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First Quarter 2016 Annual Groundwater Monitoring Report

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California Case #: RO0000138



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
Marketing Business Unit

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

March 14, 2016

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

Dear Mr. Detterman:

Attached for your review is the *First Quarter 2016 Annual Groundwater Monitoring Report* for former Chevron-branded service station 90517, located at 3900 Piedmont Avenue in Oakland, California (**Case #:** RO0000138). 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 <a href="mailto:travis.flora@stantec.com">travis.flora@stantec.com</a>.

Sincerely,

Carryl MacLeod Project Manager



March 14, 2016

Attention: Mr. Mark Detterman

Alameda County Environmental Health

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

Reference: First Quarter 2016 Annual Groundwater Monitoring Report

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue, Oakland, California

Dear Mr. Detterman:

On behalf of Chevron Environmental Management Company (Chevron), Stantec Consulting Services Inc. (Stantec) is pleased to submit the First Quarter 2016 Annual Groundwater Monitoring Report for former Chevron-branded service station 90517, which was located at 3900 Piedmont Avenue, Oakland, Alameda County, California (Site - shown on **Figure 1**). This report is presented in three sections: Site Background, First Quarter 2016 Groundwater Monitoring and Sampling Program, and Conclusions and Recommendations.

#### SITE BACKGROUND

The Site is a former Chevron-branded service station located on the eastern corner at the intersection of Piedmont Avenue and Montell Street in Oakland, California. The Site is currently occupied by a one-story commercial building and associated parking areas. The Site background is summarized according to the Case Closure Request, prepared by Conestoga-Rovers & Associates (CRA) and dated October 12, 2010, and indicates a Chevron-branded service station operated at the Site from at least 1940 until 1978.

Based on a Site Plan from 1940, first-generation Site features consisted of three gasoline underground storage tanks (USTs; 928-gallon, 440-gallon, and 550-gallon) located in the southwestern portion of the Site, a lubrication building with a waste oil sump in the eastern corner of the Site, two fuel dispenser islands located in the western portion of the Site, and a small station building located adjacent to the fuel dispenser islands. Based on a Site Plan from 1955, the first-generation gasoline USTs were removed and three second-generation gasoline USTs (3,000-gallon, 5,000-gallon, and 7,500-gallon) were installed to the northwest of the first-generation USTs. A 1,000-gallon waste oil UST is shown to the northwest of the lubrication building and two hydraulic hoists are shown within the building. In addition, the first-generation fuel dispenser islands were installed to the east of the first-generation fuel dispenser islands. Based on a Site Plan from 1971, the mid-size gasoline UST is identified as 5,700 gallons instead of 5,000 gallons. In 1978, the service station was closed and all remaining Site features, including underground fuel structures, were removed. The existing commercial building was then constructed.

Land use near the Site consists of a mixture of commercial and residential properties. The Site is bounded on the northwest by Piedmont Avenue, to the northeast by a commercial building that appears to be vacant, to the southeast by residences, and on the southwest by Montell Street.

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Due to consistent dissolved-phase concentrations below California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Levels (ESLs) or method detection limits (MDLs), fuel oxygenates *tertiary*-butyl alcohol (TBA), *tertiary*-amyl methyl ether (TAME), ethyl *tertiary*-butyl ether (EtBE), di-isopropyl ether (DIPE), 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (1,2-DBA), ethanol, and all priority pollutant list (PPL) volatiles except naphthalene were removed from the groundwater sampling program prior to the First Quarter 2016 event.

#### FIRST QUARTER 2016 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Gettler-Ryan, Inc. (G-R) performed the First Quarter 2016 groundwater monitoring and sampling event on January 14, 2016. G-R's standard operating procedures (SOPs) and field data sheets are included in **Attachment A**. G-R gauged depth-to-groundwater (DTW) in four Site wells (MW-1 through MW-4) prior to collecting groundwater samples for laboratory analysis. Three Site wells (MW-1, MW-3, and MW-4) were purged and sampled using low-flow procedures. Well MW-2 was gauged for DTW only because it is not a part of the groundwater sampling program.

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

#### **Groundwater Elevation and Gradient**

Well construction details and a screen interval assessment for each Site well are presented in **Table 1**. All four Site wells are currently screened across the prevailing groundwater table. Current and historical groundwater elevation data are presented in **Table 2**. A groundwater elevation contour map (based on First Quarter 2016 data) is shown on **Figure 2**. The direction of groundwater flow at the time of sampling was generally towards the northwest at an average hydraulic gradient of approximately 0.032 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 Third Quarter 1998 to present.

#### **Schedule of Laboratory Analysis**

Groundwater samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline range organics (TPH-GRO) and TPH as diesel range organics (TPH-DRO) with silica gel cleanup using United States Environmental Protection Agency (US EPA) Method 8015B (SW-846) and TPH as motor oil (TPH-MO) using US EPA Method 8015B modified (SW-846). Benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds), methyl tertiary-butyl ether (MtBE), and naphthalene were analyzed using US EPA Method 8260B (SW-846). Metals (cadmium, chromium, lead, nickel, and zinc) were analyzed using US EPA Method 6010B (SW-846). In addition, the laboratory reported total TPH for internal quality assurance/quality control purposes.

#### **Groundwater Analytical Results**

During First Quarter 2016, groundwater samples were collected from three Site wells (MW-1, MW-3, and MW-4). Well MW-2 is not currently included in the sampling program. 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

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**Figure 6**. A benzene isoconcentration map is shown on **Figure 7**. An isoconcentration map was not developed for MtBE because all concentrations were below MDLs.

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 for wells that were sampled are included in **Attachment C**. A summary of First Quarter 2016 groundwater analytical results follows:

- **TPH-GRO** was detected in two Site wells, at concentrations of 400 micrograms per liter (µg/L; well MW-3) and 4,300 µg/L (well MW-4), which are within historical limits for each respective well.
- **TPH-DRO** was detected in three Site wells, at concentrations of 55 µg/L (well MW-3), 400 µg/L (well MW-1), and 540 µg/L (well MW-4). The concentrations in wells MW-1 and MW-4 are within historical limits, while the concentration in well MW-3 is a historical high for TPH-DRO with silica gel cleanup.
- **TPH-MO** was detected in three Site wells, at concentrations of 81 μg/L (well MW-3), 150 μg/L (well MW-4), and 520 μg/L (well MW-1), which are within historical limits for each respective well.
- **Benzene** was detected in two Site wells, at concentrations of 0.7 µg/L (well MW-3) and 27 µg/L (well MW-4). The concentration in well MW-3 is within historical limits, while the concentration in well MW-4 is a historical low.
- **Toluene** was detected in one Site well, at a concentration of  $12 \,\mu\text{g/L}$  (well MW-4), which is equal to the historical low for this well.
- **Ethylbenzene** was detected in one Site well, at a concentration of 3 µg/L (well MW-4), which is within historical limits for this well.
- **Total Xylenes** were detected in two Site wells, at concentrations of 0.6 µg/L (well MW-3) and 10 µg/L (well MW-4). The concentration in well MW-3 is within historical limits, while the concentration in well MW-4 is equal to the historical low.
- MtBE was not detected above the MDLs (0.5 µg/L and 3 µg/L) in any Site well sampled.
- Naphthalene was not detected above the MDLs (1  $\mu$ g/L and 5  $\mu$ g/L) in any Site well sampled.
- Cadmium was not detected above the MDL (0.64 µg/L) in any Site well sampled.
- **Chromium** was detected in three Site wells, at concentrations of 5.2 µg/L (well MW-3), 5.5 µg/L (well MW-1), and 13.6 µg/L (well MW-4). The concentration in well MW-4 is within historical limits, while the concentrations in wells MW-1 and MW-3 are historical lows.
- **Lead** was detected in one Site well, at a concentration of 5.1 μg/L (well MW-3), which is within historical limits for this well.

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- Nickel was detected in three Site wells, at concentrations of 10.3 μg/L (well MW-3),
   15.8 μg/L (well MW-1), and 129 μg/L (well MW-4). The concentrations in wells MW-1 and MW-4 are within historical limits, while the concentration in well MW-3 is a historical low.
- **Zinc** was detected in three Site wells, at concentrations of 13.9 µg/L (well MW-1), 30.4 µg/L (well MW-3), and 55.4 µg/L (well MW-4). The concentrations in wells MW-3 and MW-4 are within historical limits, while the concentration in well MW-1 is a historical low.

#### CONCLUSIONS AND RECOMMENDATIONS

Maximum concentrations of TPH-GRO, TPH-DRO, BTEX compounds, chromium, nickel, and zinc were observed in well MW-4, located approximately 20 feet down-gradient of the northern-most first-generation fuel dispenser island. The maximum concentration of TPH-MO was observed in well MW-1, located in the immediate vicinity of the former waste oil UST and sump. The maximum concentration of lead was observed at the detection limit in well MW-3, located approximately 20 feet cross-gradient of the Site.

During February 2016, Stantec attempted to conduct an additional Site investigation as approved by Alameda County Environmental Health (ACEH); however, during the first day of work on Site, the tenant insisted that all assessment activities cease and demanded that we leave the Site immediately. Site access has not yet been reestablished. The current due date for the investigation report is April 29, 2016. An extension will be needed to resolve the Site access issue.

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

Prepared by	Gra O Malley	
	(signature)	

Erin O'Malley
Project Engineer

Reviewed by Marua Refenburgus (signature)

Marisa Kaifenberger Senior Engineer

Reviewed by

(signature)

**Travis L. Flora**Associate Project Manager

Reviewed by

(signature)

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**Dorota Runyan, P.E.**Senior Engineer

Former Chevron-branded Service Station 90517 March 14, 2016 Page 6 of 6

#### Attachments:

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

Table 2 – Groundwater Monitoring Data and Analytical Results

Table 3 – Groundwater Analytical Results – Oxygenate Compounds

Table 4 – Groundwater Analytical Results – PPL Volatiles

Table 5 – Groundwater Analytical Results – Metals

Table 6 – Groundwater Analytical Results – PCBs

Figure 1 – Site Location Map

Figure 2 – Groundwater Elevation Contour Map – First Quarter 2016

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

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

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

Figure 6 – TPH-DRO Isoconcentration Map – First Quarter 2016

Figure 7 – Benzene Isoconcentration Map – First Quarter 2016

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

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

Neil and Diane Goodhue, 300 Hillside Avenue, Piedmont, CA 94611



## Table 1 Well Details / Screen Interval Assessment First Quarter 2016

Former Chevron-Branded Service Station 90517 3900 Piedmont Avenue, 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 <sup>1</sup> (feet below TOC)	Current Depth to Groundwater <sup>1</sup> (feet below TOC)	Screen Interval (feet bgs)	Screen Interval Assessment
MW-1	07/21/98	Monitoring	2	87.89	16.50	16.61	8.35	3.5-16.5	Depth-to-groundwater within screen interval.
MW-2	07/21/98	Monitoring	2	86.09	16.50	16.48	5.40	3.5-16.5	Depth-to-groundwater within screen interval.
MW-3	07/21/98	Monitoring	2	86.28	17.50	17.71	7.06	4.5-17.5	Depth-to-groundwater within screen interval.
MW-4	07/21/98	Monitoring	2	87.22	16.50	16.25	9.30	3.5-16.5	Depth-to-groundwater within screen interval.

#### Notes:

bgs = below ground surface

msl = mean sea level

TOC = top of casing

<sup>1</sup> = As measured prior to groundwater sampling on January 14, 2016.

WELL ID/ DATE	TOC* (ff.)	DTW (ff.)	GWE (msl)	TOTAL TPH (µg/L)	TPH-MO (μg/L)	O&G (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)
DAIL			(11131)										
	Ground	water ESL		100	100	100	100	100	1	40	30	20	5
MW-1													
08/03/98	87.89	12.43	75.46					<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/23/98	87.89	9.05	78.84					<50	<0.5	<0.5	<0.5	<0.5	<2.0
02/08/99	87.89	6.50	81.39					<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/07/99	87.89	7.13	80.76					<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/23/99	87.89	9.15	78.74					<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/03/99	87.89	9.54	78.35					<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/15/00	87.89	5.90	81.99					<50	<0.5	<0.5	<0.5	<0.5	<5.0
05/12/00 <sup>3</sup>	87.89	7.05	80.84					<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5
07/31/00	87.89	8.40	79.49					<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.5
10/30/00	87.89	8.65	79.24					<50	< 0.50	< 0.50	< 0.50	<1.50	<2.50
02/27/01	87.89	5.83	82.06					<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.50
05/15/01	87.89	7.71	80.18					<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.50
08/23/01		DRY											
02/25/02	87.89	6.71	81.18					<50	<0.50	<0.50	< 0.50	<1.5	<2.5
08/05/02	87.89	8.89	79.00					<50	<0.50	<0.50	< 0.50	<1.5	<2.5
02/11/03	87.89	7.36	80.53					<50	<0.50	<0.50	<0.50	<1.5	<2.5
08/09/03 <sup>5</sup>	87.89	9.47	78.42					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/25/04 <sup>5</sup>	87.89	6.30	81.59					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/04 <sup>5</sup>	87.89	10.12	77.77					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/11/05 <sup>5</sup>	87.89	6.79	81.10					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/15/05 <sup>5</sup>	87.89	8.89	79.00					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/10/06 <sup>5</sup>	87.89	6.65	81.24					<50	1	<0.5	<0.5	<0.5	<0.5
08/02/06 <sup>5</sup>	87.89	7.73	80.16					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/09/07 <sup>5</sup>	87.89	7.77	80.12					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/07 <sup>5</sup>	87.89	9.59	78.30					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/18/08 <sup>5</sup>	87.89	7.41	80.48					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/12/08 <sup>5</sup>	87.89	9.78	78.11					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/19/095	87.89	5.61	82.28					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/07/09	87.89	10.22	77.67	NOT PART OF	GROUNDWATE	R SAMPLING I	PROGRAM						
01/29/10	87.89	6.04	81.85		GROUNDWATE								
08/11/10	87.89	8.35	79.54		GROUNDWATE								
02/02/11	87.89	6.54	81.35		GROUNDWATE								
01/31/12	INACCESSIBLE												
05/10/12 <sup>5</sup>	87.89	7.28	80.61	2,800 <sup>6</sup> / 1,300 <sup>6,7,8</sup>	2,800 <sup>6</sup> / 1,300 <sup>6,7,8</sup>		1,400/ 720 <sup>7,8</sup>	<50	<0.5	<0.5	<0.5	<1	<0.5
02/09/13 <sup>5</sup>	87.89	7.47	80.42	1,400 <sup>6</sup> / 700 <sup>6,7,8</sup>	1,400 <sup>6</sup> / 700 <sup>6,7,8</sup>	1,600/ 2,400 <sup>7</sup>	650/ 220 <sup>7,8</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5

WELL ID/	TOC*	DTW	GWE	TOTAL TPH	TPH-MO	O&G	TPH-DRO	TPH-GRO	B	T (up/l)	E (um/l)	X (up/1)	MtBE
DATE	(ft.)	(ft.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
	Ground	water ESL		100	100	100	100	100	1	40	30	20	5
MW-1 (cont)													
02/24/14 <sup>5</sup>	87.89	8.68	79.21	2,400 <sup>6</sup>	2,400 <sup>6</sup>	<1,400/ <1,400 <sup>7</sup>	1,100/ 570 <sup>7,8</sup>	<50	<0.5	<0.5	<0.5	<0.5	<2
02/04/15 <sup>5</sup>	87.89	7.98	79.91	71 <sup>6,7,8</sup>	716,7,8		360 <sup>7,8</sup>	<50	<0.5	<0.5	<0.5	0.6	<0.5
01/14/16 <sup>5</sup>	87.89	8.35	79.54	520 <sup>6</sup>	520 <sup>6</sup>		400 <sup>7,8</sup>	<50	<0.5	<0.5	<0.5	<0.5	<0.5
MW-2													
08/03/98	86.09	11.34	74.75					<50	<0.5	< 0.5	< 0.5	<0.5	3.4
11/23/98	86.09	6.90	79.19					<50	<0.5	<0.5	<0.5	<0.5	<2.0
02/08/99	86.09	5.23	80.86					<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/07/99	86.09	6.12	79.97					<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/23/99	86.09	6.41	79.68					<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/03/99 02/15/00	86.09 86.09	7.29 4.49	78.80 81.60					<50 <50	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<2.5 <5.0
								4,000 <sup>3</sup>					
05/12/00 07/31/00	86.09 86.09	5.90 6.58	80.19 79.51					4,000 <50	240 <0.50	26 <0.50	100 <0.50	76 <0.50	<100 <2.5
10/30/00	86.09	6.23	79.31 79.86					<50 <51	<0.50	2.92	<0.50	1.88	<2.5 4.89
02/27/01	86.09	4.60	81.49					<52	<0.50	< 0.50	<0.50	<0.50	<2.50
05/15/01	86.09	6.3	79.79					<50	<0.50	<0.50	<0.50	<0.50	<2.50
08/23/01	86.09	7.28	78.81					<50	<0.50	< 0.50	< 0.50	< 0.50	<2.5
02/25/02	86.09	5.61	80.48					<50	<0.50	<0.50	< 0.50	<1.5	<2.5
08/05/02	86.09	7.10	78.99					<50	< 0.50	<0.50	< 0.50	<1.5	<2.5
02/11/03	86.09	7.45	78.64					<50	<0.50	<0.50	<0.50	<1.5	<2.5
08/09/03 <sup>5</sup>	86.09	7.65	78.44					<50	<0.5	<0.5	<0.5	<0.5	< 0.5
02/25/04 <sup>5</sup>	86.09	4.85	81.24					<50	<0.5	<0.5	<0.5	<0.5	< 0.5
08/23/04 <sup>5</sup>	86.09	8.23	77.86					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/11/05 <sup>5</sup>	86.09	5.93	80.16					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/15/05 <sup>5</sup>	86.09	7.59	78.50					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/10/06 <sup>5</sup>													
_	86.09	5.73	80.36					<50	0.6	<0.5	<0.5	<0.5	<0.5
08/02/06 <sup>5</sup>	86.09	6.95	79.14					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/09/07 <sup>5</sup>	86.09	6.29	79.80					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/07 <sup>5</sup>	86.09	7.40	78.69					<50	<0.5	<0.5	<0.5	<0.5	< 0.5
02/18/08 <sup>5</sup>	86.09	6.47	79.62					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/12/08 <sup>5</sup>	86.09	7.08	79.01					<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/19/09 <sup>5</sup>	86.09	6.50	79.59					<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/07/09	86.09	8.51	77.58	NOT PART OF (	3ROHNDWATE	R SAMPLINIC I		-50					
01/29/10	86.09	6.29	79.80	NOT PART OF									
08/11/10	86.09	7.20	78.89	NOT PART OF (									
02/02/11	86.09	6.87	79.22	NOT PART OF (									
01/31/12	86.09	6.81	79.28	NOT PART OF (	GROUNDWATE	R SAMPLING I	PROGRAM						

NW-2   Cont   Cont	(µg/L) 30 	(µg/L) 20	(µg/L) 5
MW-2 (cont) 02/09/13 86.09 5.80 80.29 NOT PART OF GROUNDWATER SAMPLING PROGRAM			5
02/09/13 86.09 5.80 80.29 NOT PART OF GROUNDWATER SAMPLING PROGRAM			
02/24/14 86.09 6.95 79.14 NOT PART OF GROUNDWATER SAMPLING PROGRAM — — — — — — — — — — — — — — — — — — —			
02/04/15 86.09 5.59 80.50 NOT PART OF GROUNDWATER SAMPLING PROGRAM			
MW-3         86.28         12.08         74.20            4,000         160         <5.0           11/23/98         86.28         12.08         74.20             4,000         160         <5.0			
MW-3         86.28         12.08         74.20             4,000         160         <5.0           11/23/98         86.28         7.69         78.59             4,000         67.7         7.56           02/08/99         86.28         6.27         80.01			
08/03/98       86.28       12.08       74.20           4,000       160       <5.0			
11/23/98       86.28       7.69       78.59           4,000       67.7       7.56         02/08/99       86.28       6.27       80.01            550       <0.5			
02/08/99       86.28       6.27       80.01            450       <0.5	<5.0	73	180
05/07/99       86.28       6.96       79.32            1,800       53.6       8.96         08/23/99       86.28       7.92       78.36            3,970       155       24         11/03/99       86.28       7.92       78.36            3,320       108       19.9         02/15/00       86.28       5.74       80.54            779       26.7       3.82         05/12/00       86.28       6.76       79.52            12,000³       3,100       120         07/31/00       86.28       7.30       78.98            1,200³       32       <5.0	17.1	24.5	41.2
08/23/99       86.28       7.92       78.36            3,970       155       24         11/03/99       86.28       7.92       78.36             3,320       108       19.9         02/15/00       86.28       5.74       80.54            779       26.7       3.82         05/12/00       86.28       6.76       79.52           12.000³       3,100       120         07/31/00       86.28       7.30       78.98            1,200³       32       <5.0	<0.5	<0.5	<2.5
11/03/99       86.28       7.92       78.36            3,320       108       19.9         02/15/00       86.28       5.74       80.54            779       26.7       3.82         05/12/00       86.28       6.76       79.52            12,000³       3,100       120         07/31/00       86.28       7.30       78.98            1,200³       32       <5.0	33	18.6	21.4
02/15/00       86.28       5.74       80.54           779       26.7       3.82         05/12/00       86.28       6.76       79.52            12.000³       3,100       120         07/31/00       86.28       7.30       78.98            1,200³       32       <5.0	88.8	39.8	185
05/12/00       86.28       6.76       79.52           12,000³       3,100       120         07/31/00       86.28       7.30       78.98           1,200³       32       <5.0	98.4	44.8	<25
07/31/00       86.28       7.30       78.98            1,200³       32       <5.0	15.4	4.24	<12.5
10/30/00       86.28       7.02       79.26            3,300 <sup>4</sup> 119       <5.00	980	1,400	820
02/27/01     86.28     5.89     80.39          432³     15.5     1.53       05/15/01     86.28     7.07     79.21          3.220³     96.4     12.6       08/23/01     86.28     8.05     78.23         2,300     48     <10	11	7.3	39
05/15/01 86.28 7.07 79.21 3.220 <sup>3</sup> 96.4 12.6 08/23/01 86.28 8.05 78.23 2.300 48 <10 02/25/02 86.28 6.73 79.55 3,100 27 2.1 08/05/02 86.28 7.95 78.33 4,100 87 21	40	<15.0	<25.0
08/23/01 86.28 8.05 78.23 2,300 48 <10 02/25/02 86.28 6.73 79.55 3,100 27 2.1 08/05/02 86.28 7.95 78.33 4,100 87 21	14.9	1.06	15.7
02/25/02 86.28 6.73 79.55 3,100 27 2.1 08/05/02 86.28 7.95 78.33 4,100 87 21	11.5	11.6	128
08/05/02 86.28 7.95 78.33 4,100 87 21	<10	<10	100
	4.8	6.6	<2.5
	90	47	21
02/11/03 86.28 7.05 79.23 3,700 21 2.3	4.4	9	<20
08/09/03 <sup>5</sup> 86.28 8.23 78.05 1,600 12 1	2	4	0.7
$02/25/04^5$ 86.28 5.85 80.43 < < < < <- < <	<0.5	<0.5	<0.5
08/23/04 <sup>5</sup> 86.28 9.05 77.23 3,000 21 3	3	9	<0.5
02/11/05 <sup>5</sup> 86.28 7.02 79.26 540 15 1	<0.5	0.8	<0.5
08/15/05 <sup>5</sup> 86.28 8.41 77.87 2,600 11 1	1	2	<0.5
02/10/06 <sup>5</sup> 86.28 6.93 79.35 970 20 2	<0.5	3	<0.5
08/02/06 <sup>5</sup> 86.28 8.00 78.28 1,000 16 1	<0.5	3	<0.5
02/09/07 <sup>5</sup> 86.28 7.33 78.95 590 3 <0.5	<0.5	0.5	<0.5
08/23/07 <sup>5</sup> 86.28 8.83 77.45 2,700 18 4	2	8	<0.5
02/18/08 <sup>5</sup> 86.28 7.27 79.01 1,300 8 1	0.6	1	<0.5
08/12/08 <sup>5</sup> 86.28 9.58 76.70 2,000 21 3	1	4	<0.5
02/19/09 <sup>5</sup> 86.28 6.76 79.52 810 <0.5 <0.5	<0.5	1	<0.5
5.0			
5.	3	3	<0.5
01/29/10 <sup>5</sup> 86.28 6.57 79.71 <50 <0.5 <0.5	<0.5	<0.5	<0.5
08/11/10 <sup>5</sup> 86.28 8.61 77.67 1,800 9 2	6	5	<0.5
$2/2/2011^5$ 86.28 7.16 79.12 97 <0.5 <0.5	<0.5	<0.5	<0.5

WELL ID/ DATE	TOC* (ft.)	DTW (ff.)	GWE (msl)	TOTAL TPH (µg/L)	TPH-MO (µg/L)	Ο&G (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)
	Ground	water ESL		100	100	100	100	100	1	40	30	20	5
MW-3 (cont)													
01/31/12 <sup>5</sup>	86.28	7.67	78.61					720	0.9	<0.5	<0.5	0.9	<0.5
02/09/13 <sup>5</sup>	86.28	6.87	79.41	86 <sup>6</sup> / <41 <sup>6,7,8</sup>	86 <sup>6</sup> / <41 <sup>6,7,8</sup>	<1,400/ 2,400 <sup>7</sup>	120/ <50 <sup>7,8</sup>	75	<0.5	<0.5	<0.5	<0.5	<0.5
02/24/14 <sup>5</sup>	86.28	7.11	79.17	<40 <sup>6</sup>	<40 <sup>6</sup>	1,500/ <1,400 <sup>7</sup>	<50/ <50 <sup>7,8</sup>	<50	<0.5	<0.5	<0.5	<0.5	<2
02/04/15 <sup>5</sup>	86.28	6.78	79.50	<38 <sup>6,7,8</sup>	<38 <sup>6,7,8</sup>		<50 <sup>7,8</sup>	84	0.8	<0.5	<0.5	0.7	<0.5
01/14/16 <sup>5</sup>	86.28	7.06	79.22	816	816		55 <sup>7,8</sup>	400	0.7	<0.5	<0.5	0.6	<0.5
MW-4													
08/03/98	87.22	12.92	74.30					1,900	110	12	<0.5	55	130
11/23/98	87.22	9.40	77.82					4,080	136	17.8	37.2	30.1	51.8
02/08/991	87.22	7.82	79.40					2,900	150	16	<5.0	15	230/30.7 <sup>2</sup>
05/07/99	87.22	7.42	79.80					6,050	161	<25	39.8	36.9	<250/30.2 <sup>2</sup>
08/23/99 11/03/99	87.22 87.22	9.39 9.81	77.83 77.41					3,930 5,350	203 324	37.6	58.6 91.5	42.2 56.1	255 <50
02/15/00	87.22	7.72	77.41 79.50					4,080	324 161	44.7 27.7	31.1	39.1	73.9
05/12/00	87.22	7.72	79.31					3,600 <sup>3</sup>	170	27	49	64	170
07/31/00	87.22	8.65	78.57					2,900 <sup>3</sup>	160	20	15	56	170
10/30/00	87.22	9.08	78.14					5,630⁴	301	17.8	11.8	51.5	<25.0
								2,140 <sup>3</sup>					
02/27/01	87.22	7.30	79.92					4,580 <sup>3</sup>	95.1	12.8	53.4	43.0	235
05/15/01 08/23/01	87.22 87.22	8.15 9.33	79.07 77.89					2,700	200 250	44.1 44	46.3 21	51.7 72	172 130
02/25/02	87.22	7.33 7.80	77.0 <del>7</del> 79.42					4,100	100	18	27	39	<10
08/05/02	87.22	7.10	80.12					4,100	130	18	50	20	<10
02/11/03	87.22	8.12	79.10					4,100	100	23	20	51	<50
08/09/03 <sup>5</sup>	87.22	9.55	77.67					3,700	110	24	10	45	8
02/25/04 <sup>5</sup>	87.22	8.06	79.16					5,400	94	28	34	49	5
08/23/04 <sup>5</sup>	87.22	10.19	77.03					5,100	100	26	7	43	5
02/11/05 <sup>5</sup>	87.22	7.97	79.25					3,900	58	16	25	16	2
08/15/05 <sup>5</sup>	87.22	8.82	78.40					2,400	76	16	11	26	3
02/10/06 <sup>5</sup>	87.22	7.81	79.41					1,600	68	16	8	27	4
08/10/06 <sup>5</sup>	87.22	8.58	78.64					2,500	100	19	5	30	3
02/09/07 <sup>5</sup>													3
02/07/07 08/23/07 <sup>5</sup>	87.22	8.71	78.51					6,200	200	39	16	52	
08/23/07 02/18/08 <sup>5</sup>	87.22	10.38	76.84					5,800	190	48	20	61	3
	87.22	8.11	79.11					4,900	110	24	11	32	2
08/12/08 <sup>5</sup>	87.22	10.58	76.64					6,100	180	31	9	52	3
02/19/09 <sup>5</sup>	87.22	7.72	79.50					2,900	84	20	5	24	2
08/07/09 <sup>5</sup>	87.22	10.42	76.80					4,900	120	34	11	36	2
01/29/10 <sup>5</sup>	87.22	8.02	79.20					3,800	49	15	4	17	1
08/11/10 <sup>5</sup>	87.22	10.19	77.03					5,400	110	36	11	36	1

WELL ID/	TOC*	DTW	GWE	TOTAL TPH	TPH-MO	O&G	TPH-DRO	TPH-GRO	В	T	E	Х	MtBE
DATE	(ft.)	(ft.)	(msl)	(μg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)	(µg/L)
	Ground	water ESL		100	100	100	100	100	1	40	30	20	5
MW-4 (cont)													
2/2/2011 <sup>5</sup>	87.22	8.65	78.57					3,800	76	29	16	31	1
01/31/12 <sup>5</sup>	87.22	9.24	77.98					6,700	110	32	7	34	1
02/09/13 <sup>5</sup>	87.22	8.14	79.08	300 <sup>6,9</sup> / <40 <sup>6,7</sup>	300 <sup>6,9</sup> /<40 <sup>6,7</sup>	<1,400/ 1,900 <sup>7</sup>	2,300/ 1,500 <sup>7,8</sup>	1,800	77	17	4	10	0.8
02/24/14 <sup>5</sup>	87.22	9.50	77.72	926	92 <sup>6</sup>	<1,400/ <1,400 <sup>7</sup>	1,200/ 720 <sup>7,8</sup>	6,000	80	29	9	30	<2
02/04/15 <sup>5</sup>	87.22	8.60	78.62	<38 <sup>6,7,8</sup>	<38 <sup>6,7,8</sup>		290 <sup>7,8</sup>	2,300	43	15	5	11	<0.5
01/14/16 <sup>5</sup>	87.22	9.30	77.92	150 <sup>6</sup>	150 <sup>6</sup>		540 <sup>7,8</sup>	4,300	27	12	3	10	<3
TRIP B1													
<b>TRIP BLANK</b> 08/03/98								<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/23/98								<50	<0.5	<0.5	<0.5	<0.5	<2.0
02/08/99								<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/07/99								<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/23/99								<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/03/99								<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/15/00								<50	<0.5	<0.5	<0.5	<0.5	<5.0
05/12/00								<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	< 0.50	< 0.50	< 0.50	<1.50	<2.50
02/27/01								<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.50
05/15/01								<50	< 0.50	< 0.50	< 0.50	< 0.50	<2.50
08/23/01								<50	<0.50	< 0.50	< 0.50	< 0.50	<2.5
QA													
02/25/02								<50	< 0.50	< 0.50	< 0.50	<1.5	<2.5
08/05/02								<50	< 0.50	<0.50	< 0.50	<1.5	<2.5
02/11/03								<50	<0.50	<0.50	< 0.50	<1.5	<2.5
08/09/03 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/25/04 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/04 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/11/05 <sup>5</sup>					-								
								<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/15/05 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/10/06 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/02/06 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/09/07 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/07 <sup>5</sup>													
								<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/18/08 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/12/08 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/19/09 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/07/09 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
, , 0,								<b>~30</b>	~0.0	<b>~U.</b> J	<b>~</b> 0.0	<b>~U.</b> J	<b>~U.</b> J

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	TOTAL TPH (µg/L)	TPH-MO (μg/L)	Ο&G (μg/L)	TPH-DRO (µg/L)	TPH-GRO (μg/L)	B (µg/L)	Τ (μg/L)	E (µg/L)	Χ (μg/L)	M†BE (µg/L)
	Ground	water ESL		100	100	100	100	100	1	40	30	20	5
QA (cont)													
02/09/13 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/24/14 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<2
02/04/15 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/14/16 <sup>5</sup>								<50	<0.5	<0.5	<0.5	<0.5	<0.5

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California

#### **EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to May 12, 2000 were compiled from reports prepared by Blaine Tech Services, Inc. Groundwater monitoring data and laboratory analytical results from May 12, 2000 to May 12, 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 E = Ethylbenzene (ft.) = FeetMO = Motor Oil X = Xylenes (sum of m+p and o) GWE = Groundwater Elevation GRO = Gasoline Range Organics MtBE = Methyl tertiary-butyl ether (msl) = Mean sea level O&G = Oil and Grease (n-Hexane Extractable Material) (µg/L) = Micrograms per liter DTW = Depth to Water B = Benzene -- = Not Measured/Not Analyzed T = Toluene QA = Quality Assurance/Trip Blank TPH = Total Petroleum Hydrocarbons

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 are referenced to msl.
- Chromatogram pattern indicates gas and an unidentified hydrocarbon.
- <sup>2</sup> Confirmation run.
- Laboratory report indicates gasoline C<sub>6</sub>-C<sub>12</sub>.
- <sup>4</sup> Laboratory report indicates hydrocarbon pattern present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
- <sup>5</sup> BTEX and MtBE by EPA Method 8260.
- <sup>6</sup> TPH quantitation is based on peak area comparison of the sample pattern to that of a hydrocarbon component mix calibration in a range that includes C<sub>8</sub> (n-octane) through C<sub>40</sub> (n-tetracontane) normal hydrocarbons.
- <sup>7</sup> Analyzed with silica gel cleanup.
- Laboratory report indicates the reverse surrogate, capric acid, is present at <1%.
- <sup>9</sup> Laboratory report indicates the surrogate data is outside the QC limits due to unresolvable matrix problems evident in the sample chromatogram.

# Table 3 Groundwater Analytical Results - Oxygenate Compounds Former Chevron-branded Service Station 90517

WELL ID/ DATE	ETHANOL (µg/L)	TBA (µg/L)	DIPE (µg/L)	E†BE (µg/L)	TAME (µg/L)	1,2-DCA (μg/L)	1,2-DBA (µg/L)
Groundwater ESL	NE	12	NE	NE	NE	0.5	0.05
MW-1							
05/10/12	<50	<5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
02/09/13	<50	<5	< 0.5	< 0.5	< 0.5	<0.5	< 0.5
02/24/14	<500	<100	<2	<2	<2	<2	<2
02/04/15	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3							
02/09/13	<50	<5	< 0.5	< 0.5	<0.5	<0.5	< 0.5
02/24/14	<500	<100	<2	<2	<2	<2	<2
02/04/15	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-4							
02/09/13	<50	5	<0.5	<0.5	< 0.5	<0.5	< 0.5
02/24/14	<500	<100	<2	<2	<2	<2	<2
02/04/15	<50	<5	<0.5	<0.5	< 0.5	< 0.5	< 0.5

#### Table 3

#### **Groundwater Analytical Results - Oxygenate Compounds**

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California

#### **EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results on May 12, 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.

TBA = Tertiary-Butyl Alcohol

DIPE = Di-Isopropyl Ether

EtBE = Ethyl Tertiary-Butyl Ether

TAME = Tertiary-Amyl Methyl Ether

1,2-DCA = 1,2-Dichloroethane

1,2-DBA = 1,2-Dibromoethane

(µg/L) = Micrograms per liter

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

#### **ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

## Table 4 Groundwater Analytical Results - PPL Volatiles

WELL ID/ DATE	Acetone (µg/L)	2-Butanone (µg/L)	n-Butyl- benzene (µg/L)	sec-Butyl- benzene (µg/L)	2-Chlorotoluene (μg/L)		p-Isopropyl- toluene (µg/L)	Naphth- alene (µg/L)	n-Propyl- benzene (µg/L)	1,3,5-Trimethyl- benzene (µg/L)	Diethylphthalate (µg/L)
Groundwater ESL	1,500	4,900	NE	NE	NE	NE	NE	6.1	NE	NE	1.5
MW-1											
05/10/12	<6	<3	<1	<1	<1	<1	<1	7	<1	<1	2
02/09/13	<6	<3	<1	<1	<1	<1	<1	<1	<1	<1	
02/24/14	<6	<3	<1	<1	<1	<2	<1	<2	<1	<1	
02/04/15	<6	<3	<1	<1	<1	<1	<1	<1	<1	<1	
01/14/16								<1			
MW-3											
02/09/13	<6	<3	<1	<1	<1	<1	<1	<1	<1	<1	
02/24/14	<6	<3	<1	<1	<1	<2	<1	<2	<1	<1	
02/04/15	<6	<3	<1	<1	<1	1	<1	<1	2	<1	
01/14/16								<1			
MW-4											
02/09/13	13	5	<1	1	<1	14	1	<1	7	<1	
02/24/14	20	<3	5	7	2	44	7	<2	35	2	
02/04/151	12	<3	2	4	<1	24	2	1	18	<1	
01/14/16								<5			

## Table 4 Groundwater Analytical Results - PPL Volatiles

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California

#### **EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results on May 12, 2012 were provided by Gettler-Ryan Inc.

Current groundwater monitoring data was provided by Gettler-Ryan Inc. and current laboratory analytical results were provided by Eurofins Lancaster Laboratories.

Only constituents with currently or historically detected concentrations are shown. Complete analytical results for the current monitoring period can be found in Attachment B.

 $(\mu g/L)$  = Micrograms per liter

PPL = priority pollutant list

-- = Not Measured/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

Laboratory report indicates the LCS and/or LCSD recoveries are outside the stated QC window but within the marginal exceedance allowance of +/- 4 standard deviations as defined in the NELAC standards. The following analytes are accepted based on this allowance: Acetone.

## Table 5 Groundwater Analytical Results - Metals

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California

WELL ID/	Cadmium	Chromium	Lead	Nickel	Zinc
DATE	(μg/L)	(μg/L)	(μg/L)	(µg/L)	(µg/L)
Groundwater ESL	0.25	50	2.5	8.2	81
MW-1					
05/10/12	< 0.27	153	92.3	195	154
02/09/13	< 0.36	37.7	5.4	42.0	36.1
02/24/14	< 0.76	38.7	<4.7	49.8	39.3
02/04/15	< 0.33	9.8	<4.7	10.7	18.7
01/14/16	<0.64	5.5	<5.1	15.8	13.9
MW-3					
02/09/13	< 0.36	34.6	8.4	40.6	52.1
02/24/14	< 0.76	30.3	6.0	38.3	41.6
02/04/15	< 0.33	5.7	<4.7	12.9	12.7
01/14/16	<0.64	5.2	5.1	10.3	30.4
MW-4					
02/09/13	0.49	54.7	17.5	145	664
02/24/14	< 0.76	22.5	<4.7	57.6	69.9
02/04/15	< 0.33	8.8	<4.7	55.1	47.2
01/14/16	<0.64	13.6	<5.1	129	55.4

**EXPLANATIONS:** 

**ANALYTICAL METHOD:** 

 $(\mu g/L) = Micrograms per liter$ 

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

## Table 6 Groundwater Analytical Results - PCBs

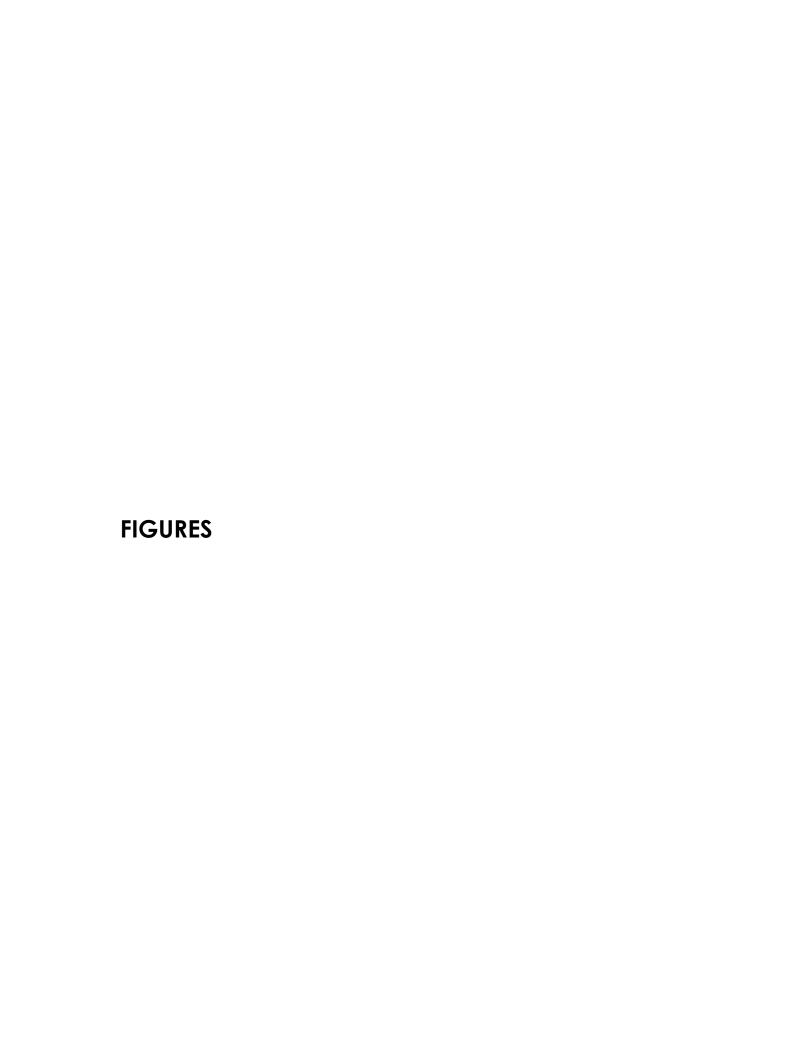
Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California

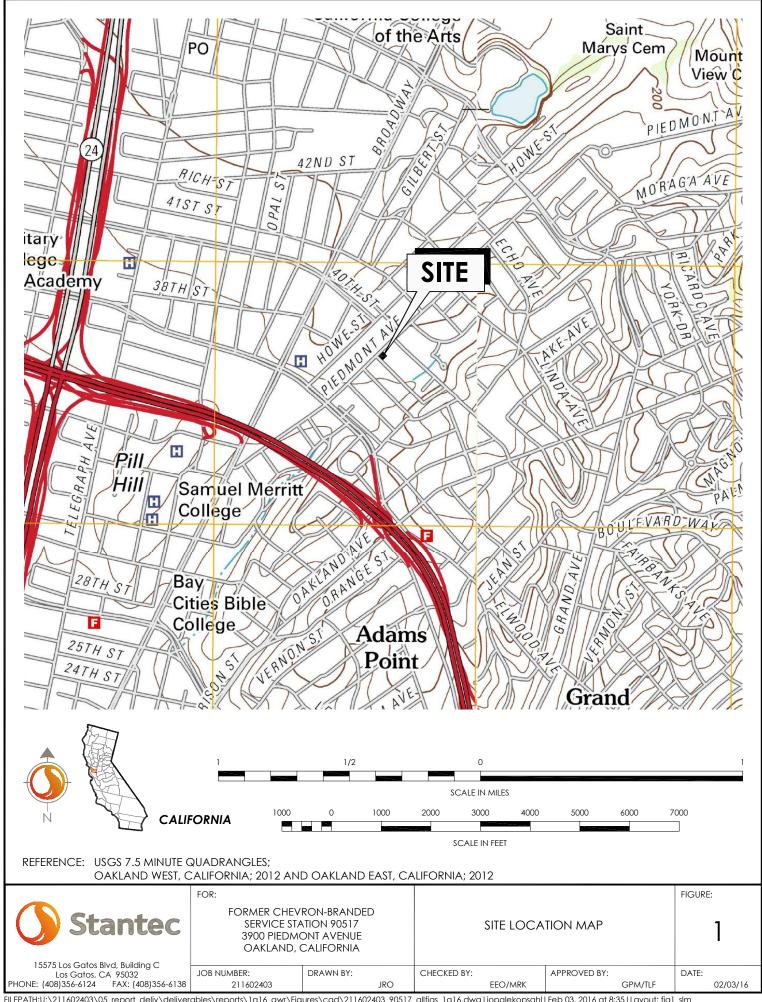
WELL ID/ DATE	PCB- 1016 (μg/L)	PCB- 1221 (μg/L)	PCB- 1232 (μg/L)	PCB- 1242 (μg/L)	PCB- 1248 (μg/L)	PCB- 1254 (μg/L)	PCB- 1260 (μg/L)
Groundwater ESL	0.014	0.014	0.014	0.014	0.014	0.014	0.014
<b>MW-1</b> 05/10/12	<0.095	<0.05	<0.19	<0.095	<0.095	<0.095	<0.14

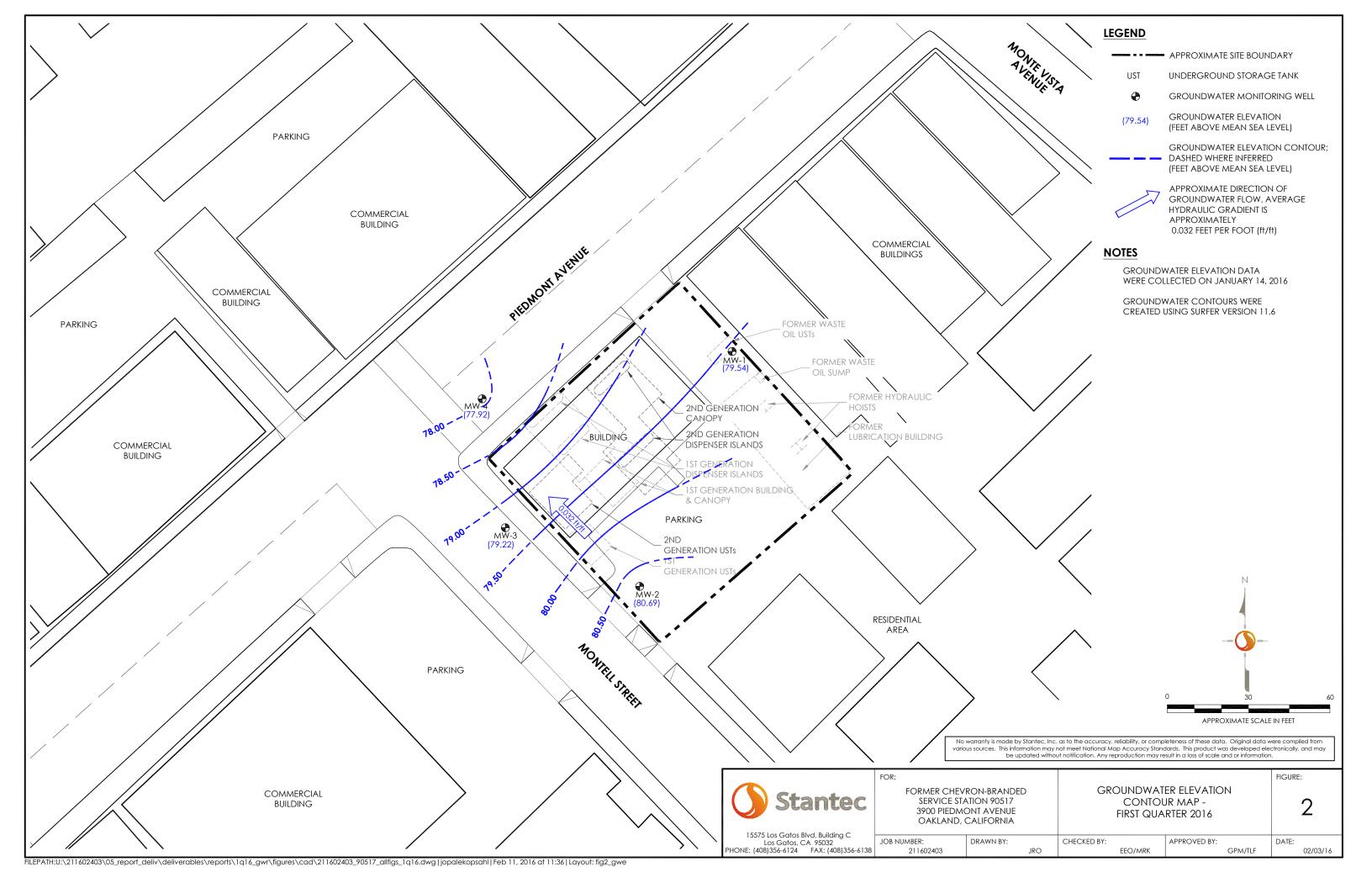
EXPLANATIONS: ANALYTICAL METHOD:

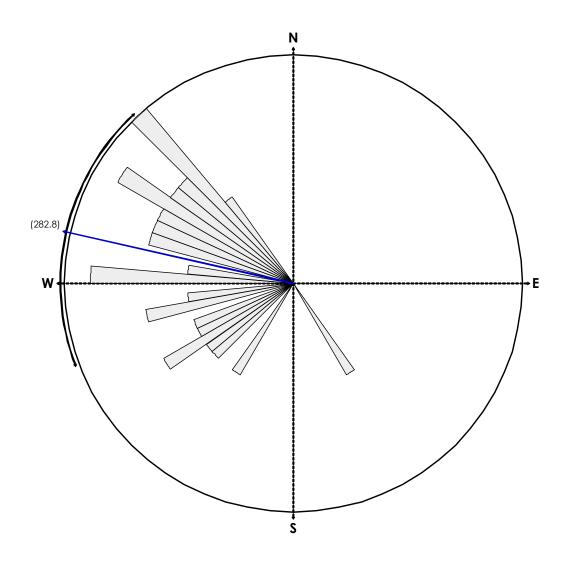
(μg/L) = Micrograms per liter PCB = Polychlorinated Biphenyl PCBs by EPA Method 8082

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









### **EQUAL AREA PLOT**

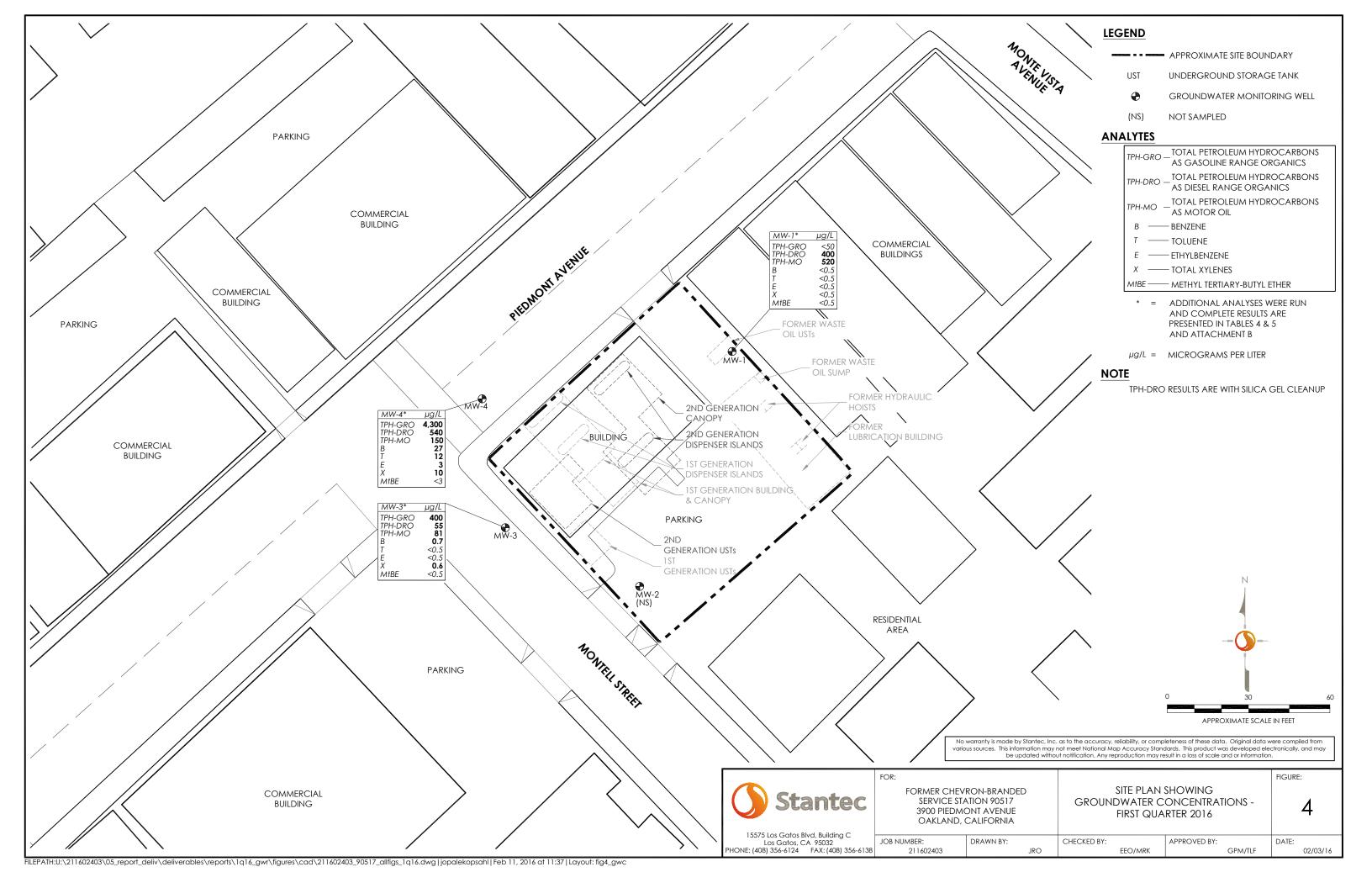
Number of Points 36 Class Size 5

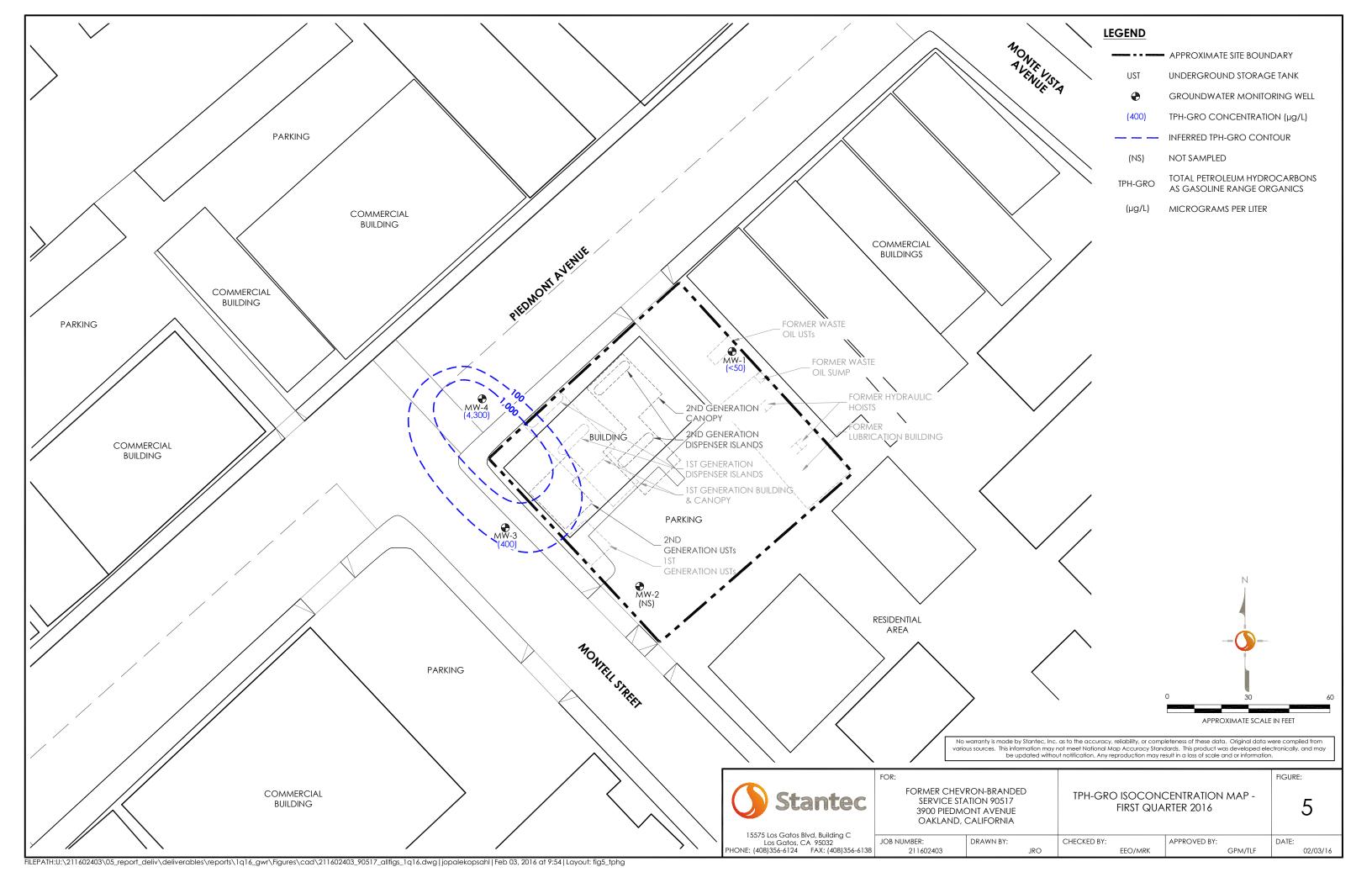
Vector Mean 282.76 Vector Magnitude 29.71

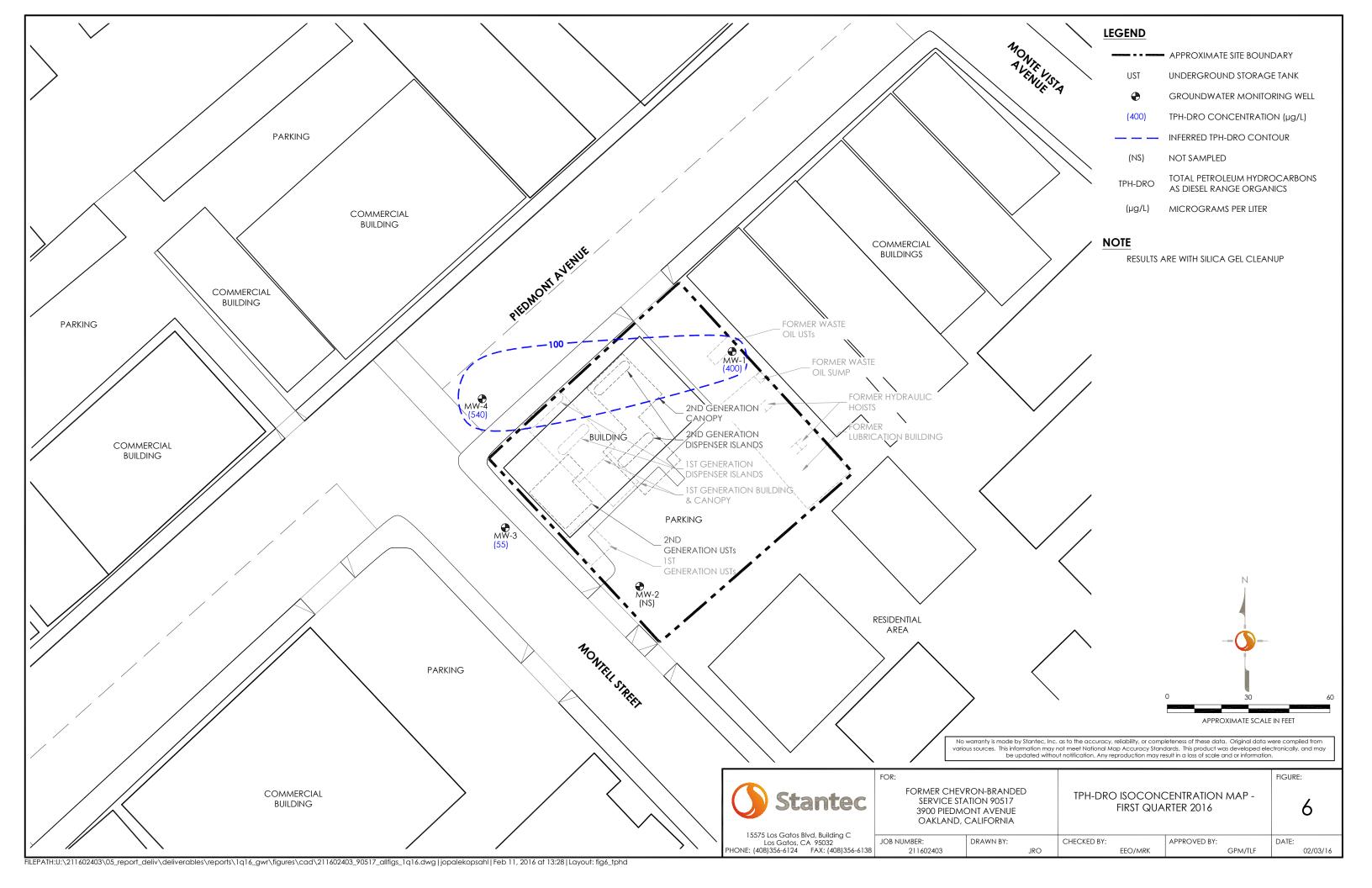
Consistency Ratio 0.83

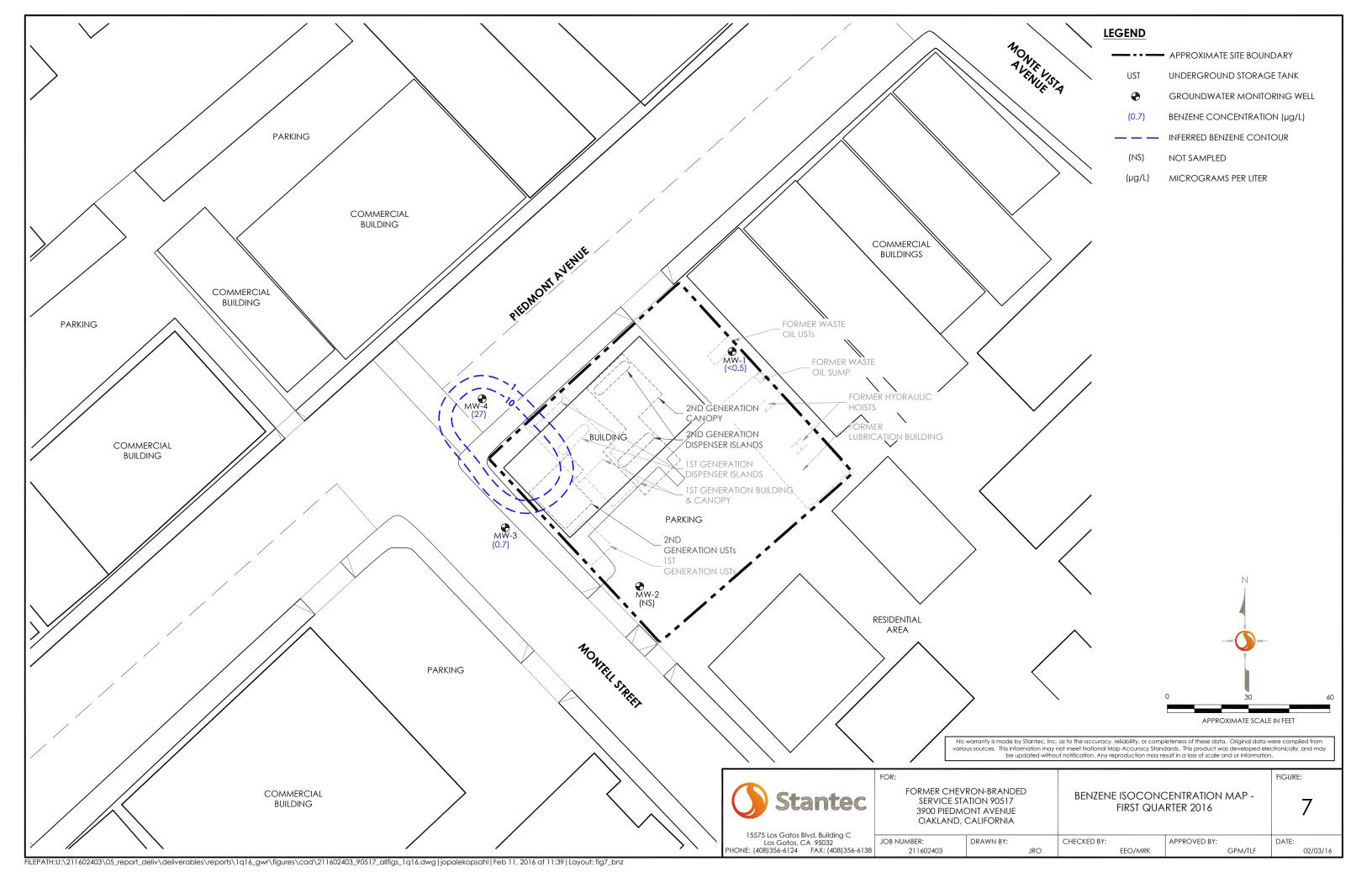
#### NOTE: ROSE DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING THIRD QUARTER 1998.

<b>Stantec</b>	SERVICE STA 3900 PIEDMO	RON-BRANDED ATION 90517 ONT AVENUE CALIFORNIA	GROUNDWA ROS FIRST	3	
15575 Los Gatos Blvd, Building C Los Gatos, CA 95032	JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
PHONE: (408)356-6124 FAX: (408)356-6138		JRO	EEO/M		02/03/16









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

### TRANSMITTAL

January 22, 2016 G-R #386420

TO:

Mr. Travis Flora

Stantec

15575 Los Gatos Blvd., Building C

Los Gatos, California 95032

FROM:

Deanna L. Harding

**Project Coordinator** Gettler-Ryan Inc.

6805 Sierra Court, Ste. G Dublin, California 94568

RE:

**Former Chevron Service Station** 

#9-0517

3900 Piedmont Avenue Oakland, California

RO 0000138

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package Annual Event of January 14, 2016

#### COMMENTS:

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

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

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

trans/9-0517

#### **WELL CONDITION STATUS SHEET**

	OL "O OTA"										
Client/Facility #:						-	Job #:	386420			
Site Address:		dmont Av	enue			•	Event Date:		/	114/16	•
City:	Oakland	l, CA				<u>-</u>	Sampler:			38	
WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	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 Yes / No
Mr-1	ok							N	r	8" BL	N
MW-Z	ok							1	1	1	
mw->	ok						-				
MW-4	ou						->	1	+	8" Monn	1
Comments				<u>.</u>							
	<del></del>										

#### Standard Operating Procedure, Low-Flow Purging and Sampling

Gettler-Ryan Inc. field personnel adhere to the following Standard Operating Procedure (SOP) for the collection and handling of representative groundwater samples using the Low-Flow (Minimal-Drawdown) Purging technique. This SOP incorporates purging and sampling methods discussed in U.S. EPA, Ground Water Issue, Publication Number EPA/540/S-95/504, April 1996 by Puls, R.W. and M.J. Barcelona - "Low-Flow (Minimal-Drawdown) Ground-Water Sampling Procedures."

A QED Well Wizard<sup>TM</sup> (or equivalent) bladder pump or Peristaltic Pump will be used to purge and sample selected wells as outlined in the scope-of-work. An in-line flow cell or other multi-parameter meter is used to collect water quality indicating parameters during purging.

#### Initial Pump Discharge Test Procedures

The Static Water Level (SWL) is measured in all wells at the site prior to the installation of the pump or tubing and initiation of the test procedures in any well. In addition, the presence or absence of separate-phase hydrocarbons (SPH) is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot. The SWL measurement and SPH thickness, if any, will be recorded on the field data sheet.

The bladder pump or suction inlet tubing of the peristaltic pump is then positioned with its inlet located within the screened interval of the well. The in-line flow cell is then connected to the discharge tubing. After pump installation, the SWL is allowed to recover to its original level. The pump is then started at a discharge rate between 100 ml to 300 ml per minute with the in-line flow cell connected. The water level is monitored continuously for any change from the original measurement and the discharge rate is adjusted until an optimum discharge rate (ODR) is determined. The goal for the ODR is to produce a stable drawdown of less than 0.1 meter as allowed by site conditions; however the total drawdown from the initial SWL should not exceed 25% of the distance between pump inlet location and the top of the well screen. Once achieved, the ODR will be confirmed by volumetric discharge measurement and recorded on the field data sheet.

#### Purging and Water Quality Parameter Measurement

When the ODR has been determined and the SWL drawdown has been established within the acceptable range, and a minimum of one pump system volume (bladder volume and/or discharge tubing volume) has been purged, field measurements for temperature (T), pH, conductivity (Ec), and if required, oxygen reduction potential (ORP) and dissolved oxygen (DO) will be collected and documented on the field data sheet. Measurements should be taken every three to five minutes until parameters stabilize for three consecutive readings. The minimum parameter subset of T ( $\pm$  10%), pH ( $\pm$  0.1 unit), and Ec ( $\pm$  10 uS) are required to stabilize. Additional parameters that may be required are DO ( $\pm$  0.2 mg/l) and ORP ( $\pm$  20 mV).

#### Sample Collection

When water quality parameters have stabilized, and the SWL drawdown remains established within the acceptable range, groundwater sample collection may begin. If used, the in-line flow cell and its tubing are disconnected from the discharge tubing prior to sample collection. Water samples are collected from the discharge tubing into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. 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. 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. 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.

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 #9-0	0517		Job Number:	386420		
Site Address:	3900 Piedmo	nt Aven	ue	Event Date:	1/14/16		(inclusive)
City:	Oakland, CA			Sampler:	711		•
Well ID	MW-		E	ate Monitored:	1/14/16		
Well Diameter	2 in.	-	Volume				
Total Depth	76.67 ft. 8.35 ft.		Factor			12"= 5.80	
Depth to Water	8.35 ft. 8.24	-	heck if water column		) ft. : Estimated Purge Volume	):	gal.
Depth to Water	w/ 80% Recharge	- [(Height of W	/ater Column x 0.20) +	DTWJ: <u>10.00</u>	Time Started:		(2400 hrs)
Purge Equipment:		S	ampilng Equipment:		Time Completed:_		(2400 hrs)
Disposable Bailer		D	isposable Bailer		Depth to Product:_		
Stainless Steel Baile	er	Pi	ressure Bailer		Depth to Water:		
Stack Pump		M	etal Filters		Hydrocarbon Thick Visual Confirmation		π
Peristaltic Pump			eristaltic Pump	×	Visual Committation	rbescription.	
QED Bladder Pump			ED Bladder Pump		Skimmer / Absorba	V	
		0	ther:		Amt Removed from		
					Amt Removed from		
					Water Removed:		ltr
Start Time (purg	e): <i> 40</i> 0		Weather Con	ditions:	Fossu		
Sample Time/Da		114/16			Odor: Y / 🐼		
Approx. Flow Ra			Sediment De		me_		
Did well de-wate					tr. DTW @ Sampling	g: <b>%</b> .3	53
Time (2400 hr.)	Volume (Liters)	pН	Conductivity (µS) mS	Temperature	D.O.	ORP	Gauge DTV as paramete
` ,	· _ ·	7.4	µmnos/cm)		(mg/L)	(mV)	are recorde
1418	3.6	7.61	776	18.5		/	8-42
<u> </u>	<u> 4.2</u>	7.57	753	18.3			8.47
<u> </u>	<u> 4. 8</u>	7.42	744	18.2			8.53
			LABORATORY IN	FORMATION			
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		ANALYSES	
MW-	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+		
	2 x 500ml ambers	YES	NP	LANCASTER	NAPHTHALENE(8260B)		
	2 x 1 liter ambers	YES	NP NP	LANCASTER	TPH-DRO w/sgc COLUIT TPH-MO w/sgc(8015)	VIIN	·
- · · · · · · · · · · · · · · · · · · ·	x 250ml poly	YES	HNO3	LANCASTER	CAM 5 METALS(6010B)	· · · · · · · · · · · · · · · · · · ·	
OMMENTS:	DEPTH PUMP	SET AT	: 11.00	1			
Add/Replaced Ga	asket:	Add/Replace	d Bolt:	Add/Replaced Loc	ck: Add/Re	eplaced Plug: _	<del></del>



Client/Facility#:	Chevron #9-0	<i>1</i> 57 /		Job Number:	386420		
Site Address:	3900 Piedmo	nt Aveni	ue	Event Date:	1 14 16	)	(inclusive)
City:	Oakland, CA			Sampler:	¥Z		
Vell ID	MW- 2		[	ate Monitored:	1/14/16		
Well Diameter	<b>2</b> in.	-	Volum	e 3/4"= 0.02	2 1"= 0.04 2"= 0	.17 3"= 0.38	
Γotal Depth	16.48 ft.	_	Factor				
Depth to Water			heck if water columi				
Denth to Water	11.08	xVF			Estimated Purge Volu	me:	_ gal.
Jeptii to vvater	w/ 80% Recharge	(Height of vv	rater Column x 0.20) +	DTWJ:	Time Started:		
Purge Equipment:		Sa	ampling Equipment:			J:	
Disposable Bailer		Di	isposable Bailer		Depth to Produc	:t:	ft
Stainless Steel Baile	er	Pr	ressure Bailer			I-I	
Stack Pump		M	etal Filters			ickness: tion/Description:	
Peristaltic Pump			eristaltic Pump		Visual Committa	don/Description.	
QED Bladder Pump	· /		ED Bladder Pump		Skimmer / Abso	rbant Sock (circle	e one)
	•	Oi	ther:	<del></del>		om Skimmer:	
					i i i	om Well:	
					Water Removed	:	ltr
Start Time (purg Sample Time/Da Approx. Flow Ra	ate: /	Ipm.	Weather Cor- Water Color: Sediment De	scription:	Odor: Y / N		
Did well de-wate	er?1f	yes, Time:	Volun	ne: l'	tr. DTW @ Sampl	ing:	
Time (2400 hr.)	Volume (Liters)	pH	Conductivity ( μS / mS μmhos/cm)	Temperature ( C F )	D.O. (mg/L)	ORP (mV)	Gauge DTV as paramete
SAMPLE ID	(#) CONTAINER	REFRIG.	ABORATORY IN PRESERV. TYPE	FORMATION LABORATORY		ANALYSES	
MW-	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTE		
					NAPHTHALENE(826	, · · · · ,	
	x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc COL		
(	x 1 liter ambers	YES	NP	LANCASTER	TPH-MO w/sgc(8015)		
$\overline{}$	x 250ml poly	YES	HNO3	LANCASTER	CAM 5 METALS (601)	OB)	
OMMENTS:	DEPTH PUMP	SET AT	: H/	110			-
Add/Replaced Ga	asket:	Add/Replace	d Bolt:	Add/Replaced Loc	k: Add	/Replaced Plug:	



Client/Facility#:	Chevron #9-				1		
Site Address:	3900 Piedmo	nt Avenu	ue	Event Date:	/ 114	(inclusive)	
City:	Oakland, CA	***		Sampler:	7H		
Well ID		_	C	ate Monitored:	1/14	116	
Well Diameter	<b>2</b> in.	_	Volume	e 3/4"= 0.02	2 1"= 0.04 2"=	0.17 3"= 0.38	
Total Depth	17.71 ft.	_	Factor	(VF) 4"= 0.66		1.50 12"= 5.80	
Depth to Water	7.06 ft.	xVF C	heck if water column		ft. Estimated Purge Vol		
Depth to Water	w/ 80% Recharge						
D		_			Time Started:	ed:	
Purge Equipment:			ampling Equipment:			uct:	
Disposable Bailer			sposable Bailer	<del></del>		r:	
Stainless Steel Bail	er		essure Bailer			hickness:	
Stack Pump Peristaltic Pump			etal Filters eristaltic Pump			ation/Description:	
QED Bladder Pump			ED Bladder Pump		01:		
			her:			orbant Sock (circle from Skimmer:	
						from Well:	
						ed:	ltr
						***************************************	
Start Time (purg			Weather Con	ditions:	Fossy		
		114/16		ditions:	F055 y Odor: Y / 🐼		
Sample Time/D	ate: 1615 /	)   14   16   Ipm.	Water Color:	Clear			
Sample Time/D Approx. Flow R	ate: 200 m	lpm.	Water Color: Sediment De	Clean_	Odor: Y 100 Line	olina:	1.26
Sample Time/D Approx. Flow R Did well de-wate	ate: 1615 / ate: 200 m er? No If	lpm.	Water Color: Sediment De Volun	Clean_	Odor: Y / 🐧  Lune  tr. DTW @ Samp	<u> </u>	7.25
Start Time (purg Sample Time/D Approx. Flow R Did well de-wate	ate: 1615 /	lpm.	Water Color: Sediment De	scription: ne:	Odor: Y / (1)  Live  tr. DTW @ Samp	ORP	Gauge DTW
Sample Time/D Approx. Flow R Did well de-wate Time (2400 hr.)	ate: 1615 / ate: 200 m er? No If  Volume (Liters)	lpm. yes, Time:	Water Color: Sediment De Volun Conductivity (µ\$/ mS  µmnos/cm)	clean scription: ne:	Odor: Y / 🐧  Lune  tr. DTW @ Samp	<u> </u>	Gauge DTW
Sample Time/D Approx. Flow R Did well de-wate Time (2400 hr.)	ate: 1615 /	Ipm. yes, Time: pH 7-5-3	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm)	scription: ne:	Odor: Y / (1)  Live  tr. DTW @ Samp	ORP	Gauge DTW as parameter
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1533	ate: 1615 / ate: 200 m er? Volume (Liters) 3-6 4-7	Ipm. yes, Time: pH 7-53 7-48	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm) 671	Temperature (0 / F)	Odor: Y / (1)  Live  tr. DTW @ Samp	ORP	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate Time (2400 hr.)	ate: 1615 / ate: 200 m er? No If  Volume (Liters)	Ipm. yes, Time: pH 7-5-3	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm)	scription: ne:	Odor: Y / (1)  Live  tr. DTW @ Samp	ORP	Gauge DTW as parameter are recorded
Sample Time/D Approx. Flow R Did well de-wate Time (2400 hr.) 1535	ate: 1615 / ate: 200 m er? Volume (Liters) 3-6 4-7	pH 7.53 7.48 7.42	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm) 671 649	Clean	Odor: Y / (1)  Live  tr. DTW @ Samp	ORP	Gauge DTW as parameter are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536	ate: 1615 / ate: 200 m er? Volume (Liters) 3.6 4.7 4.7	Ipm. yes, Time: pH 7.53 7.49 7.42	Water Color: Sediment De Volun Conductivity (µ\$/ m\$ ymnos/cm) 671 649 442 ABORATORY IN	Clean scription: ne:     Temperature (O / F )   18.4   18.3   18.2	Odor: Y / (1)  Live  tr. DTW @ Samp	ORP (mV)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536  1535	ate: 1615 / ate: 200 m er? Volume (Liters) 3-6 4-7	pH 7.53 7.48 7.42	Water Color: Sediment De Volun Conductivity (µ\$/ mS (µmhos/cm) 671 649 442  ABORATORY IN PRESERV. TYPE	Clean scription: ne:	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536	ate: 1615 / ate: 200 m er? No If  Volume (Liters) 3.6 4.7 4.7 4.8	Ipm. yes, Time:  pH  7.53 7.48 7.42  REFRIG.	Water Color: Sediment De Volun Conductivity (µ\$/ m\$ ymnos/cm) 671 649 442 ABORATORY IN	Clean scription: ne:     Temperature (O / F )   18.4   18.3   18.2	Odor: Y / (1)  Live  tr. DTW @ Samp	ORP (mV)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536  1535	ate: 1615 / ate: 200 m er?	pH 7.53 7.49 7.42  REFRIG. YES	Water Color: Sediment De Volun Conductivity (µ\$/ mS (µmnos/cm) 671 649 642  ABORATORY IN PRESERV. TYPE HCL	Temperature (C) / F)  18.4  18.3  18.2  FORMATION  LABORATORY  LANCASTER	D.O. (mg/L) TPH-GRO(8015)/BT	ORP (mV)  ANALYSES  TEX+MTBE(8260)/60B)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536  1535	# CONTAINER  (#) CONTAINER  ( x voa vial	pH 7.53 7.49 7.42  REFRIG. YES YES	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm) 671 699 642  ABORATORY IN PRESERV. TYPE HCL NP NP	Temperature (C) / F)  18.4  18.3  18.2  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	D.O. (mg/L)  TPH-GRO(8015)/BT NAPHTHALENE(82) TPH-DRO w/sgc (8015)	ORP (mV)  ANALYSES  TEX+MTBE(8260)/ 60B)  DLUMN 5)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536  1535	ate: 1615 / ate: 200 m er?	pH 7.53 7.49 7.42  REFRIG. YES	Water Color: Sediment De Volun Conductivity (µ\$/ mS (µmnos/cm) 671 649 642  ABORATORY IN PRESERV. TYPE HCL	Temperature (C) / F)  18.4  18.3  18.2  FORMATION  LABORATORY  LANCASTER	D.O. (mg/L)  TPH-GRO(8015)/BT NAPHTHALENE(82) TPH-DRO w/sgc CC	ORP (mV)  ANALYSES  TEX+MTBE(8260)/ 60B)  DLUMN 5)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536  1535	# CONTAINER  (#) CONTAINER  ( x voa vial	pH 7.53 7.49 7.42  REFRIG. YES YES	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm) 671 699 642  ABORATORY IN PRESERV. TYPE HCL NP NP	Temperature (C) / F)  18.4  18.3  18.2  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	D.O. (mg/L)  TPH-GRO(8015)/BT NAPHTHALENE(82) TPH-DRO w/sgc (8015)	ORP (mV)  ANALYSES  TEX+MTBE(8260)/ 60B)  DLUMN 5)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536  1535	# CONTAINER  (#) CONTAINER  ( x voa vial	pH 7.53 7.49 7.42  REFRIG. YES YES	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm) 671 699 642  ABORATORY IN PRESERV. TYPE HCL NP NP	Temperature (C) / F)  18.4  18.3  18.2  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	D.O. (mg/L)  TPH-GRO(8015)/BT NAPHTHALENE(82) TPH-DRO w/sgc (8015)	ORP (mV)  ANALYSES  TEX+MTBE(8260)/ 60B)  DLUMN 5)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1533  1536  1536  SAMPLE ID  MW-3	# CONTAINER  (#) CONTAINER  ( x voa vial  2 x 500ml ambers  x 1 liter ambers  x 250ml poly	pH 7.53 7.49 7.42  REFRIG. YES YES YES YES	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm) 671 649 642  ABORATORY IN PRESERV. TYPE HCL NP NP HNO3	Temperature (C) / F)  18.4  18.3  18.2  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	D.O. (mg/L)  TPH-GRO(8015)/BT NAPHTHALENE(82) TPH-DRO w/sgc (8015)	ORP (mV)  ANALYSES  TEX+MTBE(8260)/ 60B)  DLUMN 5)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1533  1536  1536  SAMPLE ID  MW-3	# CONTAINER  (#) CONTAINER  ( x voa vial	pH 7.53 7.49 7.42  REFRIG. YES YES YES YES	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm) 671 649 642  ABORATORY IN PRESERV. TYPE HCL NP NP HNO3	Temperature (C) / F)  18.4  18.3  18.2  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	D.O. (mg/L)  TPH-GRO(8015)/BT NAPHTHALENE(82) TPH-DRO w/sgc (8015)	ORP (mV)  ANALYSES  TEX+MTBE(8260)/ 60B)  DLUMN 5)	Gauge DTW as parameters are recorded
Sample Time/D Approx. Flow R Did well de-wate  Time (2400 hr.)  1535  1536  1535	# CONTAINER  (#) CONTAINER  ( x voa vial  2 x 500ml ambers  x 1 liter ambers  x 250ml poly	pH 7.53 7.49 7.42  REFRIG. YES YES YES YES	Water Color: Sediment De Volun Conductivity (µ\$/ mS µmnos/cm) 671 649 642  ABORATORY IN PRESERV. TYPE HCL NP NP HNO3	Temperature (C) / F)  18.4  18.3  18.2  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	D.O. (mg/L)  TPH-GRO(8015)/BT NAPHTHALENE(82) TPH-DRO w/sgc (8015)	ORP (mV)  ANALYSES  TEX+MTBE(8260)/ 60B)  DLUMN 5)	Gauge DTW as parameters are recorded



Client/Facility#:	Chevron #9-0	JJ 17		Job Number:	386420		
Site Address:	3900 Piedmo	nt Aveni	16	Event Date:	1/14/1	<u>,                                    </u>	inclusive)
City:	Oakland, CA			Sampler:	217	`	,
							<u> </u>
Well ID	MW- ∜	_	D	ate Monitored:	1/14/1	6	
Well Diameter	<b>2</b> in.	<u>.</u>	Volume	3/4"= 0.0	2 1"= 0.04 2"= 0.	17 3"= 0.38	
Total Depth	16.25 ft.	_	Factor	(VF) 4"= 0.6			
Depth to Water	<b>9.30</b> ft.	_ 🔲 c	heck if water column	is less then 0.50	ft.		<del></del>
	6. 95	xVF		x3 case volume =	Estimated Purge Volun	ne:	gal.
Depth to Water	w/ 80% Recharge	[(Height of W	ater Column x 0.20) +	DTW]: 10.69	Time Started		(0.400 has)
Durgo Equipments		6.	mallan Envisarante			•	
Purge Equipment: Disposable Bailer			impling Equipment:			:	
Stainless Steel Baile	<u></u>		sposable Bailer essure Bailer				
Stack Pump			etal Filters		Hydrocarbori Thi	ckness:	ft
Peristaltic Pump	X		eristaltic Pump	×	Visual Confirmati	ion/Description:	
QED Bladder Pump			ED Bladder Pump		Skimmer / Absor	bant Sock (circle o	ne)
		Ot	her:		i i i	om Skimmer:	,
						om Well:	
					Water Removed:		Itr
	***********						
Start Time (purge	e): <u>1245</u>		Weather Con	ditions:	10494		
Sample Time/Da	ite: <u>/330 /</u>	1./14/16	Water Color:	clean	_Odor: Y / <b>/</b> \$D _		
A	ite: 200 m	I	O = 41 4. D = .				
Approx. Flow Ra	ite	lpm.	Sediment Des	scription:	None		
Approx. Flow Ra Did well de-wate		• •			tr. DTW @ Sampli	ng: <b>9.</b> :	52
Did well de-wate	r? <u>No</u> If	yes, Time:	Volum	ne:I	tr. DTW @ Sampli		Sauge DTV
		• •	Conductivity (A3/mS		tr. DTW @ Sampli	ORP	Gauge DTV as paramete
Did well de-wate Time (2400 hr.)	Volume (Liters)	yes, Time:	Conductivity (13/mS  µmkos/cm)	Temperature	tr. DTW @ Sampli		Gauge DTV as paramete are recorde
Time (2400 hr.)	Volume (Liters)	yes, Time: pH	Conductivity (AS/mS µmbos/cm) 819	Temperature	tr. DTW @ Sampli	ORP	Gauge DTV as paramete are recorde
Did well de-wate Time (2400 hr.)	Volume (Liters) 3.6	yes, Time:  pH  6.52  6.50	Conductivity (A3/mS µmkos/cm) 8/9	Temperature (C)/ F)  /8.4	tr. DTW @ Sampli	ORP	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303	Volume (Liters)	yes, Time: pH	Conductivity (AS/mS µmbos/cm) 819	Temperature	tr. DTW @ Sampli	ORP	Gauge DTV as paramete are recorde
Time (2400 hr.)  /303	Volume (Liters) 3.6	yes, Time:  pH  6.52  6.50	Conductivity (A3/mS µmkos/cm) 8/9	Temperature (C)/ F)  /8.4	tr. DTW @ Sampli	ORP	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306	Volume (Liters) 3.6 4.2 4.8	yes, Time:  pH  6.52  6.50  6.84	Conductivity (AS/mS pumbos/cm) 819 811 805  ABORATORY IN	Temperature (C) F)  18.4  18.4  18.3	D.O. (mg/L)	ORP (mV)	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306 /309	Volume (Liters) 3.6 4.2 4.9	pH 6.52 6.50 6.84 REFRIG.	Conductivity (AS/mS pmhos/cm) 819 811 805  ABORATORY IN	Temperature (C) F)  /8.4 /8.3  FORMATION LABORATORY	tr. DTW @ Sampli	ORP (mV)	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306	Volume (Liters) 3.6 4.2 4.8	yes, Time:  pH  6.52  6.50  6.84	Conductivity (AS/mS pumbos/cm) 819 811 805  ABORATORY IN	Temperature (C) F)  18.4  18.4  18.3	tr. DTW @ Sampli  D.O. (mg/L)  TPH-GRO(8015)/BTE	ORP (mV)  ANALYSES  X+MTBE(8260)/	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306 /309  SAMPLE ID	Volume (Liters) 3.6 4.2 4.9	pH 6.52 6.50 6.84 REFRIG.	Conductivity (AS/mS pmhos/cm) 819 811 805  ABORATORY IN	Temperature (C) F)  /8.4 /8.3  FORMATION LABORATORY	tr. DTW @ Sampli	ORP (mV)  ANALYSES  X+MTBE(8260)/ (BB)	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306 /309  SAMPLE ID	Volume (Liters) 3.6 4.2 4.9  (#) CONTAINER x voa vial x x 500ml ambers x x 1 liter ambers	yes, Time:  pH  6.92  6.90  6.84  REFRIG.  YES  YES	Conductivity (AS/mS pumbos/cm) 815 811 805  ABORATORY IN PRESERV. TYPE HCL NP NP	Temperature (C) F)  18.( 18.4 18.3  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	TPH-GRO(8015)/BTE NAPHTHALENE(8260 TPH-DRO w/sgc COL	ORP (mV)  ANALYSES  X+MTBE(8260)/ 0B)  UMN	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306 /309  SAMPLE ID	Volume (Liters) 3.6 4.2 4.9 (#) CONTAINER 6 x voa vial 2 x 500ml ambers	yes, Time:  pH  6.52  6.50  6.84  REFRIG.  YES	Conductivity (AB/mS pumbos/cm) 819 811 805  ABORATORY IN PRESERV. TYPE HCL	Temperature (C) F)  /8.4 /8.3  FORMATION LABORATORY LANCASTER	TPH-GRO(8015)/BTE.NAPHTHALENE(8260	ORP (mV)  ANALYSES  X+MTBE(8260)/ 0B)  UMN	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306 /309	Volume (Liters) 3.6 4.2 4.9  (#) CONTAINER x voa vial x x 500ml ambers x x 1 liter ambers	yes, Time:  pH  6.92  6.90  6.84  REFRIG.  YES  YES	Conductivity (AS/mS pumbos/cm) 815 811 805  ABORATORY IN PRESERV. TYPE HCL NP NP	Temperature (C) F)  18.( 18.4 18.3  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	TPH-GRO(8015)/BTE NAPHTHALENE(8260 TPH-DRO w/sgc COL	ORP (mV)  ANALYSES  X+MTBE(8260)/ 0B)  UMN	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306 /309	Volume (Liters) 3.6 4.2 4.9  (#) CONTAINER x voa vial x x 500ml ambers x x 1 liter ambers	yes, Time:  pH  6.92  6.90  6.84  REFRIG.  YES  YES	Conductivity (AS/mS pumbos/cm) 815 811 805  ABORATORY IN PRESERV. TYPE HCL NP NP	Temperature (C) F)  18.( 18.4 18.3  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	TPH-GRO(8015)/BTE NAPHTHALENE(8260 TPH-DRO w/sgc COL	ORP (mV)  ANALYSES  X+MTBE(8260)/ 0B)  UMN	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306 /309	Volume (Liters) 3.6 4.2 4.9  (#) CONTAINER x voa vial x x 500ml ambers x x 1 liter ambers	yes, Time:  pH  6.92  6.90  6.84  REFRIG.  YES  YES	Conductivity (AS/mS pumbos/cm) 815 811 805  ABORATORY IN PRESERV. TYPE HCL NP NP	Temperature (C) F)  18.( 18.4 18.3  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	TPH-GRO(8015)/BTE NAPHTHALENE(8260 TPH-DRO w/sgc COL	ORP (mV)  ANALYSES  X+MTBE(8260)/ 0B)  UMN	Gauge DTV as paramete are recorde 9.37
Time (2400 hr.)  /303 /306 /309	Volume (Liters) 3.6 4.2 4.9  (#) CONTAINER x voa vial x x 500ml ambers x x 1 liter ambers	yes, Time:  pH  6.92  6.90  6.84  REFRIG.  YES  YES  YES  YES	Conductivity (AS/mS pumbos/cm) 815 811 805  ABORATORY IN PRESERV. TYPE HCL NP NP HNO3	Temperature (C) F)  18.( 18.4 18.3  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	TPH-GRO(8015)/BTE NAPHTHALENE(8260 TPH-DRO w/sgc COL	ORP (mV)  ANALYSES  X+MTBE(8260)/ 0B)  UMN	Gauge DTV as paramete are recorde 9.37
Did well de-water  Time (2400 hr.)  /303 /306 /309  SAMPLE ID  MW-   W	Volume (Liters) 3.6 4.2 4.9  (#) CONTAINER x voa vial x x 500ml ambers x x 1 liter ambers x 250ml poly	yes, Time:  pH  6.92  6.90  6.84  REFRIG.  YES  YES  YES  YES	Conductivity (AS/mS pumbos/cm) 815 811 805  ABORATORY IN PRESERV. TYPE HCL NP NP HNO3	Temperature (C) F)  18.( 18.4 18.3  FORMATION  LABORATORY  LANCASTER  LANCASTER  LANCASTER	TPH-GRO(8015)/BTE NAPHTHALENE(8260 TPH-DRO w/sgc COL	ORP (mV)  ANALYSES  X+MTBE(8260)/ 0B)  UMN	Gauge DTV as parameter are recorded 9.37

# Chevron California Region Analysis Request/Chain of Custody

	eurofins	Lancaste Laborato			A	Acct. # _					Group	ıp#				Sa	oratorie ample i	#							<del></del>	
(1)	,		nformation	'n				(4)	M	atrix		T	(5)			A	nalys	ses	Req	uest	ed				1	
	95#9-0517-OML	G-R#38642	20 Globa	INDIFTOF	5001022	48				J	Π	1							۲				$\sim$		SCR #:	
Site	3900° PIEDMONT	AVENUE, C	DAKLANI	D, CA				10		<b>₽</b> □												13)	gan		Results in Dry	-
8	, est	ANTECTF		Lead Consu				Sediment	Ground	Surface		S	8260 🗷	8260	Gel Cleanup	Cleanup						826013	(last		Must meet low	est detection
	sultant/Office Getter-Ryan Inc.,				Dublin,	CA 9	<b>456</b>	Sec	ਹਿੱ	Š		of Containers	824	824		Gel Cle	343					7	15.		compounds	onfirmation
Cons	sultant Project Mgr. <b>Deanna L. Hardin</b>	ıg, deanna@	grinc.cc	om .							미	Sont		2	out Silii	Silica			Method	Method	(2012)	lene	ETTE		Confirm highes	st hit by 8260
Cons	sultant Phone # (925) 551-7444 x1	180	·					4	Potable	NPDES	Air			1	5 withc	with		Oxygenates			80	1 7	1 ~~		Run oz	xy's on highest hit
Sam	pler		J. Hez.	1700		3	osite		<sup>-</sup>			Total Number	+ MTBE	ဥ	TPH-DRO 8015 without Silica	TPH-DRO 8015	8260 Full Scan	ŏ	ad	Dissolved Lead	PH-MO	+ Hd	75			
2	Sample Identifi		Soil Depth	Colle	lected Time	Grab	Composite	Soil		Water	lie	otal	BTEX +	трн-сво	PH-DF	문	260 Fu		Total Lead	issolve	Hell	Va.F	Am		Pon	
	Sample Identifi	()A	Debui	111116		1	-	100	1	<u>&gt;</u> ×	+	1	- Y	×	+	屵	8	$\Box$	F			7	7		6 Rem	narks
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7)	Turnaround Time	Requested (*	TAT) (plear	se circle)		Relin	nquished	ed by	Щ.				Date	<u></u>	المايم	Time	بسا		Recei	ived by					Date	Time 6
·	Standard	5/day		4 day				المجارية			attended to the same of			13/	16	1	ow	4.				カャ	n.l.	60.	TY-F P1-18-16	(9)
	Commence	,		•			nquished	ed by	-				Date			Time			Receiv	ved by	<u> </u>	· K 11	HAI #	KI	Date Date	/fime
	72 hour	48 hour		24 hour	OF/EDD	9	2/1-/	M	t	25/8	6		0	1.18.	1/2					7	1.0	4	1	1	, holit	400
3	Data Package (circ	cle if required)	EDF	D (circle if re	required)	RANT	nquist	ned b	y Cor	mmerc	cial Cr	arrier:	74	* 10 p	15				Recen	ved by	/		LAAC.	_	Date	Time
	Type I - Full		EDF	FLAT (defa	auit)	1	UPS			F <sub>0</sub>	edEx	<u></u>		Ot	ther_				-				,			
	Type VI (Raw Data)		Other	ər:			T	emp	erat	ture L	Jpor	ı Rer	ceipt				_°C	J	Ci	ustor	32 yt	eals I	Intac	t?	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

Attn: Marisa Kaffenberger

Attn: Travis Flora

January 29, 2016

Project: 90517

Submittal Date: 01/19/2016 Group Number: 1624695 PO Number: 0015188594 Release Number: CMACLEOD State of Sample Origin: CA

 Client Sample Description
 Lancaster Labs (LL) #

 QA-T-160114 NA Water
 8211805

 MW-1-W-160114 Grab Groundwater
 8211806

 MW-3-W-160114 Grab Groundwater
 8211807

 MW-4-W-160114 Grab Groundwater
 8211808

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 <a href="http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/">http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/</a>.

ELECTRONIC Stantec Attn: Erin O'Malley

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ELECTRONIC Stantec Attn: Laura Viesselman

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ELECTRONIC Gettler-Ryan Inc. Attn: Gettler Ryan

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## 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-160114 NA Water

QA-T-160114 NA Water LL Sample # WW 8211805 Facility# 90517 Job# 386420 GRD LL Group # 1624695 3900 Piedmont-Oakmont T0600102248 Account # 10906

Project Name: 90517

Collected: 01/14/2016 Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 01/19/2016 17:20 Reported: 01/29/2016 10:35

### PAOQA

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.

#### Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE	SW-846 8260B	1	F160202AA	01/20/2016 20:00	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F160202AA	01/20/2016 20:00	Hu Yang	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	16021A94A	01/21/2016 13:24	Jeremy C Giffin	1
01146	GC VOA Water Prep	SW-846 5030B	1	16021A94A	01/21/2016 13:24	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-1-W-160114 Grab Groundwater

Facility# 90517 Job# 386420 GRD 3900 Piedmont-Oakmont T0600102248

LL Sample # WW 8211806 LL Group # 1624695 Account # 10906

Project Name: 90517

Collected: 01/14/2016 14:45 by JH Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 01/19/2016 17:20 Reported: 01/29/2016 10:35

#### PAOM1

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	N.D.	0.5	1
10945	Naphthalene		91-20-3	N.D.	1	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
GC Pet	roleum	SW-846	8015B modified	ug/l	ug/l	
Hydrod	carbons					
02500	Total TPH		n.a.	520	42	1
02500	TPH Motor Oil C16-C	36	n.a.	520	42	1
that	quantitation is based of a hydrocarbon com n-octane) through C40	nponent mi	ix calibration in a			
GC Pet	roleum	SW-846	8015B	ug/l	ug/l	
Hvdrod	carbons w/Si					
-	TPH-DRO CA C10-C28	w/ Si Gel	n.a.	400	50	1
00010	The reverse surrogat	,				_
Metals	3	SW-846	6010B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.64	1
07051	Chromium		7440-47-3	5.5	2.0	1
07055	Lead		7439-92-1	N.D.	5.1	1
07061	Nickel		7440-02-0	15.8	2.5	1
07072	Zinc		7440-66-6	13.9	3.9	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 Tim	ne	Analyst	Dilution Factor
10945	BTEX/MTBE/Naphthalene -	SW-846 8260B	1	F160202AA	01/21/2016	00:22	Hu Yang	1
01163	Water GC/MS VOA Water Prep	SW-846 5030B	1	F160202AA	01/21/2016	00:22	Hu Yang	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	16021A94A		14:15	Jeremy C Giffin	1
	C6-C12							
01146	GC VOA Water Prep	SW-846 5030B	1	16021A94A	01/21/2016	14:15	Jeremv 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-1-W-160114 Grab Groundwater

Facility# 90517 Job# 386420 GRD 3900 Piedmont-Oakmont T0600102248

LL Group # 1624695 Account # 10906

LL Sample # WW 8211806

Project Name: 90517

Collected: 01/14/2016 14:45 by JH Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 01/19/2016 17:20 Reported: 01/29/2016 10:35

PAOM1

	Laboratory Sample Analysis Record									
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ıe	Analyst	Dilution Factor		
02500	TPH Fuels by GC (Waters)	SW-846 8015B modified	1	160200041A	01/22/2016	19:47	Heather E Williams	1		
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	160200014A	01/22/2016	18:38	Christine E Dolman	1		
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	160200014A	01/20/2016	22:15	Karen L Beyer	1		
11191	TPH Fuels Waters Extraction	SW-846 3510C	1	160200041A	01/21/2016	09:30	Bradley W VanLeuven	1		
07049	Cadmium	SW-846 6010B	1	160251848001	01/27/2016	00:06	Elaine F Stoltzfus	1		
07051	Chromium	SW-846 6010B	1	160251848001	01/27/2016	00:06	Elaine F Stoltzfus	1		
07055	Lead	SW-846 6010B	1	160251848001	01/27/2016	00:06	Elaine F Stoltzfus	1		
07061	Nickel	SW-846 6010B	1	160251848001	01/27/2016	00:06	Elaine F Stoltzfus	1		
07072	Zinc	SW-846 6010B	1	160251848001	01/27/2016	00:06	Elaine F Stoltzfus	1		
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160251848001	01/26/2016	10:34	Christopher M Klumpp	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-160114 Grab Groundwater

Facility# 90517 Job# 386420 GRD 3900 Piedmont-Oakmont T0600102248

LL Group # 1624695 Account # 10906

LL Sample # WW 8211807

Project Name: 90517

Collected: 01/14/2016 16:15 by JH Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 01/19/2016 17:20 Reported: 01/29/2016 10:35

#### PAOM3

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 Buty	yl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene		91-20-3	N.D.	1	1
10945	Toluene		108-88-3	N.D.	0.5	1
10945	Xylene (Total)		1330-20-7	0.6	0.5	1
GC Vo	latiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	400	50	1
GC Pe	troleum	SW-846	8015B modified	ug/l	ug/l	
Hydro	carbons					
02500	Total TPH		n.a.	81	39	1
02500	TPH Motor Oil C16-C3	36	n.a.	81	39	1
that	quantitation is based of a hydrocarbon com n-octane) through C40	ponent mi	x calibration in a			
GC Pe	troleum	SW-846	8015B	ug/l	ug/l	
Hydro	carbons w/Si					
-	TPH-DRO CA C10-C28 v	u/ Si Gel	n.a.	55	50	1
00010	The reverse surrogat	,			30	_
Metal	5	SW-846	6010B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.64	1
07051	Chromium		7440-47-3	5.2	2.0	1
07055	Lead		7439-92-1	5.1	5.1	1
07061	Nickel		7440-02-0	10.3	2.5	1
07072	Zinc		7440-66-6	30.4	3.9	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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Tim	ıe	Analyst	Dilution Factor
10945	BTEX/MTBE/Naphthalene -	SW-846 8260B	1	F160202AA	01/21/2016	00:44	Hu Yang	1
01163	Water GC/MS VOA Water Prep	SW-846 5030B	1	F160202AA	01/21/2016	00:44	Hu Yang	1
01728	TPH-GRO N. CA water	SW-846 8015B	1	16021A94A		14:41	Jeremy C Giffin	1
01146	C6-C12 GC VOA Water Prep	SW-846 5030B	1	16021A94A	01/21/2016	14:41	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-160114 Grab Groundwater

LL Group # 1624695 Account # 10906

LL Sample # WW 8211807

Project Name: 90517

Collected: 01/14/2016 16:15 by JH Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 01/19/2016 17:20 Reported: 01/29/2016 10:35

PAOM3

		Labora	tory Sa	ample Analysi	s Record			
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Ti	me	Analyst	Dilution Factor
02500	TPH Fuels by GC (Waters)	SW-846 8015B modified	1	160200041A	01/22/2016	20:08	Heather E Williams	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	160200014A	01/22/2016	19:00	Christine E Dolman	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	160200014A	01/20/2016	22:15	Karen L Beyer	1
11191	TPH Fuels Waters Extraction	SW-846 3510C	1	160200041A	01/21/2016	09:30	Bradley W VanLeuven	1
07049	Cadmium	SW-846 6010B	1	160251848001	01/27/2016	00:10	Elaine F Stoltzfus	1
07051	Chromium	SW-846 6010B	1	160251848001	01/27/2016	00:10	Elaine F Stoltzfus	1
07055	Lead	SW-846 6010B	1	160251848001	01/27/2016	00:10	Elaine F Stoltzfus	1
07061	Nickel	SW-846 6010B	1	160251848001	01/27/2016	00:10	Elaine F Stoltzfus	1
07072	Zinc	SW-846 6010B	1	160251848001	01/27/2016	00:10	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	160251848001	01/26/2016	10:34	Christopher M Klumpp	1



## **Analysis Report**

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

Sample Description: MW-4-W-160114 Grab Groundwater

Facility# 90517 Job# 386420 GRD 3900 Piedmont-Oakmont T0600102248

LL Group # 1624695 Account # 10906

LL Sample # WW 8211808

Project Name: 90517

Collected: 01/14/2016 13:30 by JH Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 01/19/2016 17:20 Reported: 01/29/2016 10:35

#### PAOM4

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	27	3	5
10945	Ethylbenzene		100-41-4	3	3	5
10945	Methyl Tertiary Buty	yl Ether	1634-04-4	N.D.	3	5
10945	Naphthalene		91-20-3	N.D.	5	5
10945	Toluene		108-88-3	12	3	5
10945	Xylene (Total)		1330-20-7	10	3	5
GC Vol	latiles	SW-846	8015B	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	4,300	250	5
GC Pet	croleum	SW-846	8015B modified	ug/l	ug/l	
Hydrod	carbons					
02500	Total TPH		n.a.	150	39	1
02500	TPH Motor Oil C16-C3	36	n.a.	150	39	1
that	quantitation is based of a hydrocarbon com n-octane) through C40	ponent mi	ix calibration in a			
GC Pet	roleum	SW-846	8015B	ug/l	ug/l	
Hydrod	carbons w/Si					
-	TPH-DRO CA C10-C28 v	w/ Si Gel	n.a.	540	50	1
	The reverse surrogat					
Metals	5	SW-846	6010B	ug/l	ug/l	
07049	Cadmium		7440-43-9	N.D.	0.64	1
07051	Chromium		7440-47-3	13.6	2.0	1
07055	Lead		7439-92-1	N.D.	5.1	1
07061	Nickel		7440-02-0	129	2.5	1
07072	Zinc		7440-66-6	55.4	3.9	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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE/Naphthalene -	SW-846 8260B	1	D160221AA	01/22/2016 13:2	5 Daniel H Heller	5
	Water						
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D160221AA	01/22/2016 13:2	5 Daniel H Heller	5
01728	TPH-GRO N. CA water	SW-846 8015B	1	16021A94A	01/21/2016 21:5	5 Jeremy C Giffin	5
	C6-C12						
01146	GC VOA Water Prep	SW-846 5030B	1	16021A94A	01/21/2016 21:5	5 Jeremy C Giffin	5



## Analysis Report

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

Sample Description: MW-4-W-160114 Grab Groundwater

Facility# 90517 Job# 386420 GRD 3900 Piedmont-Oakmont T0600102248

LL Group # 1624695 Account # 10906

LL Sample # WW 8211808

Project Name: 90517

Collected: 01/14/2016 13:30 by JH Chevron

6001 Bollinger Canyon Rd L4310

San Ramon CA 94583

Submitted: 01/19/2016 17:20 Reported: 01/29/2016 10:35

PAOM4

#### Laboratory Sample Analysis Record Method CAT Analysis Name Trial# Batch# Dilution Analyst No. Date and Time Factor 02500 TPH Fuels by GC (Waters) 160200041A Heather E Williams 1 SW-846 8015B 01/22/2016 20:29 modified 06610 TPH-DRO CA C10-C28 w/ Si SW-846 8015B 160200014A 01/22/2016 19:22 Christine E Dolman 1 Gel 01/20/2016 22:15 01/21/2016 09:30 11180 Low Vol Ext(W) w/SG SW-846 3510C 160200014A Karen L Beyer SW-846 3510C 11191 TPH Fuels Waters 160200041A Bradley W 1 1 Extraction VanLeuven 07049 Cadmium SW-846 6010B 160211848001 01/26/2016 00:54 Tara L Snyder 07051 Chromium SW-846 6010B 1 160211848001 01/26/2016 00:54 Tara L Snyder 01/26/2016 00:54 01/26/2016 00:54 07055 Lead SW-846 6010B 160211848001 Tara L Snyder 1 1 160211848001 07061 Nickel SW-846 6010B 1 Tara L Snvder 1 07072 Zinc SW-846 6010B 1 160211848001 01/26/2016 00:54 Tara L Snyder 01848 ICP-WW, 3005A (tot rec) - SW-846 3005A 1 160211848001 01/25/2016 12:40 James L Mertz



## Analysis Report

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

### Quality Control Summary

Client Name: Chevron Group Number: 1624695

Reported: 01/29/2016 10:35

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
Batch number: D160221AA Benzene Ethylbenzene Methyl Tertiary Butyl Ether Naphthalene Toluene Xylene (Total)	Sample number(s): N.D. N.D. N.D. N.D. N.D. N.D. N.D.	<del>-</del> -
Batch number: F160202AA Benzene Ethylbenzene Methyl Tertiary Butyl Ether Naphthalene Toluene Xylene (Total)	Sample number(s): N.D. N.D. N.D. N.D. N.D. N.D.	8211805-8211807 0.5 0.5 0.5 1 0.5 0.5
Batch number: 16021A94A TPH-GRO N. CA water C6-C12	<pre>Sample number(s): N.D.</pre>	8211805-8211808 50
Batch number: 160200041A Total TPH TPH Motor Oil C16-C36	<pre>Sample number(s): N.D. N.D.</pre>	8211806-8211808 40 40
Batch number: 160200014A TPH-DRO CA C10-C28 w/ Si Gel	<pre>Sample number(s): N.D.</pre>	8211806-8211808 50
Batch number: 160211848001 Cadmium Chromium Lead Nickel Zinc	<pre>Sample number(s): N.D. N.D. N.D. N.D. N.D.</pre>	8211808 0.64 2.0 5.1 2.5 3.9
Batch number: 160251848001 Cadmium Chromium Lead Nickel Zinc	Sample number(s): N.D. N.D. N.D. N.D. N.D.	8211806-8211807 0.64 2.0 5.1 2.5 3.9

### LCS/LCSD

Analysis Name	LCS Spike	LCS	LCSD Spike	LCSD	LCS	LCSD	LCS/LCSD	RPD	RPD
	Added	Conc	Added	Conc	%REC	%REC	Limits		Max

<sup>\*-</sup> Outside of specification

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

<sup>(2)</sup> The unspiked result was more than four times the spike added.

## **Analysis Report**

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

## Quality Control Summary

Client Name: Chevron Group Number: 1624695

Reported: 01/29/2016 10:35

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: D160221AA	Sample numbe	r(s): 8211	808						
Benzene	20	17.77			89		78-120		
Ethylbenzene	20	17.64			88		78-120		
Methyl Tertiary Butyl Ether	20	16.36			82		75-120		
Naphthalene	20	16.47			82		59-120		
Toluene	20	17.79			89		80-120		
Xylene (Total)	60	53.27			89		80-120		
Batch number: F160202AA	Sample numbe	r(s): 8211	805-8211807						
Benzene	20	17.56			88		78-120		
Ethylbenzene	20	16.98			85		78-120		
Methyl Tertiary Butyl Ether	20	17.31			87		75-120		
Naphthalene	20	16.08			80		59-120		
Toluene	20	16.99			85		80-120		
Xylene (Total)	60	52.53			88		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 16021A94A	Sample numbe	r(s): 8211	805-8211808						
TPH-GRO N. CA water C6-C12	1100	1025.69	1100	999.85	93	91	71-138	3	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160200041A	Sample numbe	r(s): 8211	806-8211808						
Total TPH	800	545.37	800	494.77	68	62	44-115	10	20
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160200014A	Sample numbe	r(s): 8211	806-8211808						
TPH-DRO CA C10-C28 w/ Si Gel	1600	1059.92	1600	1046.13	66	65	40-105	1	20
	ug/l	ug/l	ug/l	ug/l					
Batch number: 160211848001	Sample numbe	r(s): 8211	808						
Cadmium	50	51.88			104		80-120		
Chromium	200	203.68			102		80-120		
Lead	150	151.58			101		80-120		
Nickel	500	517.46			103		80-120		
Zinc	500	509.34			102		80-120		
Batch number: 160251848001	Sample numbe		806-8211807						
Cadmium	50	51.63			103		80-120		
Chromium	200	201.89			101		80-120		
Lead	150	153.84			103		80-120		
Nickel	500	517.53			104		80-120		
Zinc	500	507.79			102		80-120		

### MS/MSD

 ${\tt Unspiked} \ \ ({\tt UNSPK}) \ = \ {\tt the} \ \ {\tt sample} \ \ {\tt used} \ \ {\tt in} \ \ {\tt conjunction} \ \ {\tt with} \ \ {\tt the} \ \ {\tt matrix} \ \ {\tt spike}$ 

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: D160221AA	Sample numb	er(s): 8211	808 UNSE	PK: P213032						

<sup>\*-</sup> Outside of specification

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

<sup>(2)</sup> The unspiked result was more than four times the spike added.



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

## Quality Control Summary

Client Name: Chevron Group Number: 1624695

Reported: 01/29/2016 10:35

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Benzene	N.D.	20	22.23	20	20.83	111	104	78-120	7	30
Ethylbenzene	N.D.	20	20.8	20	20.16	104	101	78-120	3	30
Methyl Tertiary Butyl Ether	N.D.	20	19.76	20	18.81	99	94	75-120	5	30
Naphthalene	N.D.	20	18.25	20	17.67	91	88	59-120	3	30
Toluene	N.D.	20	20.87	20	20.07	104	100	80-120	4	30
Xylene (Total)	N.D.	60	63.44	60	60.68	106	101	80-120	4	30
Batch number: F160202AA	Sample numb	er(s): 8211	.805-8211	807 UNSPK: 1	P211719					
Benzene	N.D.	20	18.07	20	18.18	90	91	78-120	1	30
Ethylbenzene	N.D.	20	17.23	20	17.96	86	90	78-120	4	30
Methyl Tertiary Butyl Ether	N.D.	20	16.53	20	17.01	83	85	75-120	3	30
Naphthalene	N.D.	20	15.17	20	16.2	76	81	59-120	7	30
Toluene	N.D.	20	17.42	20	17.98	87	90	80-120	3	30
Xylene (Total)	N.D.	60	55	60	55.52	92	93	80-120	1	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 160211848001	Sample numb	er(s): 8211	.808 UNSP							
Cadmium	N.D.	50	50.73	50	50.24	101	100	75-125	1	20
Chromium	7.36	200	212.8	200	211.84	103	102	75-125	0	20
Lead	N.D.	150	154.18	150	153.76	103	103	75-125	0	20
Nickel	14.08	500	512.98	500	512.34	100	100	75-125	0	20
Zinc	26.49	500	548.5	500	546.83	104	104	75-125	0	20
Batch number: 160251848001	Sample numb	er(s): 8211	806-8211	807 UNSPK: 1	P217090					
Cadmium	N.D.	50	49.75	50	49.58	100	99	75-125	0	20
Chromium	N.D.	200	197.6	200	196.29	99	98	75-125	1	20
Lead	N.D.	150	154.08	150	156.92	103	105	75-125	2	20
Nickel	17.19	500	510.53	500	507.94	99	98	75-125	1	20
Zinc	8.13	500	497.07	500	495.31	98	97	75-125	0	20

### Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 160211848001	-	8211808 BKG: P213441		
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	7.36	7.81	6 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Nickel	14.08	14.99	6 (1)	20
Zinc	26.49	24.84	6 (1)	20
Batch number: 160251848001	Sample number(s):	8211806-8211807 BKG:	P217090	
Cadmium	N.D.	N.D.	0 (1)	20
Chromium	N.D.	N.D.	0 (1)	20
Lead	N.D.	N.D.	0 (1)	20
Nickel	17.19	15.9	8 (1)	20
Zinc	8.13	7.88	3 (1)	20

<sup>\*-</sup> Outside of specification

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

<sup>(2)</sup> The unspiked result was more than four times the spike added.



## Analysis Report

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

### Quality Control Summary

Client Name: Chevron Group Number: 1624695

Reported: 01/29/2016 10:35

### 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/Naphthalene - Water

Batch number: D160221AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8211808	95	96	98	100
Blank	96	97	99	98
LCS	95	97	100	99
MS	97	102	98	98
MSD	96	100	100	99
T.imita.	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE/Naphthalene - Water

Batch number: F160202AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8211805	105	100	94	90
8211806	105	105	91	89
8211807	105	101	92	91
Blank	105	100	93	90
LCS	103	101	93	91
MS	107	102	94	91
MSD	106	104	94	91
Limits:	80-116	77-113	80-113	78-113

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

Batch number: 16021A94A

	Trifluorotoluene-F
8211805	77
8211806	77
8211807	88
8211808	95
Blank	76
LCS	94
LCSD	94

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

Batch number: 160200014A

63-135

Limits:

	Orthoterphenyl
8211806	82
8211807	81
8211808	82
Blank	84
LCS	91
LCSD	86

Limits: 42-126

- (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.

<sup>\*-</sup> Outside of specification



## **Analysis Report**

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

## Quality Control Summary

Client Name: Chevron Group Number: 1624695

Reported: 01/29/2016 10:35

Analysis Name: TPH Fuels by GC (Waters) Batch number: 160200041A

	Chlorobenzene	Orthoterphenyl					
8211806	53	76					
8211807	72	74					
8211808	106	72					
Blank	65	82					
LCS	60	82					
LCSD	63	91					
Limits:	35-135	48-122					

<sup>\*-</sup> Outside of specification

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

<sup>(2)</sup> 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:

134065

Group Number(s): 1624695

Client: CA Office

**Delivery and Receipt Information** 

Delivery Method:

**BASC** 

Arrival Timestamp:

01/19/2016 17:20

Number of Packages:

9

Number of Projects:

<u>2</u>

State/Province of Origin:

CA

**Arrival Condition Summary** 

Shipping Container Sealed:

Yes

Sample IDs on COC match Containers:

Yes

Custody Seal Present:

Yes

Sample Date/Times match COC:

Yes

Custody Seal Intact:

Yes

VOA Vial Headspace ≥ 6mm:

Air Quality Samples Present:

No

Samples Chilled:

Yes

Total Trip Blank Qty:

2

Paperwork Enclosed:

Yes

Trip Blank Type:

HCI No

Samples Intact:

Yes No

Missing Samples: No Extra Samples: No

Discrepancy in Container Qty on COC:

No

Unpacked by Patrick Engle (3472) at 19:04 on 01/19/2016

## **Samples Chilled Details**

Thermometer Types:

Page 1 of 2

DT = Digital (Temp. Bottle)

IR = Infrared (Surface Temp)

All Temperatures in °C.

Cooler#	Thermometer ID	Corrected Temp	Therm. Type	<u>Ice Type</u>	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.0	DT	Wet	Υ	Bagged	N
2	DT131	0.7	DT	Wet	Υ	Bagged	N
3	DT131	1.3	DT	Wet	Υ	Bagged	N
4	DT131	0.9	DT	Wet	Υ	Bagged	N
5	DT131	1.2	DT	Wet	Υ	Bagged	N
6	DT131	1.0	DT	Wet	Υ	Bagged	N
7	DT131	0.2	DT	Wet	Υ	Bagged	N
8	DT131	0.8	DT	Wet	Υ	Bagged	N
9	DT131	0.2	DT	Wet	Υ	Bagged	N



## **Explanation of Symbols and Abbreviations**

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

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

< less than

> greater than

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

ppb parts per billion

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

Laboratory Data Qualifiers:

B - Analyte detected in the blank

C - Result confirmed by reanalysis

E - Concentration exceeds the calibration range

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

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

U - Analyte was not detected at the value indicated

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

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

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

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

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

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

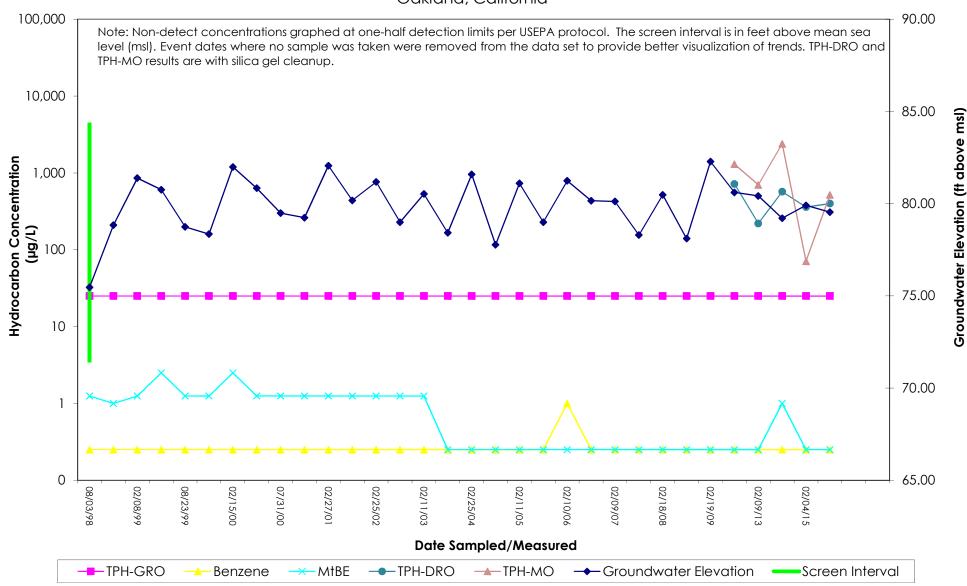
Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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ATTACHMENT C Hydrographs

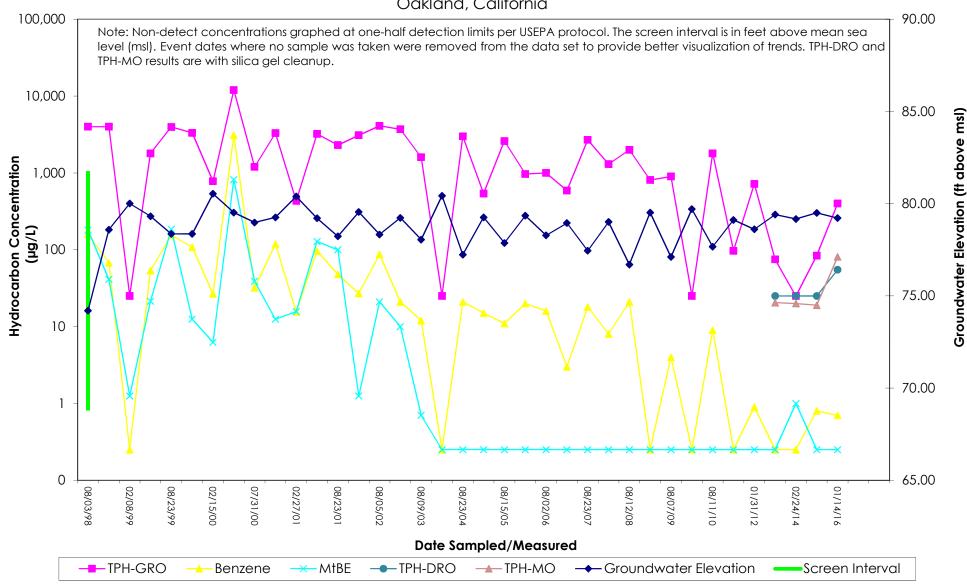
# MW-1 TPH-GRO, TPH-DRO, TPH-MO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California



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

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California



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

Former Chevron-branded Service Station 90517 3900 Piedmont Avenue Oakland, California

