09 ¹⁴	29.04 29.04	9.58	19.46		310 ¹⁹	2,000	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	2	
05/01/09 ¹⁴					51 ²⁰							
00/01/07	29.04	9.40	19.64		JI	1,500	<0.5	<0.5	<0.5	<0.5	2	

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)	M†BE (μg/L)	TOG (μg/L)
	Groundy	vater ESL		100	100	100	1	40	30	20	5	100
MW-3 (cont)												
08/10/0914	29.04	10.21	18.83		470	1,300	<0.5	<0.5	<0.5	<0.5	3	
01/29/1014	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	
08/22/1114	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	2	
05/13/14 ¹⁴					200/140 ^{21,22}				<0.5			
	29.04	9.03	20.01			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	
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	9.15	18.12			<50	<0.5	<0.5	<0.5	<0.5	~2.5	
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	
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	17.77			227	<0.5	<0.5	<0.5	<0.5	<0.5 ¹²	
02/25/00	27.27	INACCESSIBLE	17.22				<0.5 	<0.5	<0.5	<0.5		
	27.27	6.17	01.10								<2.5/<2.0 ¹²	
03/01/00 05/10/00	27.27	6.17 INACCESSIBLE -	21.10	 ED OVER WELL		<50 	<0.5 	<0.5 	<0.5 	<0.5 		
07/31/00	27.27	9.37	17.90			<50	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0 ¹²	
						<50 54.0 ¹⁰					<2.50/<2.0 ¹²	
10/30/00 02/05/01	27.27 27.27	9.47 INACCESSIBLE -	17.80	 ED OVER WELL		54.0	<0.500	<0.500	<0.500	<1.50 	<2.50/<2.0	
						<50					<2.5/<2.0 ¹²	
05/07/01	27.27	7.81	19.46				<0.50	<0.50	<0.50	<0.50	6.0/<2.0 ¹²	
08/06/01	27.27	9.78	17.49			<50	1.1	0.52	<0.50	1.1		
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/<212	

WELL ID/	TOC*	DTW	GWE	TPH-MO	TPH-DRO	TPH-GRO	B	T (,(1)	E	X	MtBE	TOG
DATE	(ff.)	(ff.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)
	Groundwa	ter ESL		100	100	100	1	40	30	20	5	100
MW-4 (cont)												
05/13/02	27.27	8.32	18.95			54	<0.50	0.84	<0.50	<1.5	<2.5/<212	
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/<212	
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	
06/03/0514	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	
12/02/0514	27.27	8.35	18.92			<50	<0.5	<0.5	<0.5	<0.5	<0.5	
03/03/0614	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	
05/02/0814	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	
05/01/0914	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	
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 27.27	8.81	18.46			< 50	< 0.5	<0.5	<0.5	< 0.5	<0.5	

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)
	Groundwa	ter ESL		100	100	100	1	40	30	20	5	100
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	
02/09/99						<50	<0.5	<0.5	<0.5	<0.5	<2.0	
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	
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	
05/13/02			_			<50	<0.50	<0.50	<0.50	<1.5	<2.5	

WELL ID/ DATE	TOC*	DTW #	GWE (ms/)	TPH-MO	TPH-DRO	TPH-GRO	B (ug/l)	T (ua/l)	E (ua/l)	X (ua/l)	MtBE	TOG
DAIE	(ft.)	(ft.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	Groundwa	ter ESL		100	100	100	1	40	30	20	5	100
QA (cont)												
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 05/05/03						<50 <50	<0.50 <0.5	<0.50 <0.5	<0.50 <0.5	<1.5 <1.5	<2.5 <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												
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	
	==					<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						<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	
02/09/07 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	<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	
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	

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 (µg/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

- ESL = California Regional Water Quality Control Board San Francisco Bay Region Environmental Screening Level for groundwater that is a current or potential source of drinking water
- * 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.
- ⁵ ORC was installed.
- Laboratory report indicates gasoline C6-C12.
- Laboratory report indicates unidentified hydrocarbons <C16.</p>
- Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.
- Laboratory report indicates unidentified hydrocarbons >C16.
- 10 Laboratory report indicates hydrocarbon pattern present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
- ORC in well.
- ¹² MtBE by EPA Method 8260.
- Laboratory report indicates unidentified hydrocarbons C9-C17.
- ¹⁴ BTEX and MtBE by EPA Method 8260.
- ORC removed from well.
- 16 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.
- 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.
- ²¹ 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)	E†BE (µg/L)	TAME (µg/L)
C	Groundwater ESL	NE	12	NE	NE	NE
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

ESL = California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Level for groundwater that is a current or potential source of drinking water

NE = ESL not established

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)
Groundwater ESL	0.25	50	2.5	8.2	81	NE	NE	NE	6.1
MW-3 08/22/11	2.6	173	8.3	308	123	3	3	4	2

EXPLANATIONS:

ANALYTICAL METHODS:

(µg/L) = Micrograms per liter

PPL = priority pollutant list

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

ESL = California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Level for groundwater that is a current or potential source of drinking water

NE = ESL not established

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

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

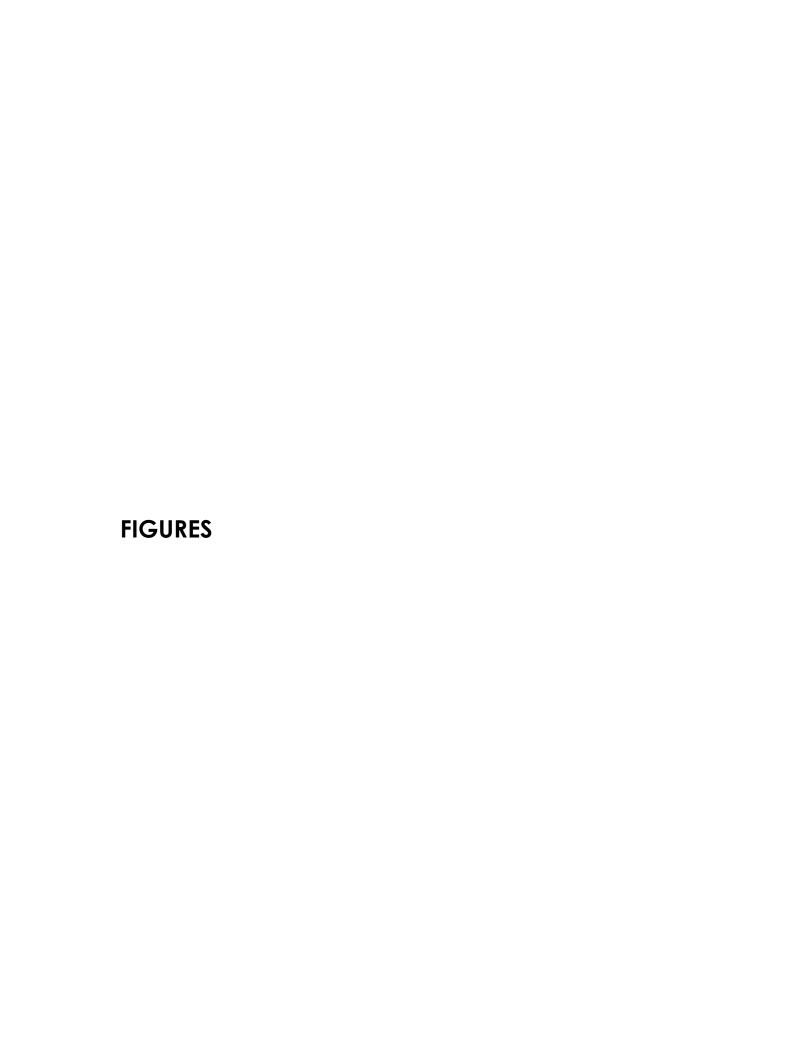
Table 6 Dissolved Oxygen Levels

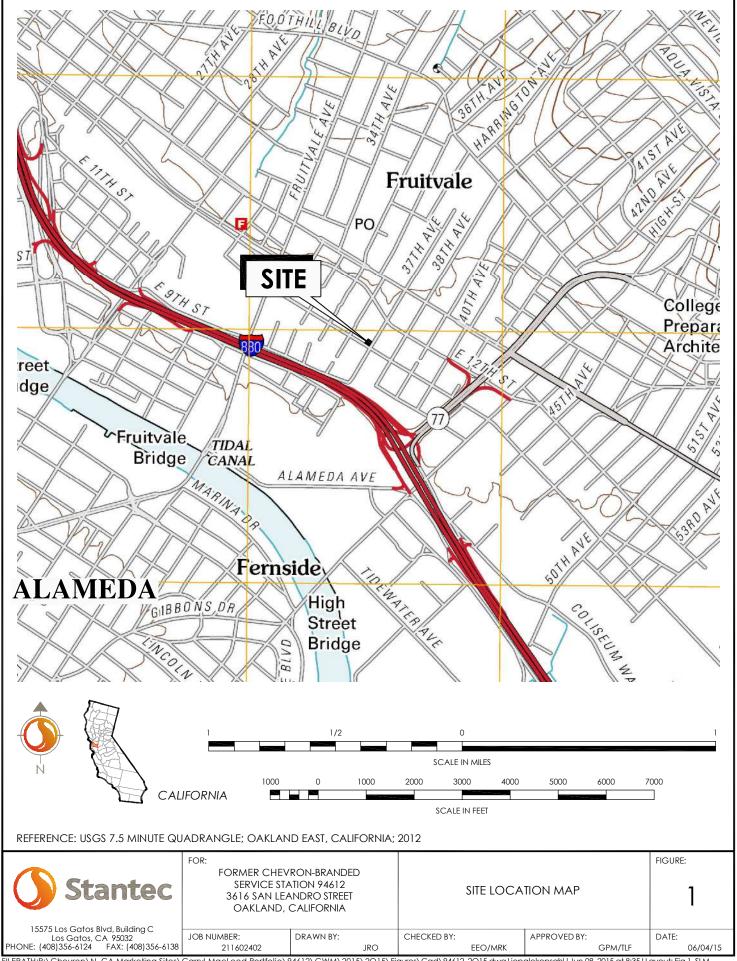
Former Chevron-branded Service Station 94612 3616 San Leandro Street Oakland, California

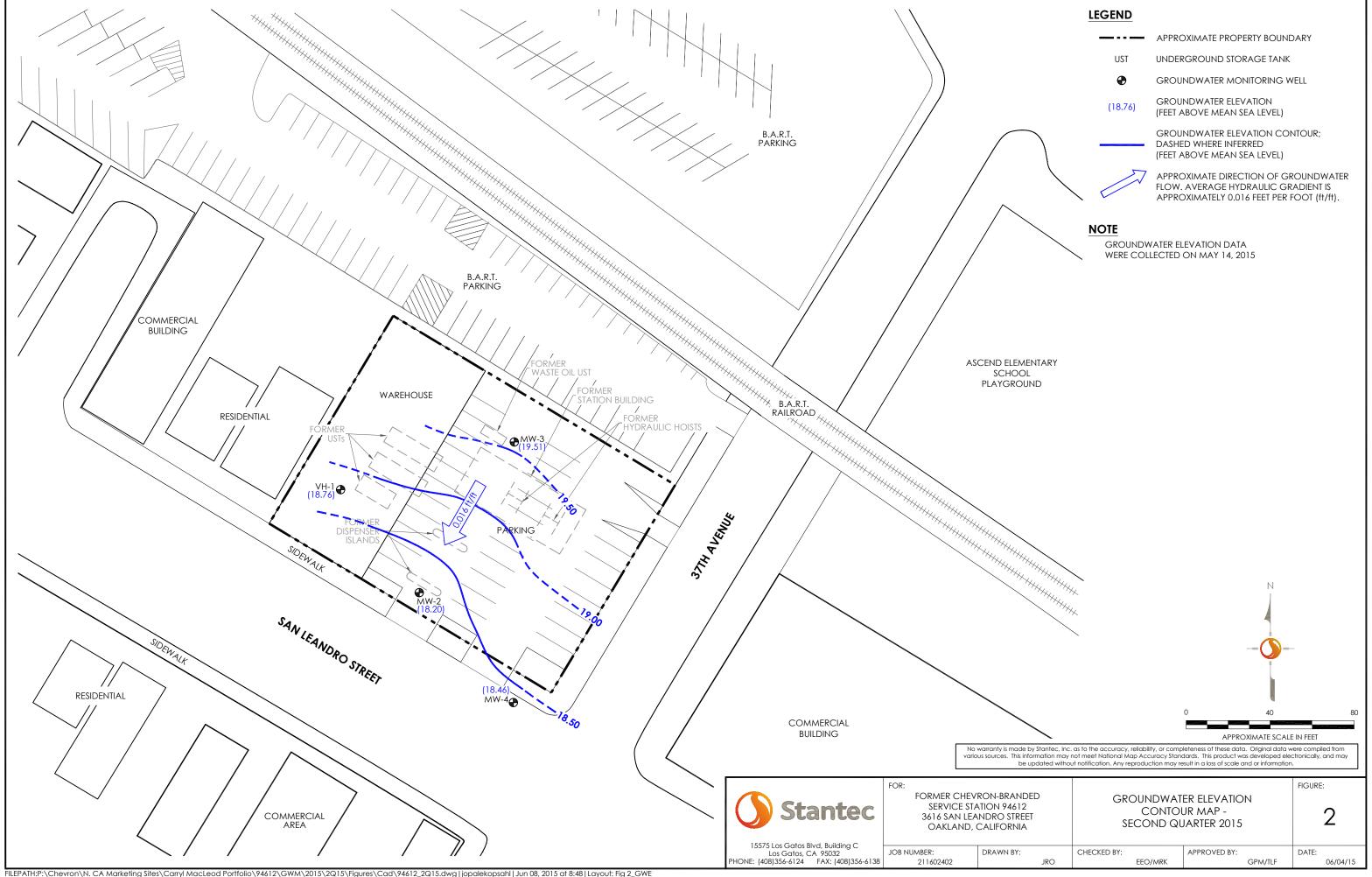
	DATE						
WELL ID	DATE	PRE-PURGE D.O. (mg/L)					
VH-1	05/10/00	0.90					
	07/31/00	1.25					
	10/30/00	1.97					
	05/07/01	1.10					
	08/06/01	1.40					
	11/12/01	0.90					
	02/11/02	1.10					
	05/13/02	0.70					
MW-2	05/10/00	0.57					
	07/31/00	1.26					
	10/30/00	1.25					
	05/07/01	0.90					
	08/06/01	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					
171.71 - 7	10/30/00	0.97					
	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					

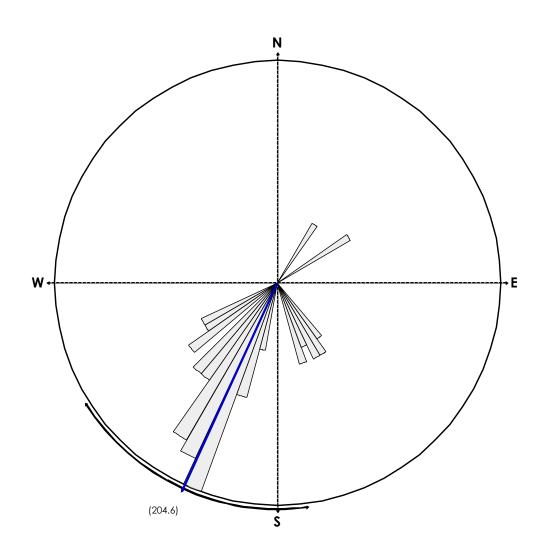
EXPLANATIONS:

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









EQUAL AREA PLOT

Number of Points 63

Class Size 5

Vector Mean 204.60 Vector Magnitude 52.65

Consistency Ratio 0.84

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

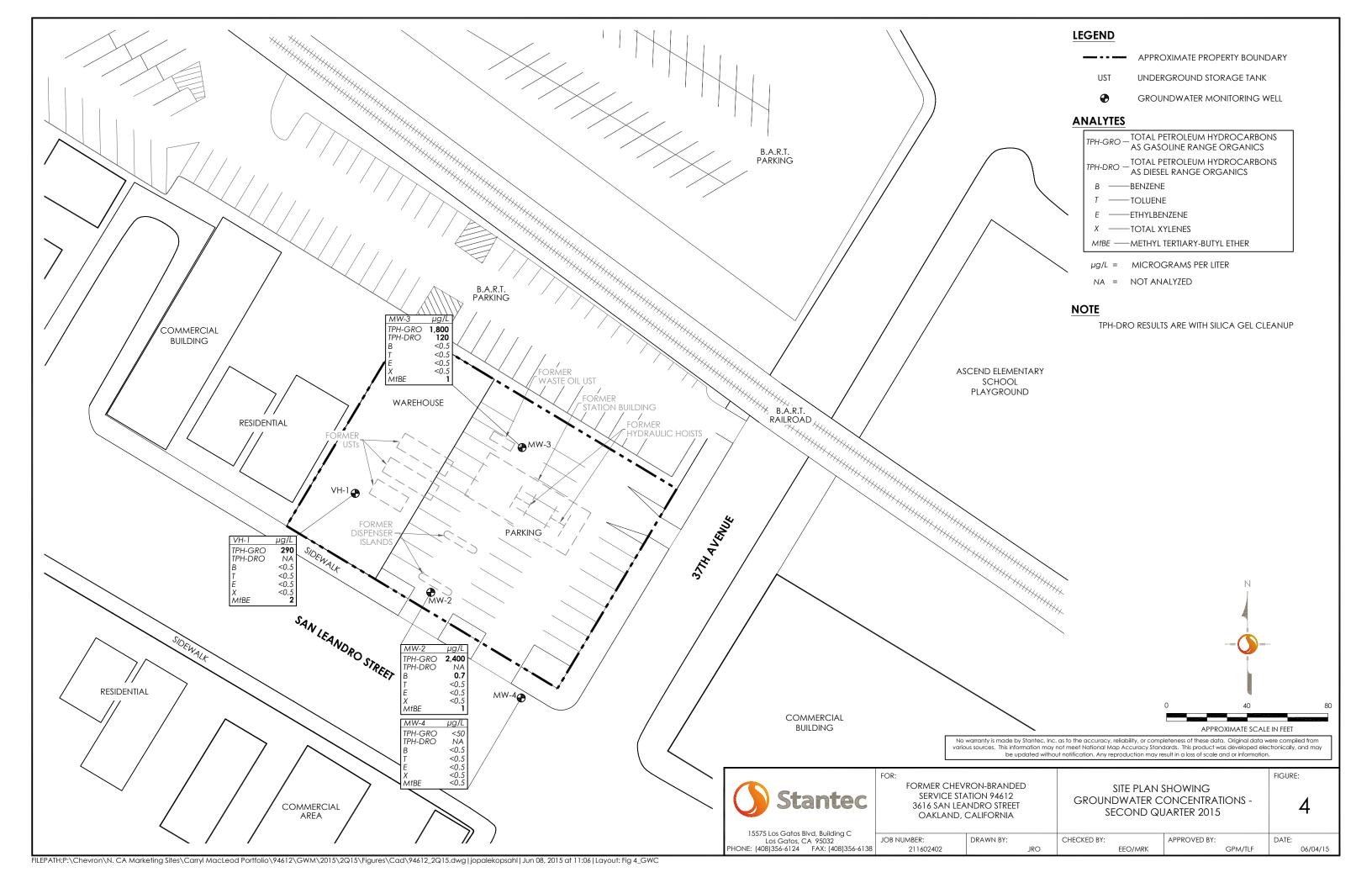
Stantec

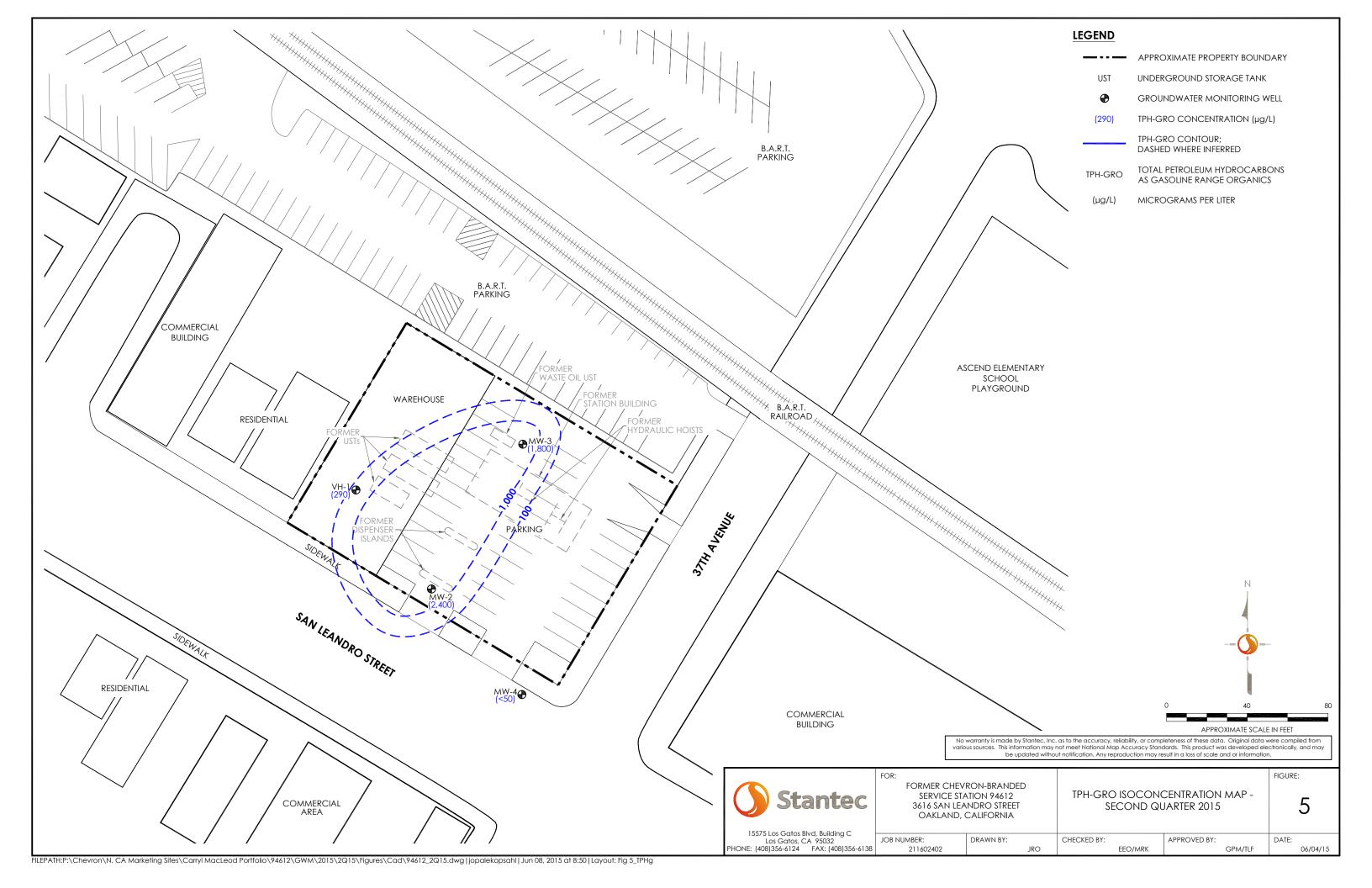
15575 Los Gatos Blvd, Building C Los Gatos, CA 95032 PHONE: (408)356-6124 FAX: (408)356-6138 FORMER CHEVRON-BRANDED SERVICE STATION 94612 3616 SAN LEANDRO STREET OAKLAND, CALIFORNIA

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM -SECOND QUARTER 2015 3

FIGURE:

C JOB NUMBER: DRAWN BY: CHECKED BY: APPROVED BY: DATE: 06/04/15





ATTACHMENT A
Gettler-Ryan Inc. Field Data Sheets and Standard
Operating Procedures – Second Quarter 2015

TRANSMITTAL

S. O.D.

May 22, 2015 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.

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 14, 2015

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

WELL CONDITION STATUS SHEET

Client/Facility #:	Chevron #9-4612	Job #:	386473
Site Address:	3616 San Leandro Street	Event Date:	5-14-15
City:	Oakland, CA	Sampler:	AW

					·					_
Vault Frame Condition	Gasket/O-Ring (M) Missing (R) Replaced	BOLTS (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retap	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 Bolts	Pictures Taken Y/N
OK	~/4		3	ok.		->	W	N	10 x0" Box	N
OK		>	25	OK		>	,	1	marked /8:1/2	1
OK		4	25	OK		>) / N	
0K						->	V		Emco 18"/2	
										1
					-					
	·									
								e		
										-
	OK OK	Condition (M) Missing (R) Replaced	Condition (M) Missing (R) Replaced (M) Missing (R) Replaced OK N/A	Vault Frame Condition (M) Missing (M) Missing (R) Replaced (R) Replace	Vault Frame Condition Valid Frame Condition Gasket/O-Ring (M) Missing (M) Missing (R) Replaced Sestripped (R) Repla	Vault Frame Condition Gasket/O-Ring (M) Missing (R) Replaced BOLTS (M) Missing (R) Replaced Condition S=Broken S=Stripped R=Retap Condition C=Cracked B=Broken G=Gone Condition C=Cracked B=Broken G=Gone	Vault Frame Condition Gasket/O-Ring (M) Missing (R) Replaced Bolt Flanges (M) Missing (R) Replaced APRON Condition (C=Cracked B=Broken G=Gone) Grout Seal (Deficient) inches from prevents tight cap seal) OK N/A S OK S OK S S S OK S OK S S S S S OK S S S S S S	Vault Frame Condition Gasket/O-Ring (M) Missing (M) Missing (R) Replaced OK OK OK OK OK OK OK OK OK O	Vault Frame Gasket/O-Ring (M) Missing (M) Missing (R) Replaced (R) Rep	Vault Frame Condition (M) Missing (R) Replaced (R) Replac

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.

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.



Client/Facility#:	Chevron #9-4612		Job Number:	386473	
Site Address:	3616 San Leandro	Street	Event Date:	5-14-15	(inclusive)
City:	Oakland, CA		Sampler:	AM	
Well ID	VH-I		Date Monitored:	5-14-15	
Well Diameter	2 (4) in.	[Vol	ume 3/4"= 0	0.02 1"= 0.04 2"= 0.17 3"	'= 0.38
Total Depth	28.98 ft.		tor (VF) 4"= 0		'= 5.80
Depth to Water	9.15 ft. 9.83 xVF	Check if water colun		0 ft. = Estimated Purge Volume:	
Depth to Water v	v/ 80% Recharge [(Height			Time Started:	gal.
Purge Equipment:		Sampling Equipment		Time Completed:	(2400 hrs) (2400 hrs)
Disposable Bailer				Depth to Product:	
Stainless Steel Baile	, /	Disposable Bailer Pressure Bailer		Depth to Water:	ft
Stack Pump	'	Metal Filters		Hydrocarbon Thickness:	ft
Peristaltic Pump		Peristaltic Pump		Visual Confirmation/Descr	iption:
QED Bladder Pump		QED Bladder Pump			
Other:	/	Other:		Skimmer / Absorbant Soci	
		Other		Amt Removed from Skimn	
				Amt Removed from Well:_ Water Removed:	
				Water Nemoved.	10
O44 T'	, Javort				
Start Time (purge		Weather Co	_	Cloudy	
Sample Time/Da		Water Color	Cloudy	Odor O IN _Slig	hf
Approx. Flow Rat	te: gpm.	Sediment De	escription:	C/ondy	
Did well de-water	? If yes,	Time: Vo	olume:	_ gal. DTW @ Sampling:	9-15
Time (2400 hr.)	Volume (gal.) pH 7.17	Conductivity (Temperature (C) / F)	D.O. ORP (mg/L) (mV)	
		LABORATORY	IFORMATION.		
ŞAMPLE ID	(#) CONTAINER REFRI	LABORATORY IN IG. PRESERV. TYPE	LABORATORY	T. ANALYO	
VH-I	x voa vial YES		LANCASTER	ANALYS TPH-GRO(8015)/BTEX+MTBE(8)	
	x 500ml ambers YES		LANCASTER	TPH-DRO w/sgc COLUMN/TPH-	
				Sittle Woge Collows (1)	3/(0010)
					
COMMENTS:	Well Inacra	stic va	truck.	No purge samp	k taken.
Add/Replaced Gas	ket: Add/Repl	laced Bolt:	Add/Replaced Loc	k: Add/Replaced P	lug:



Client/Facility#:	Chevron #9-	4612		Job Number:	386473	
Site Address:	3616 San Le	andro St	reet	Event Date:	5-14-15	(inclusive)
City:	Oakland, CA			Sampler:	AW	
Well ID Well Diameter Total Depth Depth to Water Depth to Water Purge Equipment: Disposable Bailer Stainless Steel Baile Stack Pump Peristaltic Pump QED Bladder Pump Other:	//w-2 (2)/4 in 19.45 ft. 9.85 ft. 9.60 w/ 80% Recharge	xVF 17 [(Height of W S D P M M P Q Q	Volu Fact Check if water colum = 1.63	Date Monitored: me 3/4"= 0 or (VF) 4"= 0 n is less then 0.50 x3 case volume =	5-14-15 .02 1"= 0.04 2"= 0.17 .66 5"= 1.02 6"= 1.50) ft. Estimated Purge Volume: Time Started: Time Completed:	
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.) 1070	nte: 1045 / 9	5-14-15 gpm. If yes, Tin PH 7-00 7-04 7-09	Weather Cor Water Color: Sediment De ne: Vo Conductivity (13) / mS µmhos/cm) 518 506		gal. DTW @ Sampli	Mesolc ng: 11.24 ORP (mV)
	•		AROPATORY IN	EOPMATION		
SAMPLE ID	(#) CONTAINER	REFRIG.	ABORATORY IN PRESERV. TYPE	LABORATORY	ΔN	ALYSES
Mw-2	6 x voa vial x 500ml ambers	YES YES	HCL NP	LANCASTER LANCASTER	TPH-GRO(8015)/BTEX+M* TPH-DRO w/sgc COLUMN	ΓΒΕ(8260)
COMMENTS:					Morri	sen /8'/2S
Add/Replaced Gas	sket:	Add/Replaced	1 Bolt	Add/Replaced Loc	¢: Δdd/Renla	aced Dina.



Client/Facility#:	Chevron #9-	4612		Job Number:	386473	
Site Address:	3616 San Le	andro St	reet	Event Date:	5-14-15	(inclusive)
City:	Oakland, CA	\		Sampler:	Aw	
Well ID Well Diameter Total Depth Depth to Water Depth to Water Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Peristaltic Pump QED Bladder Pump Other:		xVF	Vol Fac heck if water colun 1 = 1.43	_ x3 case volume : + DTW]:	0.66 5"= 1.02 6"= 1.50 12 0 ft. = Estimated Purge Volume:	(2400 hrs)ftftftftft ription:
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate Time (2400 hr.)	te: 1000 / '	5-14-15 gpm. If yes, Tin pH 6-95 7.02 7.06	Sediment De	Cloudy	Odor: OIN modes Clowdy gal. DTW @ Sampling: D.O. ORP (mg/L) (mV)	10.79
		1	ABORATORY II	NEORMATION		
SAMPLEID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYS	ES
MW-3	6 x voa vial	YES	HCL.	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8	
	Zx 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc COLUMN/TPH-	DRO(8015)
COMMENTS:					Allesp (t'iSon	18725
Add/Replaced Gas	sket:	Add/Replaced	Bolt:	Add/Replaced Loc	k: Add/Replaced F	Plug:



Client/Facility#:	Chevron #9-	4612		Job Number:	386473	
Site Address:	3616 San Le	andro S	treet	Event Date:	5-14-15	(inclusive)
City:	Oakland, CA			Sampler:	AW	(
Well ID	MWY	_		Date Monitored:	5-14-15	
Well Diameter	(2)/4 in	- I.	Vol	ume 3/4"= 0	0.02 1"= 0.04 2"= 0.1	7 3"= 0.38
Total Depth	17.85 ft.	<u>-</u>		tor (VF) 4"= 0		
Depth to Water	8.81 ft.		heck if water colun	n is less then 0.5	0 ft.	**************************************
	9.04	xVF	7 = 1.53	x3 case volume =	= Estimated Purge Volume:	5.0 gal.
Depth to Water v	w/ 80% Recharge		vater Column x 0.20)			
Domes Employees		_			Time Started:	(2400 hrs) (2400 hrs)
Purge Equipment:			ampling Equipment			(2400 Hrs)
Disposable Bailer			isposable Bailer			ft
Stainless Steel Baile			ressure Bailer		Hydrocarbon Thick	
Stack Pump Peristattic Pump			letal Filters	····	Visual Confirmation	
QED Bladder Pump			eristaltic Pump ED Bladder Pump			
Other:			•		II .	ant Sock (circle one)
oulor.		O	ther:		1	n Skimmer:Itr
						n Well:ltr
					water Removed:_	ltr
Ot T' /	0011					
Start Time (purge		= 14	Weather Co		Cloudy	
	te: <u>6915</u> / 3	5-1445	Water Color	Cloudy	_Odor: Y /🍻	
Approx. Flow Rat		gpm.	Sediment De	escription:	Cloudy	
Did well de-water	r? N	If yes, Tir	ne: Vo	olume:	gal. DTW @/Samp	ling: 10.19
Time			Conductivity	T	20	
(2400 hr.)	Volume (gal.)	pН	(€6/mS	Temperature	D.O. (mg/L)	ORP (mV)
0850	1.5	100	μmhos/cm)		(9/=/	(1114)
0 8 55	3.0	6.83	430	19.8		
0900	5.0	6.81	476	19.5		
0 80		<u>6.17</u>	500	20.2		
			ABORATORY IN	FORMATION		
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		NALYSES
- W- 4	x voa vial x 500ml ambers	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+M	
	x 500mi ambers	YES	NP NP	LANCASTER	TPH-DRO w/sgc COLUMI	1/TPH-DRO(8015)
001111			L	<u> </u>	L	
COMMENTS:						
Add/Replaced Gas	ket:	Add/Replaced	d Bolt:	Add/Replaced Loc	k: Add/Rep	laced Plug:
		-		•		·

Chevron California Region Analysis Request/Chain of Custody

\$		caster oratories			Ac	ect. # _				G	aroup	#				_ Sa	ratorie mple : d with ci	#					×			
	Clier	nt Informa		hárata	NEKAI NA	444		4)	Mat	rix			(5)			Ar	nalys	es l	Requ	est	ed				SCR #:	
		386473 G				333			,																***************************************	
Site A	d3616 SAN LEANDRO S'	TREET, C	DAKL	AND,	CA				Ø						Ø	A									Results in Dry Weigh	
Chev	STANTEC	CTF	Le	ead Çê ba l	/ta nt			Sediment	Ground	Surface			8260 🔯	8260	Sleanur	dnue									Must meet lowest de	tection
Consi	etter-Ryan, Inc., 6805	Sierra Co	urt, S	Suite C	3, Dublir	n, CA	945	6 5	ğ	Sul		ainers	826	826	a Gel (Gel Cleanup									compounds 8021 MTBE Confirma	
Consi	Pearinia ^{Mg.} Harding, dea	anna@grii	nc.co	m								Contr	8021	Š.	out Silic				Method	Method					Confirm highest hit b	y 8260
Consi	(925)°551-7444 x180								Potable	NPDES	Air	er of		8015	5 withc	5 with	_	Oxygenates	_						Run oxy's on	highest hit
Samp	Alex Worg	(72)			ete nascenata (e	3	Composite					Total Number of Containers	BTEX + MTBE	유 유	TPH-DRO 8015 without Silica Gel Cleanup	TPH-DRO 8015 with Silica	8260 Full Scan	oxx	aad	Dissolved Lead						
2	Consideration of the same	Soi			ected	Grab	omp	Soil	Water		=	otal	ă	TPH-GRO	급	IG-H	60 Fi		Total Lead	ssolv						
-	Sample Identification	Dep		Date	Time	$\frac{\times}{9}$	O	S	<u>></u>		Ö	上 て	-	<u> </u>	Ë	<u> </u>	82		ř	Ö		\dashv		-	6 Remarks	S
	VH-T	+	+	1	1115	1		\vdash	<u> </u>	_	_	6	S	X					-			\dashv			TPH-DRO SILICA	
	mw-2				1045	\sqcap						6	文	Ż											REQUEST	
	mw-3				1000							8	X	X	\times	X									GRAM CO	
	mw-4			V	0915	7				/		6	X	\times											CLEAN-UF	
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7)	Turnaround Time Request	ted (TAT) (n	lease d	circle)		Relino	uishe	by					Date			Time		\dashv	Recei	red by					Date Tir	me (a
	Standard 5 da			day		_					2_		5-	-14-	15	13	380		a	./	July	n			14MAY15 1	me 9
	72 hour 48 h	nour	24	4 hour ⊑	DF/EDI	Relino	quishe	d by					Date			Time			Recei	ved by					Date Tir	me
8	Data Package (circle if require	ed) E	DD (c	circle if re	equired)	Relin	quish	ed by	Com	nercia	al Ca	rrier:	L						Recei	ved by	10,000				Date Tir	me
ľ	Type I - Full	E	DFFLA	AT (defa	ult)	L	JPS .		_	Fe	dEx			Otl	her_											
	Type VI (Raw Data)	c	Other:				T	empe	eratu	re U	pon	Rec	eipt				°C		Cı	ıstoc	ly Se	als I	Intac	ct?	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

May 28, 2015

Project: 94612

Submittal Date: 05/15/2015 Group Number: 1561501 PO Number: 0015167993 Release Number: CMACLEOD State of Sample Origin: CA

Client Sample Description	<u>Lancaster Labs (LL) #</u>
QA-T-150514 NA Water	7889533
VH-1-W-150514 Grab Groundwater	7889534
MW-2-W-150514 Grab Groundwater	7889535
MW-3-W-150514 Grab Groundwater	7889536
MW-4-W-150514 Grab Groundwater	7889537

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	Stantec	Attn: Erin O'Malley
COPY TO		
ELECTRONIC	Stantec	Attn: Marisa Kaffenberger
COPY TO		
ELECTRONIC	Stantec International	Attn: Travis Flora
COPY TO		
ELECTRONIC	Stantec	Attn: Laura Viesselman
COPY TO		
ELECTRONIC	Gettler-Ryan Inc.	Attn: Gettler Ryan
COPY TO	•	-

Analysis Report

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

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-150514 NA Water

QA-T-150514 NA Water LL Sample # WW 7889533 Facility# 94612 Job# 386473 GRD LL Group # 1561501 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 05/14/2015 Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/15/2015 09:40 Reported: 05/28/2015 14:59

4612Q

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

General Sample Comments

CA ELAP Lab Certification No. 2792

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D151411AA	05/21/2015 20:27	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D151411AA	05/21/2015 20:27	Amanda K Richards	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	15138A53A	05/18/2015 12:22	Marie D	1
	C6-C12					Beamenderfer	
01146	GC VOA Water Prep	SW-846 5030B	1	15138A53A	05/18/2015 12:22	Marie D Beamenderfer	1



Analysis Report

LL Sample # WW 7889534

LL Group # 1561501

Account # 10906

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

Sample Description: VH-1-W-150514 Grab Groundwater

Facility# 94612 Job# 386473 GRD 3616 San Leandro-Oakland T0600100333

Project Name: 94612

Collected: 05/14/2015 11:15 by AW Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/15/2015 09:40 Reported: 05/28/2015 14:59

46121

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	2	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.	290	50	1

General Sample Comments

CA ELAP Lab Certification No. 2792

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D151411AA	05/21/2015 21:13	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D151411AA	05/21/2015 21:13	Amanda K Richards	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15138A53A	05/18/2015 17:29	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15138A53A	05/18/2015 17:29	Marie D Beamenderfer	1



Analysis Report

LL Sample # WW 7889535

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

Sample Description: MW-2-W-150514 Grab Groundwater

Facility# 94612 Job# 386473 GRD LL Group # 1561501 3616 San Leandro-Oakland T0600100333 Account # 10906

Project Name: 94612

Collected: 05/14/2015 10:45 by AW Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/15/2015 09:40 Reported: 05/28/2015 14:59

46122

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	0.7	0.5	1
10945	Ethylbenzene	100-41-4	N.D.	0.5	1
10945	Methyl Tertiary Butyl 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 Vol	Latiles SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	2,400	50	1

General Sample Comments

CA ELAP Lab Certification No. 2792

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D151411AA	05/21/2015 21:36	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D151411AA	05/21/2015 21:36	Amanda K Richards	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15138A53A	05/18/2015 17:57	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	15138A53A	05/18/2015 17:57	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-150514 Grab Groundwater

Facility# 94612 Job# 386473 GRD 3616 San Leandro-Oakland T0600100333

LL Group # 1561501 Account # 10906

LL Sample # WW 7889536

Project Name: 94612

Collected: 05/14/2015 10:00 by AW Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/15/2015 09:40 Reported: 05/28/2015 14:59

46123

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 Buty	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 Vol	latiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	1,800	50	1
	croleum	SW-846	8015B	ug/l	ug/l	
-	carbons TPH-DRO CA C10-C28		n.a.	260	50	1
00003	IPH-DRO CA CIU-C26		n.a.	200	50	1
GC Pet	croleum	SW-846	8015B	ug/l	ug/l	
Hydrod	carbons w/Si					
06610	TPH-DRO CA C10-C28 The reverse surroga			120 at <1%.	50	1

General Sample Comments

CA ELAP Lab Certification No. 2792

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

Laboratory	Sample	Analysis	Record
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CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time		Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D151411AA	05/21/2015 23	1:59	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D151411AA	05/21/2015 23	1:59	Amanda K Richards	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	15138A53A	05/18/2015 18	8:25	Marie D Beamenderfer	1
01146	GC VOA Water Prep	SW-846 5030B	1	15138A53A	05/18/2015 18	8:25	Marie D Beamenderfer	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	151380011A	05/19/2015 1	5:58	Christine E Dolman	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	151380010A	05/28/2015 09	9:08	Christine E Dolman	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	151380011A	05/18/2015 19	9:10	Samantha L Bronder	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	151380010A	05/18/2015 19	9:10	Samantha L Bronder	1



Analysis Report

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Sample Description: MW-4-W-150514 Grab Groundwater

Facility# 94612 Job# 386473 GRD 3616 San Leandro-Oakland T0600100333

LL Group # 1561501 Account # 10906

LL Sample # WW 7889537

Project Name: 94612

Collected: 05/14/2015 09:15 by AW Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 05/15/2015 09:40 Reported: 05/28/2015 14:59

46124

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

General Sample Comments

CA ELAP Lab Certification No. 2792

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	D151411AA	05/21/2015 22:22	Amanda K Richards	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D151411AA	05/21/2015 22:22	Amanda K Richards	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	15138A53A	05/18/2015 18:53	Marie D	1
	C6-C12					Beamenderfer	
01146	GC VOA Water Prep	SW-846 5030B	1	15138A53A	05/18/2015 18:53	Marie D Beamenderfer	1



Analysis Report

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Quality Control Summary

Client Name: Chevron Group Number: 1561501

Reported: 05/28/2015 14:59

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%REC</u>	LCSD %REC	LCS/LCSD <u>Limits</u>	RPD	RPD <u>Max</u>
Batch number: D151411AA	Sample numbe	er(s): 788	9533-7889	537				
Benzene	N.D.	0.5	ug/l	103		78-120		
Ethylbenzene	N.D.	0.5	ug/l	90		80-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	97		75-120		
Toluene	N.D.	0.5	uq/l	97		80-120		
Xylene (Total)	N.D.	0.5	ug/l	95		80-120		
Batch number: 15138A53A	Sample numbe	er(s): 788	9533-7889	537				
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	100		80-139		
Batch number: 151380011A	Sample numbe	er(s): 788	9536					
TPH-DRO CA C10-C28	N.D.	50.	ug/l	97	86	56-114	13	20
Batch number: 151380010A	Sample numbe	er(s) · 788	9536					
TPH-DRO CA C10-C28 w/ Si Gel	N.D.	50.	ug/l	63	62	40-105	2	20

Sample Matrix Quality Control

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

Analysis Name	MS <u>%REC</u>	MSD %REC	MS/MSD <u>Limits</u>	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: D151411AA	Sample	number(s)	: 7889533	-788953	37 UNSP	K: P888778			
Benzene	106	116	72-134	10	30				
Ethylbenzene	95	105	71-134	10	30				
Methyl Tertiary Butyl Ether	95	104	72-126	9	30				
Toluene	100	111	80-125	11	30				
Xylene (Total)	99	111	79-125	11	30				
Batch number: 15138A53A TPH-GRO N. CA water C6-C12	Sample	number(s) 99	: 7889533 92-144	-788953 4	37 UNSP 30	K: P887676			

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.

*- 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.



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Environmental

Quality Control Summary

Client Name: Chevron Group Number: 1561501

Reported: 05/28/2015 14:59

Surrogate Quality Control

Analysis Name: BTEX/MTBE Batch number: D151411AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
7889533	100	102	93	93
7889534	98	98	93	95
7889535	96	97	93	100
7889536	97	99	94	97
7889537	99	101	93	94
Blank	98	98	95	95
LCS	97	101	94	99
MS	97	101	93	99
MSD	97	103	93	98
Limits:	80-116	77-113	80-113	78-113

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

Batch number: 15138A53A Trifluorotoluene-F

	HIIIUUIUU
7889533	95
7889534	102
7889535	152*
7889536	127
7889537	95
Blank	98
LCS	111
MS	108
MSD	109

Limits: 63-135

Analysis Name: TPH-DRO CA C10-C28 w/ Si Gel Batch number: 151380010A $\,$

Batch number: 151380010A Orthoterphenyl

7889536	81	
Blank	85	
LCS	76	
T CCD	70	

Limits: 42-126

Analysis Name: TPH-DRO CA C10-C28 Batch number: 151380011A

Orthoterphenyl

7889536 109 Blank 101 LCS 117 LCSD 98

Limits: 58-137

- (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.

^{*-} Outside of specification

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories Client Information Acct. #	#_1090	For Euro Group # Instructions	ofins Lancaster Laboratories us 5 6 / 50 / Sample # _7 s on reverse side correspond with circled r	e only. <u>8 89533-37</u> numbers.	
(1) Client Information) Matrix	5) Analyses	Requested	S¢R #:
Facility \$S#9-4612-OML G-R#386473 Glob\\P\D#T0600100333	3				Jyn #
Site Ad 3616 SAN LEANDRO STREET, OAKLAND, CA					☐ Results in Dry Weight ☐ J value reporting needed
Chevrop STANTECTF Lead Consultant	diment	Ground Surface ers	8260 A		Must meet lowest detection limits possible for 8260
Consultation Court, Suite G, Dublin, Co	A 94568	S S	826 826 ca Gel Cle		compounds 8021 MTBE Confirmation
Consultant Project Mar. Harding, deanna@grinc.com		Ser Grown Sur Air Containers	8021 🖂 8015 💢 without Silica Gel with Silica Gel	Method	Confirm highest hit by 8260 Confirm all hits by 8260
Consultant Phone # (925) 551-7444 x180					Run oxy's on highest hit
Sampler Alex Wong	ő		+ N 3 5 1 1 1 1 1 1 1 1 1	Total Lead Dissolved Lead	
2 Soil Collected & Grand Sample Identification Depth Date Time 5	Comp	Water Oil	BTEX + M TPH-GRO TPH-DRO TPH-DRO 8260 Full (Total L	(6) Remarks
QA 5-14-5	4	メーフ			
VH-1 1 N15 1		(6			TPH-DRO WITH SILICA GEL
mw-2 1045		1 6			REQUESTING 10 GRAM COLUMN
mw-3 1000 mw-4 10915 J		80			CLEAN-UP WITH
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		+ +			CAPRIC ACID REVERSE
					SURROGATE
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Police Control of the	" '-t-ad by		TT:		1
- Tarrian and Translation (Translation)	linquished by		1	Received by a. Julyan	Date Time 9
	linquished by		5-14-15 1>39 ate Time	Received by	14M415 1339 Time
72 hour 48 hour 24 hour EDF/EDD	D. A	folger 1	4MAYK 1636	FX	
		Sy Commercial Carrier:	/	Requived by	Date Time
Type I - Full EDFFLAT (default)	UPS	FedEx	Other	Dung VI	515-15 940
Type VI (Raw Data) Other:	Temp€	perature Upon Recei	ipt <u> </u>	Custody Seals Intact?	(Yes No



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)
mĹ	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 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, ISO17025) 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.

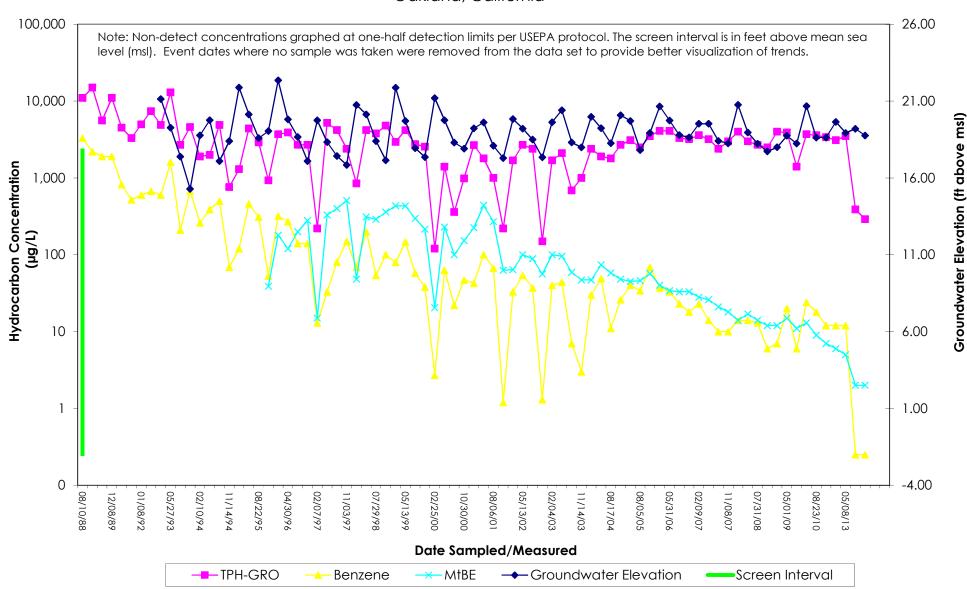
This report shall not be reproduced except in full, without the written approval of the laboratory.

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.

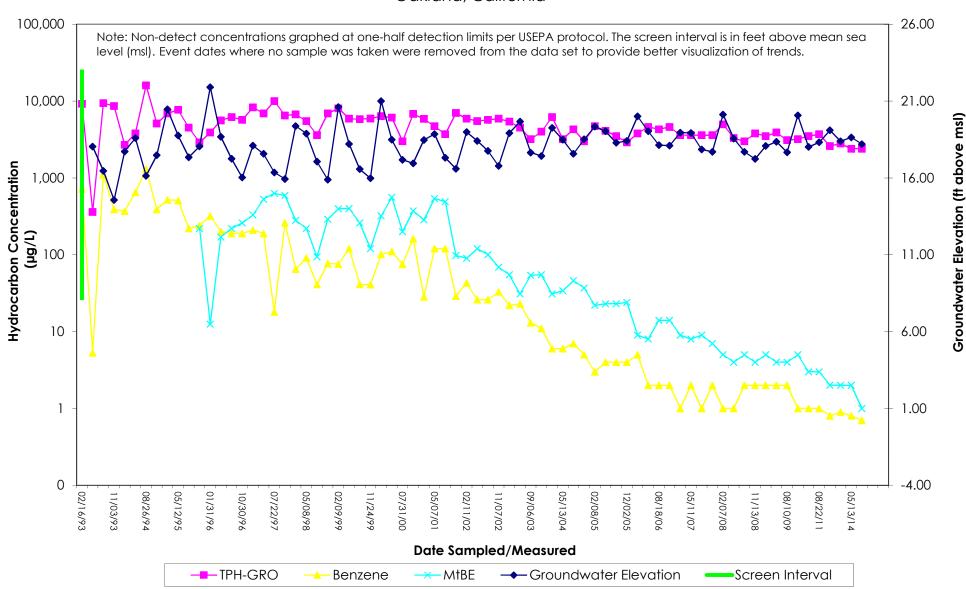
WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, 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

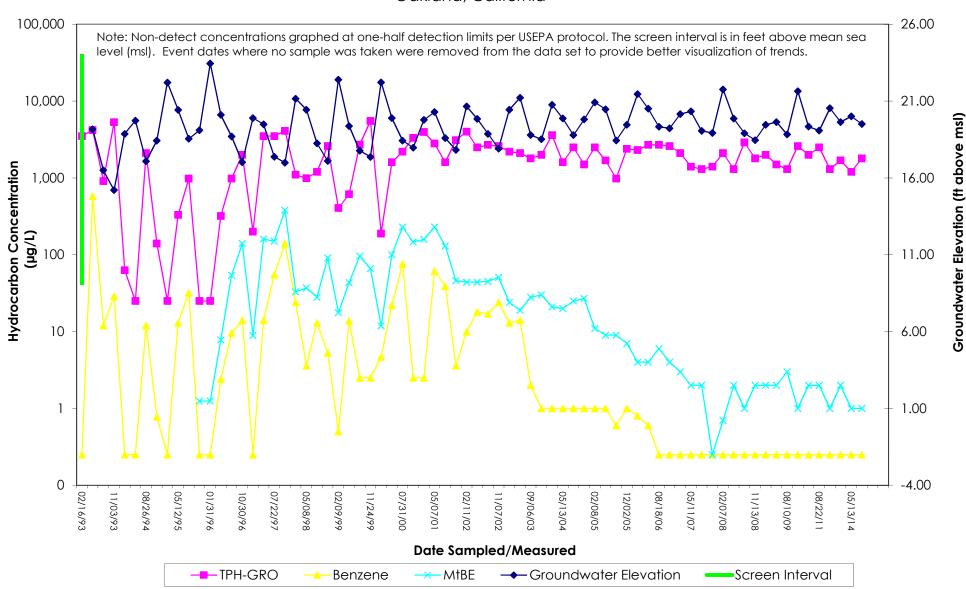
VH-1 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time



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

