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First Quarter 2017 Annual Groundwater Monitoring Report

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

Stantec

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

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

March 24, 2017

Carryl MacLeod
Project Manager
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Chevron Environmental Management Company
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March 24, 2017

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

Dear Mr. Detterman:

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

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

Sincerely,

Carryl MacLeod

Carryl MacLeod
Project Manager

March 24, 2017

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

Reference: **First Quarter 2017 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 (CEMC), Stantec Consulting Services Inc. (Stantec) is pleased to submit the *First Quarter 2017 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 2017 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 removed and second-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.

FIRST QUARTER 2017 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Gettler-Ryan, Inc. (G-R) performed the First Quarter 2017 groundwater monitoring and sampling event on February 27, 2017. 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 was removed from the groundwater sampling program in 2009 due to a long history of non-detect concentrations.

Investigation-derived waste (IDW) generated during the First Quarter 2017 groundwater monitoring and sampling event was transported by Clean Harbors Environmental Services to Seaport Environmental in Redwood City, California.

Groundwater Elevation and Gradient

Well construction details and a screen interval assessment for each Site well are presented in **Table 1**. 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 2017 data) is shown on **Figure 2**. The direction of groundwater flow at the time of sampling was generally towards the west at an average hydraulic gradient of approximately 0.029 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 2017, groundwater samples were collected from three Site wells (MW-1, MW-3, and MW-4). Current and historical groundwater analytical results are included in **Table 2** through **Table 6**. A figure showing the latest groundwater analytical data plotted on a Site map is included as **Figure 4**. A TPH-GRO isoconcentration map is shown on **Figure 5**. A TPH-DRO isoconcentration map is shown on **Figure 6**. A benzene isoconcentration map is shown on **Figure 7**. An isoconcentration map was not developed for MtBE because all concentrations were below method detection limits (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 select First Quarter 2017 groundwater analytical results follows:

Well ID	TPH-GRO (µg/L)	TPH-DRO (µg/L)	TPH-MO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L)
MW-1	**<50**	**<50**	**600**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-3	**<50**	**<50**	**<40**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-4	**2,400**	**190**	**66**	**33**	**14**	**4**	**11**	**<0.5**

CONCLUSIONS AND RECOMMENDATIONS

Maximum concentrations of TPH-GRO, TPH-DRO, BTEX compounds, and naphthalene 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. Maximum concentrations of nickel and zinc were observed in well MW-3, located approximately 20 feet down-gradient of the former USTs. Stantec recommends ceasing analyses for MtBE, naphthalene, and metals due to the low (below environmental screening levels) to non-detectable concentrations observed in all three wells.

In a letter dated November 10, 2016, Alameda County Environmental Health (ACEH) requested additional on-site and off-site assessment with a report due by January 27, 2017. Extensions on the report were requested by Stantec in letters dated January 12 and March 13, 2017. Pending ACEH approval of the March 13, 2017 extension request, the current due date of the report will be June 16, 2017. Field work is currently scheduled to begin March 24, 2017.

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

LIMITATIONS

This document entitled First Quarter 2017 Annual Groundwater Monitoring Report was prepared by Stantec Consulting Services Inc. ("Stantec") for the account of Chevron Environmental Management Company (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.

Prepared by Erin O'Malley
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Erin O'Malley
Project Engineer

Reviewed by Marisa Kaffenberger
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Marisa Kaffenberger
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Senior Project Manager

Reviewed by D Runyan
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Dorota Runyan, P.E.
Senior Engineer

Attachments:

Table 1 – Well Details / Screen Interval Assessment – First Quarter 2017
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 2017
Figure 3 – Groundwater Flow Direction Rose Diagram – First Quarter 2017
Figure 4 – Site Plan Showing Groundwater Concentrations – First Quarter 2017
Figure 5 – TPH-GRO Isoconcentration Map – First Quarter 2017
Figure 6 – TPH-DRO Isoconcentration Map – First Quarter 2017
Figure 7 – Benzene Isoconcentration Map – First Quarter 2017

Attachment A – Gettler-Ryan Inc. Field Data Sheets and Standard Operating Procedures – First Quarter 2017
Attachment B – Certified Laboratory Analysis Reports and Chain-of-Custody Documents
Attachment C – Hydrographs

cc:

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

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

TABLES

Table 1
Well Details / Screen Interval Assessment
First Quarter 2017
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[1] (feet below TOC)	Current Depth to Groundwater[1] (feet below TOC)	Screen Interval (feet bgs)	Screen Interval Assessment
MW-1	07/21/98	Monitoring	2	87.89	16.50	16.61	5.44	3.5-16.5	Depth-to-groundwater within screen interval.
MW-2	07/21/98	Monitoring	2	86.09	16.50	16.55	5.08	3.5-16.5	Depth-to-groundwater within screen interval.
MW-3	07/21/98	Monitoring	2	86.28	17.50	17.70	6.18	4.5-17.5	Depth-to-groundwater within screen interval.
MW-4	07/21/98	Monitoring	2	87.22	16.50	16.25	7.48	3.5-16.5	Depth-to-groundwater within screen interval.

Notes:
bgs = below ground surface
msl = mean sea level
TOC = top of casing
[1] = As measured on February 27, 2017.

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 90517
3900 Piedmont Avenue
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	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)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)
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[3]	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	87.89	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[5]	87.89	9.47	78.42	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/25/04[5]	87.89	6.30	81.59	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/04[5]	87.89	10.12	77.77	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/11/05[5]	87.89	6.79	81.10	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/15/05[5]	87.89	8.89	79.00	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/10/06[5]	87.89	6.65	81.24	--	--	--	--	<50	1	<0.5	<0.5	<0.5	<0.5
08/02/06[5]	87.89	7.73	80.16	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/09/07[5]	87.89	7.77	80.12	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/07[5]	87.89	9.59	78.30	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/18/08[5]	87.89	7.41	80.48	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/12/08[5]	87.89	9.78	78.11	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/19/09[5]	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 GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
01/29/10	87.89	6.04	81.85	NOT PART OF GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
08/11/10	87.89	8.35	79.54	NOT PART OF GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
02/02/11	87.89	6.54	81.35	NOT PART OF GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
01/31/12	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--
05/10/12[5]	87.89	7.28	80.61	2,800[6]/ 1,300[6,7,8]	2,800[6]/ 1,300[6,7,8]	--	1,400/ 720[7,8]	<50	<0.5	<0.5	<0.5	<1	<0.5
02/09/13[5]	87.89	7.47	80.42	1,400[6]/ 700[6,7,8]	1,400[6]/ 700[6,7,8]	1,600/ 2,400[7]	650/ 220[7,8]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/24/14[5]	87.89	8.68	79.21	2,400[6]	2,400[6]	<1,400/ <1,400[7]	1,100/ 570[7,8]	<50	<0.5	<0.5	<0.5	<0.5	<2

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 90517
3900 Piedmont Avenue
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	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)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)
MW-1 (cont)													
02/04/15[5]	87.89	7.98	79.91	71[6,7,8]	71[6,7,8]	--	360[7,8]	<50	<0.5	<0.5	<0.5	0.6	<0.5
01/14/16[5]	87.89	8.35	79.54	520[6]	520[6]	--	400[7,8]	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/27/17[5]	**87.89**	**5.44**	**82.45**	**600[6]**	**600[6]**	**--**	**<50[7,8]**	**<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	86.09	7.29	78.80	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/15/00	86.09	4.49	81.60	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
05/12/00	86.09	5.90	80.19	--	--	--	--	4,000[3]	240	26	100	76	<100
07/31/00	86.09	6.58	79.51	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
10/30/00	86.09	6.23	79.86	--	--	--	--	<51	<0.50	2.92	<0.50	1.88	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[5]	86.09	7.65	78.44	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/25/04[5]	86.09	4.85	81.24	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/04[5]	86.09	8.23	77.86	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/11/05[5]	86.09	5.93	80.16	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/15/05[5]	86.09	7.59	78.50	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/10/06[5]	86.09	5.73	80.36	--	--	--	--	<50	0.6	<0.5	<0.5	<0.5	<0.5
08/02/06[5]	86.09	6.95	79.14	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/09/07[5]	86.09	6.29	79.80	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/07[5]	86.09	7.40	78.69	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/18/08[5]	86.09	6.47	79.62	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/12/08[5]	86.09	7.08	79.01	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/19/09[5]	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 GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
01/29/10	86.09	6.29	79.80	NOT PART OF GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
08/11/10	86.09	7.20	78.89	NOT PART OF GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
02/02/11	86.09	6.87	79.22	NOT PART OF GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
01/31/12	86.09	6.81	79.28	NOT PART OF GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 90517
3900 Piedmont Avenue
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	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)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)
MW-2 (cont)													
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					--	--	--	--	--
01/14/16	86.09	5.40	80.69	NOT PART OF GROUNDWATER SAMPLING PROGRAM					--	--	--	--	--
02/27/17	**86.09**	**5.08**	**81.01**	**NOT PART OF GROUNDWATER SAMPLING PROGRAM**					**--**	**--**	**--**	**--**	**--**
MW-3													
08/03/98	86.28	12.08	74.20	--	--	--	--	4,000	160	<5.0	<5.0	73	180
11/23/98	86.28	7.69	78.59	--	--	--	--	4,000	67.7	7.56	17.1	24.5	41.2
02/08/99	86.28	6.27	80.01	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/07/99	86.28	6.96	79.32	--	--	--	--	1,800	53.6	8.96	33	18.6	21.4
08/23/99	86.28	7.92	78.36	--	--	--	--	3,970	155	24	88.8	39.8	185
11/03/99	86.28	7.92	78.36	--	--	--	--	3,320	108	19.9	98.4	44.8	<25
02/15/00	86.28	5.74	80.54	--	--	--	--	779	26.7	3.82	15.4	4.24	<12.5
05/12/00	86.28	6.76	79.52	--	--	--	--	12,000[3]	3,100	120	980	1,400	820
07/31/00	86.28	7.30	78.98	--	--	--	--	1,200[3]	32	<5.0	11	7.3	39
10/30/00	86.28	7.02	79.26	--	--	--	--	3,300[4]	119	<5.00	40	<15.0	<25.0
02/27/01	86.28	5.89	80.39	--	--	--	--	432[3]	15.5	1.53	14.9	1.06	15.7
05/15/01	86.28	7.07	79.21	--	--	--	--	3,220[3]	96.4	12.6	11.5	11.6	128
08/23/01	86.28	8.05	78.23	--	--	--	--	2,300	48	<10	<10	<10	100
02/25/02	86.28	6.73	79.55	--	--	--	--	3,100	27	2.1	4.8	6.6	<2.5
08/05/02	86.28	7.95	78.33	--	--	--	--	4,100	87	21	90	47	21
02/11/03	86.28	7.05	79.23	--	--	--	--	3,700	21	2.3	4.4	9	<20
08/09/03[5]	86.28	8.23	78.05	--	--	--	--	1,600	12	1	2	4	0.7
02/25/04[5]	86.28	5.85	80.43	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/04[5]	86.28	9.05	77.23	--	--	--	--	3,000	21	3	3	9	<0.5
02/11/05[5]	86.28	7.02	79.26	--	--	--	--	540	15	1	<0.5	0.8	<0.5
08/15/05[5]	86.28	8.41	77.87	--	--	--	--	2,600	11	1	1	2	<0.5
02/10/06[5]	86.28	6.93	79.35	--	--	--	--	970	20	2	<0.5	3	<0.5
08/02/06[5]	86.28	8.00	78.28	--	--	--	--	1,000	16	1	<0.5	3	<0.5
02/09/07[5]	86.28	7.33	78.95	--	--	--	--	590	3	<0.5	<0.5	0.5	<0.5
08/23/07[5]	86.28	8.83	77.45	--	--	--	--	2,700	18	4	2	8	<0.5
02/18/08[5]	86.28	7.27	79.01	--	--	--	--	1,300	8	1	0.6	1	<0.5
08/12/08[5]	86.28	9.58	76.70	--	--	--	--	2,000	21	3	1	4	<0.5
02/19/09[5]	86.28	6.76	79.52	--	--	--	--	810	<0.5	<0.5	<0.5	1	<0.5
08/07/09[5]	86.28	9.17	77.11	--	--	--	--	900	4	0.9	3	3	<0.5
01/29/10[5]	86.28	6.57	79.71	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/11/10[5]	86.28	8.61	77.67	--	--	--	--	1,800	9	2	6	5	<0.5

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 90517
3900 Piedmont Avenue
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	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)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)
MW-3 (cont)													
2/2/2011[5]	86.28	7.16	79.12	--	--	--	--	97	<0.5	<0.5	<0.5	<0.5	<0.5
01/31/12[5]	86.28	7.67	78.61	--	--	--	--	720	0.9	<0.5	<0.5	0.9	<0.5
02/09/13[5]	86.28	6.87	79.41	86[6]/ <41[6,7,8]	86[6]/ <41[6,7,8]	<1,400/ 2,400[7]	120/ <50[7,8]	75	<0.5	<0.5	<0.5	<0.5	<0.5
02/24/14[5]	86.28	7.11	79.17	<40[6]	<40[6]	1,500/ <1,400[7]	<50/ <50[7,8]	<50	<0.5	<0.5	<0.5	<0.5	<2
02/04/15[5]	86.28	6.78	79.50	<38[6,7,8]	<38[6,7,8]	--	<50[7,8]	84	0.8	<0.5	<0.5	0.7	<0.5
01/14/16[5]	86.28	7.06	79.22	81[6]	81[6]	--	55[7,8]	400	0.7	<0.5	<0.5	0.6	<0.5
02/27/17[5]	**86.28**	**6.18**	**80.10**	**<40[6]**	**<40[6]**	**--**	**<50[7,8]**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<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
02/08/99[1]	87.22	7.82	79.40	--	--	--	--	2,900	150	16	<5.0	15	230/30.7[2]
05/07/99	87.22	7.42	79.80	--	--	--	--	6,050	161	<25	39.8	36.9	<250/30.2[2]
08/23/99	87.22	9.39	77.83	--	--	--	--	3,930	203	37.6	58.6	42.2	255
11/03/99	87.22	9.81	77.41	--	--	--	--	5,350	324	44.7	91.5	56.1	<50
02/15/00	87.22	7.72	79.50	--	--	--	--	4,080	161	27.7	31.1	39.1	73.9
05/12/00	87.22	7.91	79.31	--	--	--	--	3,600[3]	170	27	49	64	170
07/31/00	87.22	8.65	78.57	--	--	--	--	2,900[3]	160	20	15	56	170
10/30/00	87.22	9.08	78.14	--	--	--	--	5,630[4]	301	17.8	11.8	51.5	<25.0
02/27/01	87.22	7.30	79.92	--	--	--	--	2,140[3]	95.1	12.8	53.4	43.0	235
05/15/01	87.22	8.15	79.07	--	--	--	--	4,580[3]	200	44.1	46.3	51.7	172
08/23/01	87.22	9.33	77.89	--	--	--	--	2,700	250	44	21	72	130
02/25/02	87.22	7.80	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[5]	87.22	9.55	77.67	--	--	--	--	3,700	110	24	10	45	8
02/25/04[5]	87.22	8.06	79.16	--	--	--	--	5,400	94	28	34	49	5
08/23/04[5]	87.22	10.19	77.03	--	--	--	--	5,100	100	26	7	43	5
02/11/05[5]	87.22	7.97	79.25	--	--	--	--	3,900	58	16	25	16	2
08/15/05[5]	87.22	8.82	78.40	--	--	--	--	2,400	76	16	11	26	3
02/10/06[5]	87.22	7.81	79.41	--	--	--	--	1,600	68	16	8	27	4
08/10/06[5]	87.22	8.58	78.64	--	--	--	--	2,500	100	19	5	30	3
02/09/07[5]	87.22	8.71	78.51	--	--	--	--	6,200	200	39	16	52	3
08/23/07[5]	87.22	10.38	76.84	--	--	--	--	5,800	190	48	20	61	3
02/18/08[5]	87.22	8.11	79.11	--	--	--	--	4,900	110	24	11	32	2
08/12/08[5]	87.22	10.58	76.64	--	--	--	--	6,100	180	31	9	52	3
02/19/09[5]	87.22	7.72	79.50	--	--	--	--	2,900	84	20	5	24	2
08/07/09[5]	87.22	10.42	76.80	--	--	--	--	4,900	120	34	11	36	2

Table 2
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Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	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)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)
MW-4 (cont)													
01/29/10[5]	87.22	8.02	79.20	--	--	--	--	3,800	49	15	4	17	1
08/11/10[5]	87.22	10.19	77.03	--	--	--	--	5,400	110	36	11	36	1
2/2/2011[5]	87.22	8.65	78.57	--	--	--	--	3,800	76	29	16	31	1
01/31/12[5]	87.22	9.24	77.98	--	--	--	--	6,700	110	32	7	34	1
02/09/13[5]	87.22	8.14	79.08	300[6,9]/ <40[6,7]	300[6,9]/ <40[6,7]	<1,400/ 1,900[7]	2,300/ 1,500[7,8]	1,800	77	17	4	10	0.8
02/24/14[5]	87.22	9.50	77.72	92[6]	92[6]	<1,400/ <1,400[7]	1,200/ 720[7,8]	6,000	80	29	9	30	<2
02/04/15[5]	87.22	8.60	78.62	<38[6,7,8]	<38[6,7,8]	--	290[7,8]	2,300	43	15	5	11	<0.5
01/14/16[5]	87.22	9.30	77.92	150[6]	150[6]	--	540[7,8]	4,300	27	12	3	10	<3
02/27/17[5]	**87.22**	**7.48**	**79.74**	**66[6]**	**66[6]**	**--**	**190[7,8]**	**2,400**	**33**	**14**	**4**	**11**	**<0.5**
TRIP BLANK													
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[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/25/04[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/04[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/11/05[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/15/05[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/10/06[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/02/06[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/09/07[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/23/07[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/18/08[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-branded Service Station 90517
3900 Piedmont Avenue
Oakland, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	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)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)
QA (cont)													
08/12/08[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/19/09[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/07/09[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/09/13[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/24/14[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2
02/04/15[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/14/16[5]	--	--	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/27/17[5]	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Table 2
Groundwater Monitoring Data and Analytical Results
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
(ft.) = Feet
GWE = Groundwater Elevation
(msl) = Mean sea level
DTW = Depth to Water
TPH = Total Petroleum Hydrocarbons
DRO = Diesel Range Organics
MO = Motor Oil
GRO = Gasoline Range Organics
O&G = Oil and Grease (n-Hexane Extractable Material)
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes (sum of m+p and o)
MtBE = Methyl tertiary-butyl ether
(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank

* TOC elevations are referenced to msl.

[1] Chromatogram pattern indicates gas and an unidentified hydrocarbon.

[2] Confirmation run.

[3] Laboratory report indicates gasoline C_6-C_{12}.

[4] Laboratory report indicates hydrocarbon pattern present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.

[5] BTEX and MtBE by EPA Method 8260.

[6] 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_8 (n-octane) through C_{40} (n-tetracontane) normal hydrocarbons.

[7] Analyzed with silica gel cleanup.

[8] Laboratory report indicates the reverse surrogate, capric acid, is present at <1%.

[9] 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
3900 Piedmont Avenue
Oakland, California

WELL ID/ DATE	ETHANOL (µg/L)	TBA (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	1,2-DBA (µg/L)
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

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

Table 4
Groundwater Analytical Results - PPL Volatiles
Former Chevron-branded Service Station 90517
3900 Piedmont Avenue
Oakland, California

WELL ID/ DATE	Acetone (µg/L)	2-Butanone (µg/L)	n-Butyl-benzene (µg/L)	sec-Butyl-benzene (µg/L)	2-Chlorotoluene (µg/L)	Isopropyl-benzene (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)
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	--	--	--
02/27/17	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**<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	--	--	--
02/27/17	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**<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	--
02/04/15[1]	12	<3	2	4	<1	24	2	1	18	<1	--
01/14/16	--	--	--	--	--	--	--	<5	--	--	--
02/27/17	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**1**	**--**	**--**	**--**

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.

(µg/L) **=** Micrograms per liter
PPL = priority pollutant list
-- = Not Measured/Not Analyzed

[1] 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/ DATE	Cadmium (µg/L)	Chromium (µg/L)	Lead (µg/L)	Nickel (µg/L)	Zinc (µg/L)
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
02/27/17	**<0.49**	**<1.8**	**<6.2**	**<2.8**	**<5.4**
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
02/27/17	**<0.49**	**<1.8**	**<6.2**	**3.6**	**7.3**
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
02/27/17	**<0.49**	**<1.8**	**<6.2**	**<2.8**	**<5.4**

EXPLANATIONS:

(µg/L) = Micrograms per liter

ANALYTICAL METHOD:

Metals by EPA Method 6010B

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)
MW-1							
05/10/12	<0.095	<0.05	<0.19	<0.095	<0.095	<0.095	<0.14

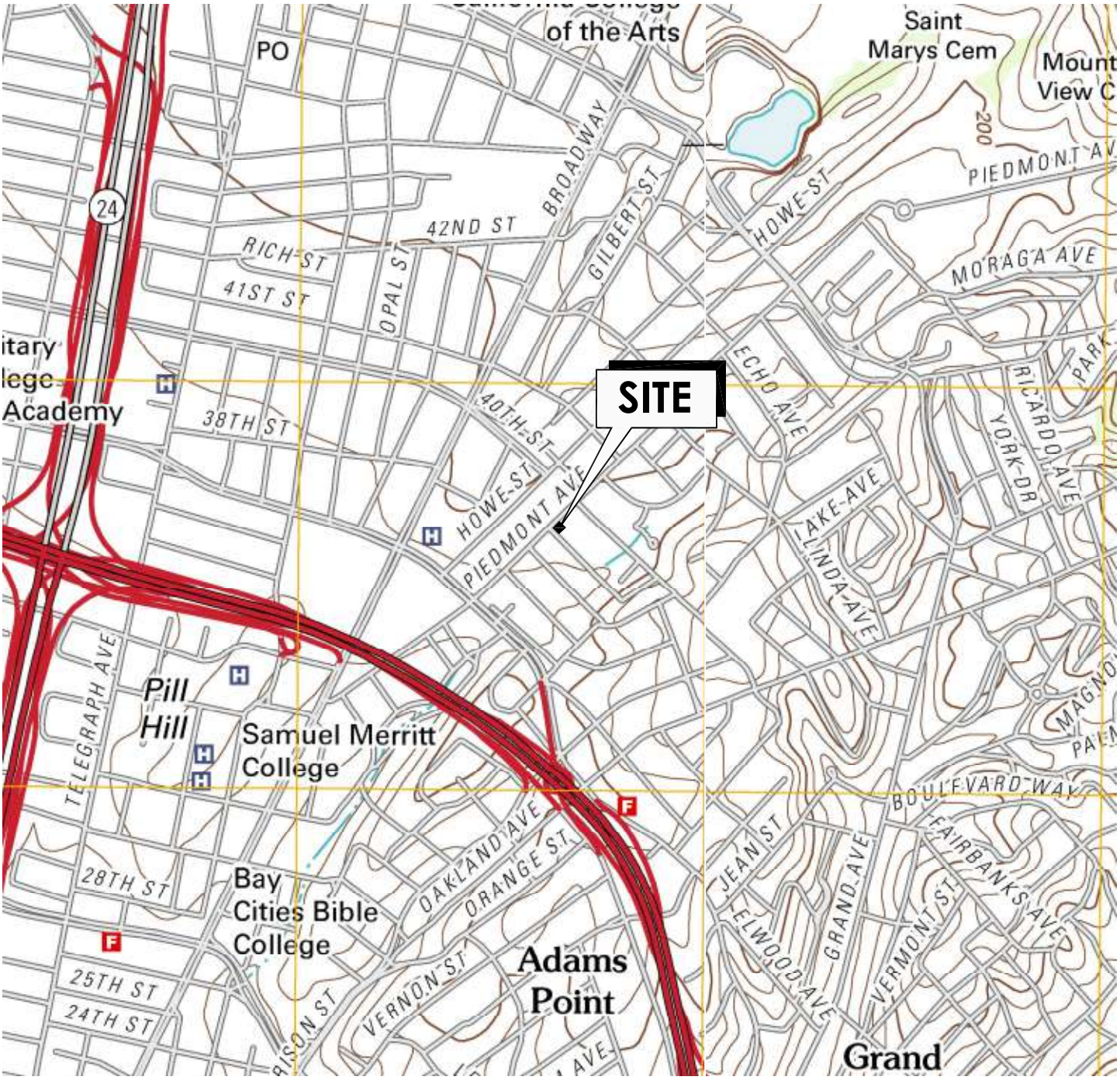
EXPLANATIONS:

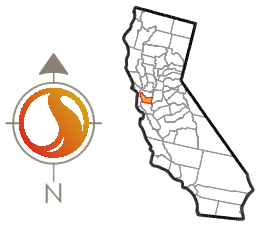
(µg/L) = Micrograms per liter
PCB = Polychlorinated Biphenyl

ANALYTICAL METHOD:

PCBs by EPA Method 8082

FIGURES





CALIFORNIA

1 1/2 0 1

SCALE IN MILES

1000 0 1000 2000 3000 4000 5000 6000 7000

SCALE IN FEET

REFERENCE: USGS 7.5 MINUTE QUADRANGLES;
OAKLAND WEST, CALIFORNIA; 2012 AND OAKLAND EAST, CALIFORNIA; 2012

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Los Gatos, CA 95032
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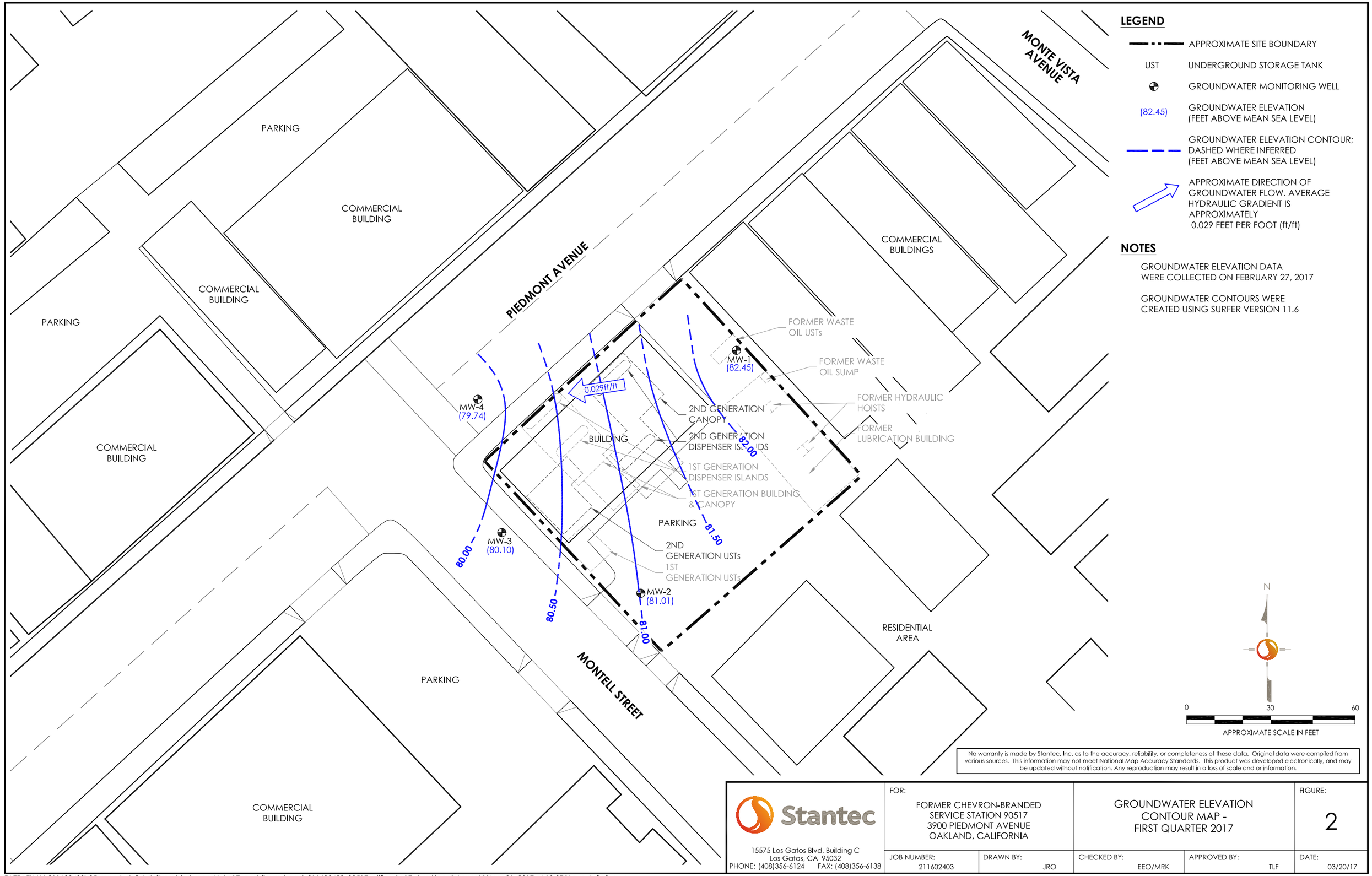
FOR:				FIGURE:
FORMER CHEVRON-BRANDED SERVICE STATION 90517 3900 PIEDMONT AVENUE OAKLAND, CALIFORNIA		SITE LOCATION MAP		1
JOB NUMBER: 211602403	DRAWN BY: JRO	CHECKED BY: EEO/MRK	APPROVED BY: TLF	DATE: 03/20/17

FILEPATH:U:\211602403\05_report_deliv\deliverables\reports\1q17_gwr\figures\cad\211602403_90517_allfigs_1q17.dwg | jopalekopsahl | Mar 20, 2017 at 9:51 | Layout: fig1_slm



LEGEND

- APPROXIMATE SITE BOUNDARY
- UST — UNDERGROUND STORAGE TANK
- GROUNDWATER MONITORING WELL
- (82.45) — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- GROUNDWATER ELEVATION CONTOUR; DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW. AVERAGE HYDRAULIC GRADIENT IS APPROXIMATELY 0.029 FEET PER FOOT (ft/ft)

NOTES

GROUNDWATER ELEVATION DATA WERE COLLECTED ON FEBRUARY 27, 2017

GROUNDWATER CONTOURS WERE CREATED USING SURFER VERSION 11.6

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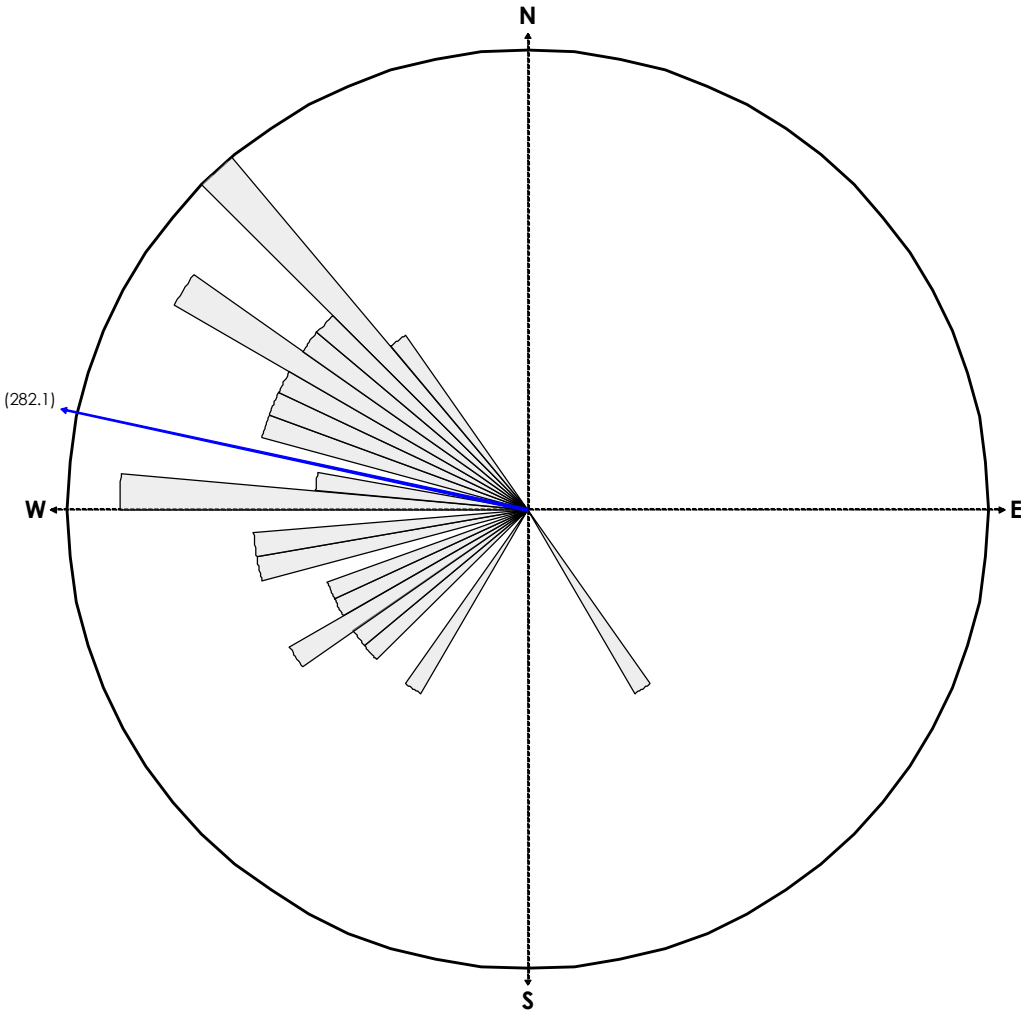
FOR:		GROUNDWATER ELEVATION CONTOUR MAP - FIRST QUARTER 2017		FIGURE:
FORMER CHEVRON-BRANDED SERVICE STATION 90517 3900 PIEDMONT AVENUE OAKLAND, CALIFORNIA				2
JOB NUMBER: 211602403	DRAWN BY: JRO	CHECKED BY: EEO/MRK	APPROVED BY: TLF	DATE: 03/20/17

FILEPATH:U:\211602403\05_report_deliv\deliverables\reports\1q17_gwr\figures\cad\211602403_90517_allfigs_1q17.dwg | jopalekopsahl | Mar 21, 2017 at 10:27 | Layout: fig2_gwe



EQUAL AREA PLOT

Number of Points	37
Class Size	5
Vector Mean	282.10
Vector Magnitude	30.65
Consistency Ratio	0.83

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

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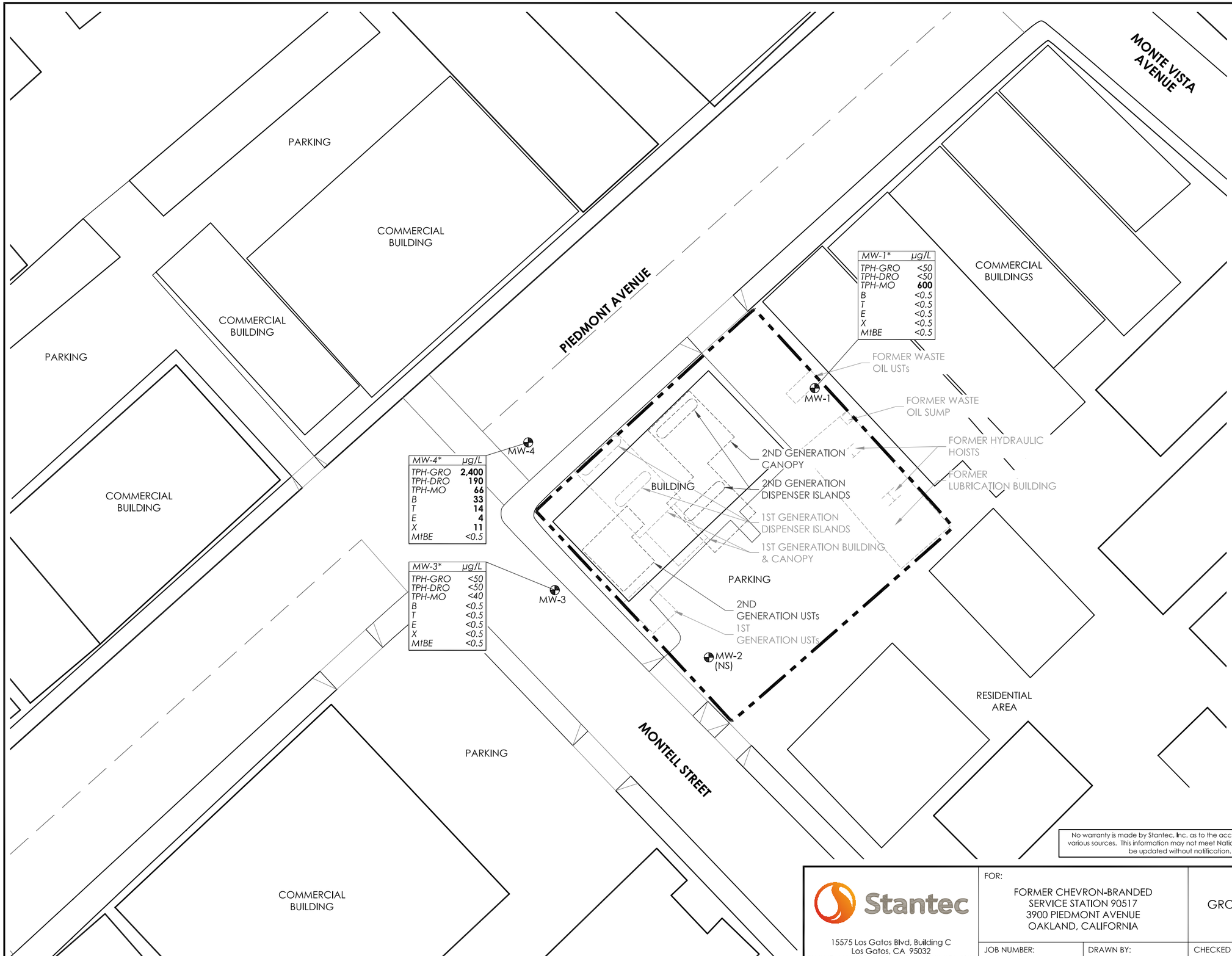
FOR:				FIGURE:
FORMER CHEVRON-BRANDED SERVICE STATION 90517 3900 PIEDMONT AVENUE OAKLAND, CALIFORNIA		GROUNDWATER FLOW DIRECTION ROSE DIAGRAM - FIRST QUARTER 2017		3
JOB NUMBER: 211602403	DRAWN BY: JRO	CHECKED BY: EEO/MRK	APPROVED BY: TLF	DATE: 03/20/17

FILEPATH:U:\211602403\05_report_deliv\deliverables\reports\1q17_gwr\figures\cad\211602403_90517_allfigs_1q17.dwg | jopalekopsahl | Mar 21, 2017 at 10:31 | Layout: fig3_rose



LEGEND

- APPROXIMATE SITE BOUNDARY
- UST — UNDERGROUND STORAGE TANK
- GROUNDWATER MONITORING WELL
- (NS) — NOT SAMPLED

ANALYTES

- *TPH-GRO* — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
- *TPH-DRO* — TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS
- *TPH-MO* — TOTAL PETROLEUM HYDROCARBONS AS MOTOR OIL
- *B* — BENZENE
- *T* — TOLUENE
- *E* — ETHYLBENZENE
- *X* — TOTAL XYLENES
- *MtBE* — METHYL TERTIARY-BUTYL ETHER

* = ADDITIONAL ANALYSES WERE RUN AND COMPLETE RESULTS ARE PRESENTED IN TABLES 4 & 5 AND ATTACHMENT B

µg/L = MICROGRAMS PER LITER

NOTE

TPH-DRO RESULTS ARE WITH SILICA GEL CLEANUP

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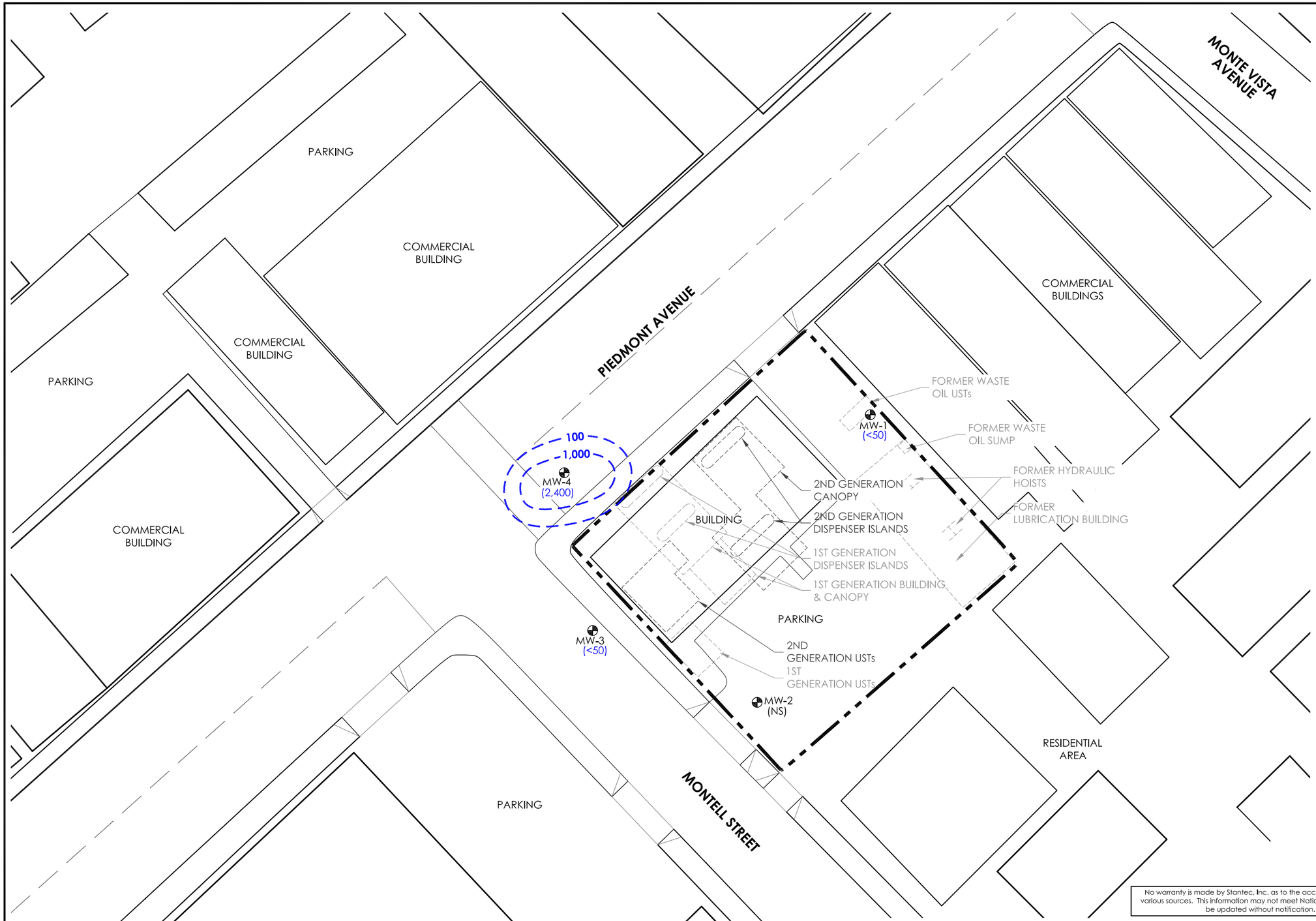
FOR: FORMER CHEVRON-BRANDED SERVICE STATION 90517
3900 PIEDMONT AVENUE
OAKLAND, CALIFORNIA

SITE PLAN SHOWING GROUNDWATER CONCENTRATIONS - FIRST QUARTER 2017

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602403	JRO	EEO/MRK	TLF	03/20/17

FILEPATH:U:\211602403\05_report_deliv\deliverables\reports\1q17_gwr\figures\cad\211602403_90517_allfigs_1q17.dwg | jopalekopsahl | Mar 20, 2017 at 9:51 | Layout: fig4_gwc



LEGEND

⊕	APPROXIMATE SITE BOUNDARY
UST	UNDERGROUND STORAGE TANK
⊕	GROUNDWATER MONITORING WELL
(2,400)	TPH-GRO CONCENTRATION (µg/L)
- - -	INFERRED TPH-GRO CONTOUR
(NS)	NOT SAMPLED
TPH-GRO	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
(µg/L)	MICROGRAMS PER LITER

N

0 30 60

APPROXIMATE SCALE IN FEET

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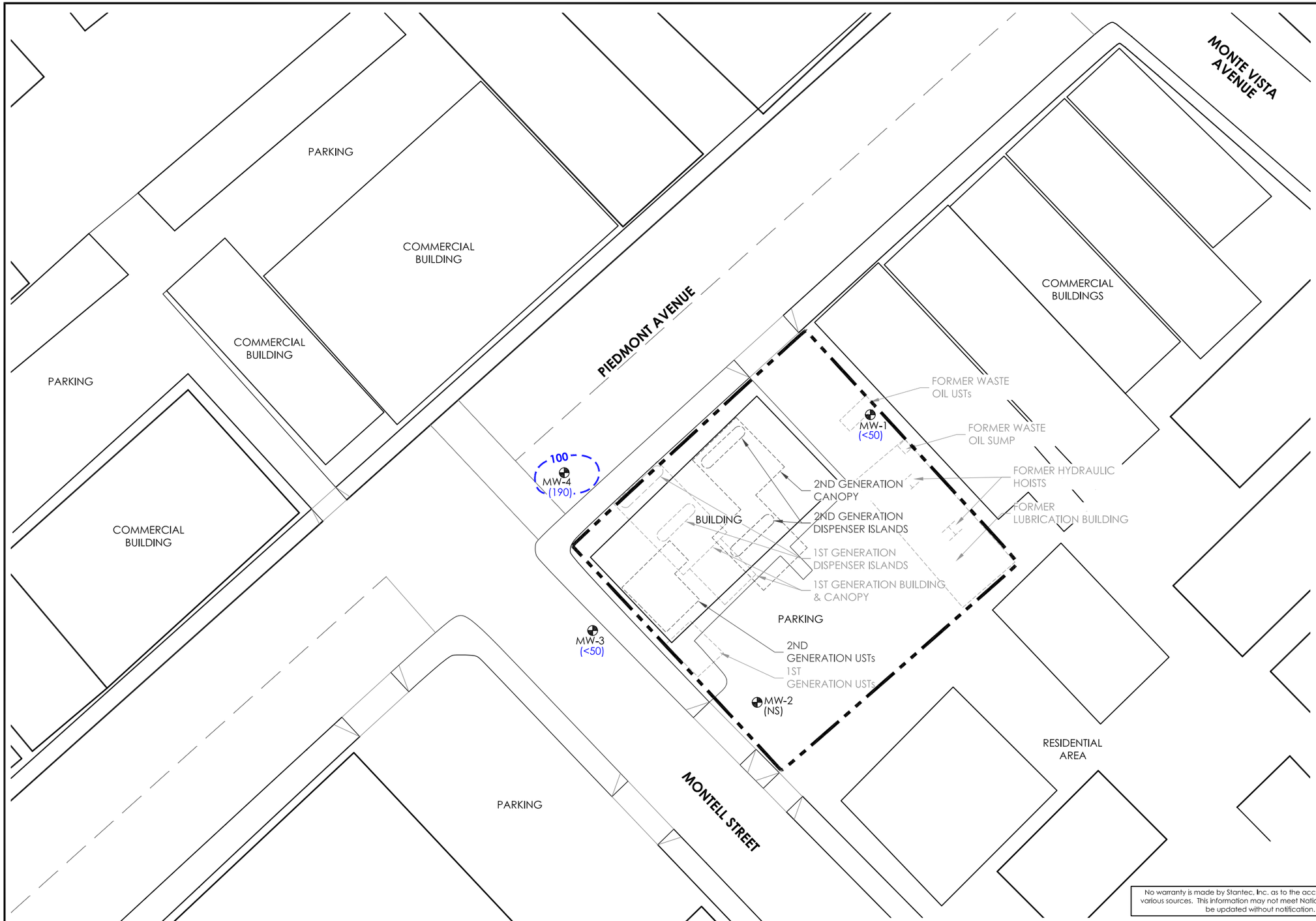
FOR:
FORMER CHEVRON-BRANDED SERVICE STATION 90517
3900 PIEDMONT AVENUE
OAKLAND, CALIFORNIA

TPH-GRO ISOCONCENTRATION MAP - FIRST QUARTER 2017

FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602403	JRO	EEO/MRK	TLF	03/20/17

FILEPATH:U:\211602403\05_report_deliv\deliverables\reports\1q17_gwr\figures\cad\211602403_90517_allfigs_1q17.dwg | jopalekopsahl | Mar 21, 2017 at 10:38 | Layout: fig5_tphg



LEGEND

⎯·⎯	APPROXIMATE SITE BOUNDARY
UST	UNDERGROUND STORAGE TANK
⊕	GROUNDWATER MONITORING WELL
(190)	TPH-DRO CONCENTRATION (µg/L)
– – –	INFERRED TPH-DRO CONTOUR
(NS)	NOT SAMPLED
TPH-DRO	TOTAL PETROLEUM HYDROCARBONS AS DIESEL RANGE ORGANICS
(µg/L)	MICROGRAMS PER LITER

NOTE

RESULTS ARE WITH SILICA GEL CLEANUP

N

0 30 60

APPROXIMATE SCALE IN FEET

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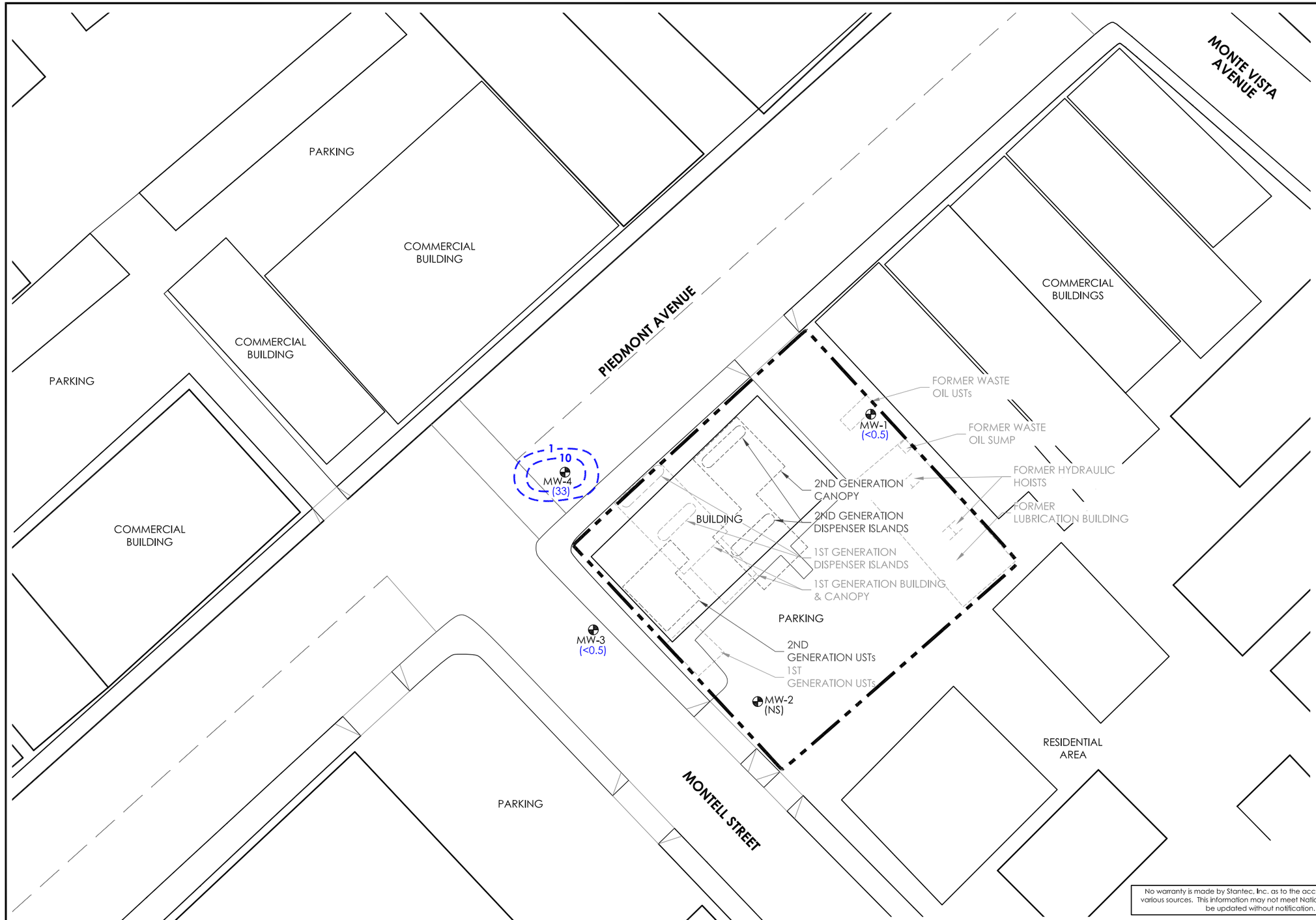
FOR:
FORMER CHEVRON-BRANDED SERVICE STATION 90517
3900 PIEDMONT AVENUE
OAKLAND, CALIFORNIA

TPH-DRO ISOCONCENTRATION MAP - FIRST QUARTER 2017

FIGURE: 6

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602403	JRO	EEO/MRK	TLF	03/20/17

FILEPATH:U:\211602403\05_report_deliv\deliverables\reports\1q17_gwr\figures\cad\211602403_90517_allfigs_1q17.dwg | jopalekopsahl | Mar 21, 2017 at 10:40 | Layout: fig6_tphd



LEGEND

- APPROXIMATE SITE BOUNDARY
- UST — UNDERGROUND STORAGE TANK
- GROUNDWATER MONITORING WELL
- (33) — BENZENE CONCENTRATION (µg/L)
- INFERRED BENZENE CONTOUR
- (NS) — NOT SAMPLED
- (µg/L) — MICROGRAMS PER LITER

N

0 30 60

APPROXIMATE SCALE IN FEET

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FOR:
FORMER CHEVRON-BRANDED SERVICE STATION 90517
3900 PIEDMONT AVENUE
OAKLAND, CALIFORNIA

BENZENE ISOCONCENTRATION MAP - FIRST QUARTER 2017

FIGURE: 7

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602403	JRO	EEO/MRK	TLF	03/20/17

FILEPATH:U:\211602403\05_report_deliv\deliverables\reports\1q17_gwr\figures\cad\211602403_90517_allfigs_1q17.dwg | jopalekopsahl | Mar 21, 2017 at 10:43 | Layout: fig7_bnz

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

GETTLER-RYAN INC.

TRANSMITTAL

March 8, 2017
G-R #17156420

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 February 27, 2017**

COMMENTS:

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

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

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

trans/9-0517

WELL CONDITION STATUS SHEET

Client/
Facility #: Chevron #9-0517
Site Address: 3900 Piedmont Avenue
City: Oakland, CA

Job #: 17156420
Event Date: 2-27-17
Sampler: ML

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M) Missing (R) Replaced	Bolts (M) Missing (R) Replaced	Bolt Flanges B=Broken S=Stripped R=Retaped	Apron Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) Inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Y/N
MW-1	OK	—				→		No	No	B.L. / 8" / 3	
MW-2	OK	→	→	1-S	OK	→	→	↓	↓	~~Morrison~~ ↓	
MW-3	OK	→	→	3-S	OK	→	→				
MW-4	OK	→	→	2-S	OK	→	⊘			Morrison / 6" / 2	

Comments

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™ (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. Total well depths are measured annually.

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 (± 10%), pH (± 0.1 unit), and Ec (± 10 uS) are required to stabilize. Additional parameters that may be required are DO (± 0.2 mg/l) and ORP (± 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.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #9-0517 Job Number: 17156420
Site Address: 3900 Piedmont Avenue Event Date: 2-27-17 (inclusive)
City: Oakland, CA Sampler: M

Well ID MW- 1 Date Monitored: 2-27-17
Well Diameter 2 in.
Total Depth 16.61 ft.
Depth to Water 5.44 ft.
11.17 xVF — = — x3 case volume = Estimated Purge Volume: — gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: —

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Peristaltic Pump X
QED Bladder Pump

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Metal Filters
Peristaltic Pump X
QED Bladder Pump
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ltr
Amt Removed from Well: ltr
Water Removed: ltr

Start Time (purge): 0915 Weather Conditions: Sunny
Sample Time/Date: 0945 / 2-27-17 Water Color: Clear Odor: (Y) N Light
Approx. Flow Rate: 200 (ml) lpm. Sediment Description: none
Did well de-water? No If yes, Time: Volume: ltr. DTW @ Sampling: 5.54

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS) mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0933	3.6	7.20	902	15.5			5.51
0936	4.2	7.24	911	15.6			5.52
0939	4.8	7.27	914	15.6			5.54

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW- 1	6 x voa vial	YES	HCL	EUROFINS	TPH-GRO(8015)/BTEX+MTBE(8260)/ NAPHTHALENE(8260B)
	2 x 500ml ambers	YES	NP	EUROFINS	TPH-DRO w/sgc COLUMN
	2 x 1 liter ambers	YES	NP	EUROFINS	TPH-MO w/sgc(8015)
	1 x 250ml poly	YES	HNO3	EUROFINS	CAM 5 METALS(6010B)

COMMENTS: DEPTH PUMP SET AT: ~ 11.00 feet

Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Lock: Add/Replaced Plug:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #9-0517 | Job Number: 17156420
Site Address: 3900 Piedmont Avenue | Event Date: 2-27-(1) (inclusive)
City: Oakland, CA | Sampler: ML

Well ID: MW-2 | Date Monitored: 2-27-(1)
Well Diameter: 2 in.
Total Depth: 16.55 ft.
Depth to Water: 5.08 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

11.47 xVF ____ = ____ x3 case volume = Estimated Purge Volume: ____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ____

Purge Equipment:
- Disposable Bailer
- Stainless Steel Bailer
- Stack Pump
- Peristaltic Pump
- QED Bladder Pump

Sampling Equipment:
- Disposable Bailer
- Pressure Bailer
- Metal Filters
- Peristaltic Pump
- QED Bladder Pump
- Other: ____

Time Started: ____ (2400 hrs)
Time Completed: ____ (2400 hrs)
Depth to Product: ____ ft
Depth to Water: ____ ft
Hydrocarbon Thickness: ____ ft
Visual Confirmation/Description: ____
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ____ ltr
Amt Removed from Well: ____ ltr
Water Removed: ____ ltr

Start Time (purge): ____ Weather Conditions: ____
Sample Time/Date: ____ / ____ Water Color: ____ Odor: Y / N ____
Approx. Flow Rate: ____ lpm Sediment Description: ____
Did well de-water? ____ If yes, Time: ____ Volume: ____ ltr. DTW @ Sampling: ____

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-	x voa vial	YES	HCL	EUROFINS	TPH-GRO(8015)/BTEX+MTBE(8260)/ NAPHTHALENE(8260B)
	x 500ml ambers	YES	NP	EUROFINS	TPH-DRO w/sgc COLUMN
	x 1 liter ambers	YES	NP	EUROFINS	TPH-MO w/sgc(8015)
	x 250ml poly	YES	HNO3	EUROFINS	CAM 5 METALS(6010B)

COMMENTS: ~~DEPTH PUMP SET AT:~~ M/O

Add/Replaced Gasket: ____ Add/Replaced Bolt: ____ Add/Replaced Lock: ____ Add/Replaced Plug: ____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #9-0517 Job Number: 17156420
Site Address: 3900 Piedmont Avenue Event Date: 2-27-17 (inclusive)
City: Oakland, CA Sampler: ML

Well ID MW-3 Date Monitored: 2-27-17
Well Diameter 2 in.
Total Depth 17.70 ft.
Depth to Water 6.18 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

11.52 xVF — = — x3 case volume = Estimated Purge Volume: — gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: —

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer
Stack Pump
Peristaltic Pump X
QED Bladder Pump

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Metal Filters
Peristaltic Pump X
QED Bladder Pump
Other:

Time Started: (2400 hrs)
Time Completed: (2400 hrs)
Depth to Product: ft
Depth to Water: ft
Hydrocarbon Thickness: ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ltr
Amt Removed from Well: ltr
Water Removed: ltr

Start Time (purge): 0655 Weather Conditions: Sunny
Sample Time/Date: 0725 / 2-27-17 Water Color: Clear Odor: Y / (N)
Approx. Flow Rate: 200 mpm. Sediment Description: None
Did well de-water? No If yes, Time: Volume: ltr. DTW @ Sampling: 6.29

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0713	3.6	7.11	598	12.3			6.26
0716	4.2	7.17	602	12.4			6.28
0719	4.8	7.19	605	12.5			6.29

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	6 x voa vial	YES	HCL	EUROFINS	TPH-GRO(8015)/BTEX+MTBE(8260)/ NAPHTHALENE(8260B)
	2 x 500ml ambers	YES	NP	EUROFINS	TPH-DRO w/sgc COLUMN
	2 x 1 liter ambers	YES	NP	EUROFINS	TPH-MO w/sgc(8015)
	1 x 250ml poly	YES	HNO3	EUROFINS	CAM 5 METALS(6010B)

COMMENTS: DEPTH PUMP SET AT: ~ 12.00 feet

Add/Replaced Gasket: Add/Replaced Bolt: Add/Replaced Lock: Add/Replaced Plug:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
LOW FLOW FIELD DATA SHEET

Client/Facility#: Chevron #9-0517 | Job Number: 17156420
Site Address: 3900 Piedmont Avenue | Event Date: 2-27-17 (inclusive)
City: Oakland, CA | Sampler: ML

Well ID: MW-4 | Date Monitored: 2-27-17
Well Diameter: 2 in.
Total Depth: 16.25 ft.
Depth to Water: 7.48 ft.

Volume Factor (VF)	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

☐ Check if water column is less then 0.50 ft.

8.77 xVF ___ = ___ x3 case volume = Estimated Purge Volume: ___ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: ___

Purge Equipment:

Disposable Bailer	___
Stainless Steel Bailer	___
Stack Pump	___
Peristaltic Pump	X
QED Bladder Pump	___

Sampling Equipment:

Disposable Bailer	___
Pressure Bailer	___
Metal Filters	___
Peristaltic Pump	X
QED Bladder Pump	___
Other:	___

Time Started: ___ (2400 hrs)
Time Completed: ___ (2400 hrs)
Depth to Product: ___ ft
Depth to Water: ___ ft
Hydrocarbon Thickness: ___ ft
Visual Confirmation/Description: ___
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: ___ ltr
Amt Removed from Well: ___ ltr
Water Removed: ___ ltr

Start Time (purge): 0800 | Weather Conditions: Smt
Sample Time/Date: 0830 / 2-27-17 | Water Color: Clear | Odor: Y / N STRONG
Approx. Flow Rate: 200 mlpm. | Sediment Description: none
Did well de-water? No | If yes, Time: ___ Volume: ___ ltr. DTW @ Sampling: 7.54

Time (2400 hr.)	Volume (Liters)	pH	Conductivity (µS / mS µmhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)	Gauge DTW as parameters are recorded
0818	3.6	6.89	596	11.6			7.53
0821	4.2	6.96	607	11.7			7.54
0824	4.8	6.92	602	11.7			7.54

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	6 x voa vial	YES	HCL	EUROFINS	TPH-GRO(8015)/BTEX+MTBE(8260)/ NAPHTHALENE(8260B)
	2 x 500ml ambers	YES	NP	EUROFINS	TPH-DRO w/sgc COLUMN
	2 x 1 liter ambers	YES	NP	EUROFINS	TPH-MO w/sgc(8015)
	1 x 250ml poly	YES	HNO3	EUROFINS	CAM 5 METALS(6010B)

COMMENTS: DEPTH PUMP SET AT: 12.00 feet

Add/Replaced Gasket: ___ Add/Replaced Bolt: ___ Add/Replaced Lock: ___ Add/Replaced Plug: ___

Chevron California Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

IL T506

Φ22717-Φ3

For Eurofins Lancaster Laboratories Environmental use only

Acct. #_____ Group #_____ Sample #_____

Instructions on reverse side correspond with circled numbers.

SCR #: _____

Client Information

Facility # SS#9-0517-OML WBS G-R#17156420 Global ID#T0600102248

Site Address 3900 PIEDMONT AVENUE, OAKLAND, CA

Chevron PM CM Lead Consultant STANTECTF Flora

Consultant/Office Getter-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568

Consultant Project Mgr. Deanna L. Harding, deanna@grinc.com

Consultant Phone # (925) 551-7444 x180

Sampler Mike L.

Matrix

Soil ☐ Sediment ☐ Ground ☒ Surface ☐ Potable ☐ NPDES ☐ Water ☒ Air ☐ Oil ☐

Analyses Requested

Sample Identification	Soil Depth	Collected Date	Collected Time	Grab	Composite	Total Number of Containers	BTEX + MTBE 8260 ☒ / 8021 ☐	TPH-GRO 8260 ☐ / 8015 ☒	TPH-DRO 8015 without Silica Gel Cleanup ☐	TPH-DRO 8015 with Silica Gel Cleanup (Column) ☒	8260 Full Scan	Oxygenates	Total Lead Method	Dissolved Lead Method	TPH-MO (8015)	NAPHTHALENE (8260B)	CAM 5 METALS (6010B)
QA		170227		X		2	X	X									
MW-1			0945	X		11	X	X		X					X	X	X
MW-3			0725	X		11	X	X		X					X	X	X
MW-4		↓	0830	X		11	X	X		X					X	X	X

- ☐ Results in Dry Weight
- ☐ J value reporting needed
- ☒ Must meet lowest detection limits possible for 8260 compounds
- ☐ 8021 MTBE Confirmation
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run _____ oxy's on highest hit
- ☐ Run _____ oxy's on all hits

Remarks

Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

Data Package (circle if required) EDF/EDD

Type I - Full | Type VI (Raw Data)

EDD (circle if required)

EDFFLAT (default) | Other: _____

Relinquished by	Date	Time	Received by	Date	Time
[signature]	170227	1200	[signature]	27FEB17	1225

Relinquished by Commercial Carrier: UPS _____ FedEx _____ Other _____

Temperature Upon Receipt _____ °C

Custody Seals Intact? Yes No

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

eurofins | Lancaster Laboratories Environmental

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

Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

Report Date: March 17, 2017

Project: 90517

Submittal Date: 02/28/2017
Group Number: 1770638
PO Number: 0015235605
Release Number: CMACLEOD

State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LL) #
QA-T-170227 NA Water	8857300
MW-1-W-170227 Grab Groundwater	8857301
MW-3-W-170227 Grab Groundwater	8857302
MW-4-W-170227 Grab Groundwater	8857303

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

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

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

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

Sample Description: QA-T-170227 NA Water
Facility# 90517 Job# 17156420 GRD
3900 Piedmont-Oakland T0600102248

LL Sample # WW 8857300
LL Group # 1770638
Account # 10906

Project Name: 90517

Collected: 02/27/2017

Submitted: 02/28/2017 09:45
Reported: 03/17/2017 10:25

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

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 Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

Sample Comments

CA ELAP Lab Certification No. 2792

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

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	Z170611AA	03/02/2017 20:05	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z170611AA	03/02/2017 20:05	Hu Yang	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17065B20A	03/06/2017 13:26	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	17065B20A	03/06/2017 13:26	Brett W Kenyon	1

Sample Description: MW-1-W-170227 Grab Groundwater
Facility# 90517 Job# 17156420 GRD
3900 Piedmont-Oakland T0600102248

LL Sample # WW 8857301
LL Group # 1770638
Account # 10906

Project Name: 90517

Collected: 02/27/2017 09:45 by ML

Submitted: 02/28/2017 09:45
Reported: 03/17/2017 10:25

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

PAO01

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	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 Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**ug/l**	**ug/l**	
02500	Total TPH	n.a.	600	39	1
02500	TPH Motor Oil C16-C36	n.a.	600	39	1
	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 C8 (n-octane) through C40 (n-tetracontane) normal hydrocarbons.				
GC Petroleum Hydrocarbons w/Si	**SW-846 8015B**		**ug/l**	**ug/l**	
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	N.D.	50	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	
07049	Cadmium	7440-43-9	N.D.	0.49	1
07051	Chromium	7440-47-3	N.D.	1.8	1
07055	Lead	7439-92-1	N.D.	6.2	1
07061	Nickel	7440-02-0	N.D.	2.8	1
07072	Zinc	7440-66-6	N.D.	5.4	1

Sample Comments

CA ELAP Lab Certification No. 2792

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE/Naphthalene - Water	SW-846 8260B	1	Z170604AA	03/01/2017 23:25	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z170604AA	03/01/2017 23:25	Hu Yang	1

Sample Description: MW-1-W-170227 Grab Groundwater
Facility# 90517 Job# 17156420 GRD
3900 Piedmont-Oakland T0600102248

LL Sample # WW 8857301
LL Group # 1770638
Account # 10906

Project Name: 90517

Collected: 02/27/2017 09:45 by ML

Submitted: 02/28/2017 09:45
Reported: 03/17/2017 10:25

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

PAO01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17065B20A	03/06/2017 17:59	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	17065B20A	03/06/2017 17:59	Brett W Kenyon	1
02500	TPH Fuels by GC (Waters)	SW-846 8015B modified	1	170630015A	03/07/2017 15:00	Timothy M Emrick	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	170630014A	03/10/2017 01:16	Amy Lehr	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	170630014A	03/06/2017 09:00	Bradley W VanLeuven	1
11191	TPH Fuels Waters Extraction	SW-846 3510C	1	170630015A	03/06/2017 09:00	Bradley W VanLeuven	1
07049	Cadmium	SW-846 6010B	1	170601848003	03/02/2017 22:22	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	170601848003	03/02/2017 22:22	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	170601848003	03/02/2017 22:22	Cindy M Gehman	1
07061	Nickel	SW-846 6010B	1	170601848003	03/02/2017 22:22	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	170601848003	03/02/2017 22:22	Cindy M Gehman	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	170601848003	03/02/2017 05:41	James L Mertz	1

Sample Description: MW-3-W-170227 Grab Groundwater
Facility# 90517 Job# 17156420 GRD
3900 Piedmont-Oakland T0600102248

LL Sample # WW 8857302
LL Group # 1770638
Account # 10906

Project Name: 90517

Collected: 02/27/2017 07:25 by ML

Submitted: 02/28/2017 09:45
Reported: 03/17/2017 10:25

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

PAO03

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	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 Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**ug/l**	**ug/l**	
02500	Total TPH	n.a.	N.D.	40	1
02500	TPH Motor Oil C16-C36	n.a.	N.D.	40	1
	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 C8 (n-octane) through C40 (n-tetracontane) normal hydrocarbons.				
GC Petroleum Hydrocarbons w/Si	**SW-846 8015B**		**ug/l**	**ug/l**	
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	N.D.	50	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	
07049	Cadmium	7440-43-9	N.D.	0.49	1
07051	Chromium	7440-47-3	N.D.	1.8	1
07055	Lead	7439-92-1	N.D.	6.2	1
07061	Nickel	7440-02-0	3.6	2.8	1
07072	Zinc	7440-66-6	7.3	5.4	1

Sample Comments

CA ELAP Lab Certification No. 2792

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE/Naphthalene - Water	SW-846 8260B	1	Z170604AA	03/01/2017 23:49	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z170604AA	03/01/2017 23:49	Hu Yang	1

Sample Description: MW-3-W-170227 Grab Groundwater
Facility# 90517 Job# 17156420 GRD
3900 Piedmont-Oakland T0600102248

LL Sample # WW 8857302
LL Group # 1770638
Account # 10906

Project Name: 90517

Collected: 02/27/2017 07:25 by ML

Submitted: 02/28/2017 09:45
Reported: 03/17/2017 10:25

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

PAO03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17065B20A	03/06/2017 18:26	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	17065B20A	03/06/2017 18:26	Brett W Kenyon	1
02500	TPH Fuels by GC (Waters)	SW-846 8015B modified	1	170630015A	03/07/2017 13:35	Timothy M Emrick	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	170630014A	03/10/2017 01:38	Amy Lehr	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	170630014A	03/06/2017 09:00	Bradley W VanLeuven	1
11191	TPH Fuels Waters Extraction	SW-846 3510C	1	170630015A	03/06/2017 09:00	Bradley W VanLeuven	1
07049	Cadmium	SW-846 6010B	1	170601848003	03/02/2017 22:25	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	170601848003	03/02/2017 22:25	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	170601848003	03/02/2017 22:25	Cindy M Gehman	1
07061	Nickel	SW-846 6010B	1	170601848003	03/02/2017 22:25	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	170601848003	03/02/2017 22:25	Cindy M Gehman	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	170601848003	03/02/2017 05:41	James L Mertz	1

Sample Description: MW-4-W-170227 Grab Groundwater
Facility# 90517 Job# 17156420 GRD
3900 Piedmont-Oakland T0600102248

LL Sample # WW 8857303
LL Group # 1770638
Account # 10906

Project Name: 90517

Collected: 02/27/2017 08:30 by ML

Submitted: 02/28/2017 09:45
Reported: 03/17/2017 10:25

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

PAO04

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	33	0.5	1
10945	Ethylbenzene	100-41-4	4	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Naphthalene	91-20-3	1	1	1
10945	Toluene	108-88-3	14	0.5	1
10945	Xylene (Total)	1330-20-7	11	0.5	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	2,400	50	1
GC Petroleum Hydrocarbons	**SW-846 8015B modified**		**ug/l**	**ug/l**	
02500	Total TPH	n.a.	66	40	1
02500	TPH Motor Oil C16-C36	n.a.	66	40	1
	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 C8 (n-octane) through C40 (n-tetracontane) normal hydrocarbons.				
GC Petroleum Hydrocarbons w/Si	**SW-846 8015B**		**ug/l**	**ug/l**	
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	190	50	1
	The reverse surrogate, capric acid, is present at <1%.				
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	
07049	Cadmium	7440-43-9	N.D.	0.49	1
07051	Chromium	7440-47-3	N.D.	1.8	1
07055	Lead	7439-92-1	N.D.	6.2	1
07061	Nickel	7440-02-0	N.D.	2.8	1
07072	Zinc	7440-66-6	N.D.	5.4	1

Sample Comments

CA ELAP Lab Certification No. 2792

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10945	BTEX/MTBE/Naphthalene - Water	SW-846 8260B	1	Z170604AA	03/02/2017 00:13	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z170604AA	03/02/2017 00:13	Hu Yang	1

Sample Description: MW-4-W-170227 Grab Groundwater
Facility# 90517 Job# 17156420 GRD
3900 Piedmont-Oakland T0600102248

LL Sample # WW 8857303
LL Group # 1770638
Account # 10906

Project Name: 90517

Collected: 02/27/2017 08:30 by ML

Submitted: 02/28/2017 09:45
Reported: 03/17/2017 10:25

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

PAO04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	17065B20A	03/06/2017 18:54	Brett W Kenyon	1
01146	GC VOA Water Prep	SW-846 5030B	1	17065B20A	03/06/2017 18:54	Brett W Kenyon	1
02500	TPH Fuels by GC (Waters)	SW-846 8015B modified	1	170630015A	03/07/2017 13:56	Timothy M Emrick	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	170630014A	03/10/2017 01:59	Amy Lehr	1
11180	Low Vol Ext(W) w/SG	SW-846 3510C	1	170630014A	03/06/2017 09:00	Bradley W VanLeuven	1
11191	TPH Fuels Waters Extraction	SW-846 3510C	1	170630015A	03/06/2017 09:00	Bradley W VanLeuven	1
07049	Cadmium	SW-846 6010B	1	170601848003	03/02/2017 22:28	Cindy M Gehman	1
07051	Chromium	SW-846 6010B	1	170601848003	03/02/2017 22:28	Cindy M Gehman	1
07055	Lead	SW-846 6010B	1	170601848003	03/02/2017 22:28	Cindy M Gehman	1
07061	Nickel	SW-846 6010B	1	170601848003	03/02/2017 22:28	Cindy M Gehman	1
07072	Zinc	SW-846 6010B	1	170601848003	03/02/2017 22:28	Cindy M Gehman	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	170601848003	03/02/2017 05:41	James L Mertz	1

Quality Control Summary

Client Name: Chevron
Reported: 03/17/2017 10:25

Group Number: 1770638

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

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

Method Blank

Analysis Name	Result	MDL
	ug/l	ug/l
Batch number: Z170604AA	Sample number(s): 8857301-8857303	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Methyl Tertiary Butyl Ether	N.D.	0.5
Naphthalene	N.D.	1
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
Batch number: Z170611AA	Sample number(s): 8857300	
Benzene	N.D.	0.5
Ethylbenzene	N.D.	0.5
Methyl Tertiary Butyl Ether	N.D.	0.5
Toluene	N.D.	0.5
Xylene (Total)	N.D.	0.5
Batch number: 17065B20A	Sample number(s): 8857300-8857303	
TPH-GRO N. CA water C6-C12	N.D.	50
Batch number: 170630015A	Sample number(s): 8857301-8857303	
Total TPH	N.D.	40
TPH Motor Oil C16-C36	N.D.	40
Batch number: 170630014A	Sample number(s): 8857301-8857303	
TPH-DRO CA C10-C28 w/ Si Gel	N.D.	32
Batch number: 170601848003	Sample number(s): 8857301-8857303	
Cadmium	N.D.	0.49
Chromium	N.D.	1.8
Lead	N.D.	6.2
Nickel	N.D.	2.8
Zinc	N.D.	5.4

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: Z170604AA	Sample number(s): 8857301-8857303								
Benzene	20	21.19			106		78-120		
Ethylbenzene	20	19.62			98		78-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 03/17/2017 10:25

Group Number: 1770638

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Methyl Tertiary Butyl Ether	20	21.77			109		75-120		
Naphthalene	20	14.82			74		59-120		
Toluene	20	20.87			104		80-120		
Xylene (Total)	60	60.73			101		80-120		
Batch number: Z170611AA	Sample number(s): 8857300								
Benzene	20	21.34			107		78-120		
Ethylbenzene	20	19.96			100		78-120		
Methyl Tertiary Butyl Ether	20	21.1			105		75-120		
Toluene	20	21.03			105		80-120		
Xylene (Total)	60	62.99			105		80-120		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 17065B20A	Sample number(s): 8857300-8857303								
TPH-GRO N. CA water C6-C12	1100	1022.92	1100	1041.46	93	95	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 170630015A	Sample number(s): 8857301-8857303								
Total TPH	802	599.48	802	600.46	75	75	44-115	0	20
	ug/l	ug/l	ug/l	ug/l					
Batch number: 170630014A	Sample number(s): 8857301-8857303								
TPH-DRO CA C10-C28 w/ Si Gel	1600	1065.22	1600	892.23	67	56	40-105	18	20
	ug/l	ug/l	ug/l	ug/l					
Batch number: 170601848003	Sample number(s): 8857301-8857303								
Cadmium	50	53.41			107		80-120		
Chromium	200	208.21			104		80-120		
Lead	150	157.34			105		80-120		
Nickel	500	540.7			108		80-120		
Zinc	500	521.98			104		80-120		

MS/MSD

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: Z170604AA	Sample number(s): 8857301-8857303 UNSPK: P857442									
Benzene	0.877	20	22.92	20	23.43	110	113	78-120	2	30
Ethylbenzene	N.D.	20	21.29	20	21.86	106	109	78-120	3	30
Methyl Tertiary Butyl Ether	375.29	20	569.11	20	538.98	969 (2)	818 (2)	75-120	5	30
Naphthalene	N.D.	20	14.81	20	15.31	74	77	59-120	3	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 03/17/2017 10:25

Group Number: 1770638

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Toluene	1.88	20	22.59	20	23.92	104	110	80-120	6	30
Xylene (Total)	N.D.	60	65.35	60	66.81	109	111	80-120	2	30
Batch number: Z170611AA	Sample number(s): 8857300 UNSPK: P857459									
Benzene	15.94	20	37.91	20	38.58	110	113	78-120	2	30
Ethylbenzene	N.D.	20	20.84	20	21.55	104	108	78-120	3	30
Methyl Tertiary Butyl Ether	3.63	20	24.16	20	24.34	103	104	75-120	1	30
Toluene	0.600	20	21.84	20	22.37	106	109	80-120	2	30
Xylene (Total)	N.D.	60	64.62	60	66.16	108	110	80-120	2	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 170601848003	Sample number(s): 8857301-8857303 UNSPK: P851853									
Cadmium	N.D.	50	49.58	50	50.03	99	100	75-125	1	20
Chromium	N.D.	200	190.58	200	194.69	95	97	75-125	2	20
Lead	N.D.	150	147.5	150	149.74	98	100	75-125	2	20
Nickel	N.D.	500	498.25	500	505.6	100	101	75-125	1	20
Zinc	N.D.	500	485.64	500	492.19	97	98	75-125	1	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: 170601848003	Sample number(s): 8857301-8857303 BKG: P851853			
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	N.D.	N.D.	0 (1)	20
Zinc	N.D.	N.D.	0 (1)	20

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: Z170604AA

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 03/17/2017 10:25

Group Number: 1770638

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: Z170604AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8857301	105	102	100	95
8857302	105	100	100	98
8857303	101	96	100	104
Blank	102	101	100	95
LCS	101	100	100	101
MS	100	102	100	101
MSD	99	100	100	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX/MTBE
Batch number: Z170611AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
8857300	104	99	99	94
Blank	102	102	99	95
LCS	101	104	99	101
MS	101	99	100	102
MSD	100	99	100	102
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 17065B20A

	Trifluorotoluene-F
8857300	90
8857301	82
8857302	90
8857303	115
Blank	88
LCS	96
LCSD	96
Limits:	63-135

Analysis Name: TPH-DRO CA C10-C28 w/ Si Gel
Batch number: 170630014A

	Orthoterphenyl
8857301	67
8857302	56
8857303	71
Blank	60
LCS	79
LCSD	66

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Chevron
Reported: 03/17/2017 10:25

Group Number: 1770638

Surrogate Quality Control (continued)

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

Analysis Name: TPH-DRO CA C10-C28 w/ Si Gel
Batch number: 170630014A

Limits: 42-126

Analysis Name: TPH Fuels by GC (Waters)
Batch number: 170630015A

	Chlorobenzene	Orthoterphenyl
8857301	100	88
8857302	96	83
8857303	100	100
Blank	88	87
LCS	124	90
LCSD	118	88
Limits:	35-135	48-122

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Chevron California Region Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories Environmental

IL T5Ø6 Ø22717-Ø3

Acct. # 10906 For Eurofins Lancaster Laboratories Environmental use only Group # 1770638 Sample # 5857300-03

Instructions on reverse side correspond with circled numbers.

Client Information

Facility # SS#9-0517-OML G-R#17156420 Global ID#T0600102248 WBS

Site Address: 3900 PIEDMONT AVENUE, OAKLAND, CA

Chevron PM: CM

Lead Consultant: STANTECTF Flora

Consultant/Office: Getter-Ryan Inc., 6805 Sierra Court, Suite G, Dublin, CA 94568

Consultant Project Mgr.: Deanna L. Harding, deanna@grinc.com

Consultant Phone #: (925) 551-7444 x180

Sampler: Mike L.

SCR #: _____

- ☐ Results in Dry Weight
- ☐ J value reporting needed
- ☒ Must meet lowest detection limits possible for 8260 compounds
- ☐ 8021 MTBE Confirmation
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run _____ oxy's on highest hit
- ☐ Run _____ oxy's on all hits

Sample Identification	Soil Depth	Collected Date	Collected Time	Grab	Composite	Matrix: Soil	Sediment	Potable Water	Ground Water	NPDES	Surface Water	Air	Oil	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☒	TPH-GRO 8015 ☐ 8260 ☒	TPH-DRO 8015 without Silica Gel Cleanup ☐	TPH-DRO 8015 with Silica Gel Cleanup ☒	8260 Full Scan (columns)	Oxygenates	Total Lead Method	Dissolved Lead Method	TPH-MO (8015)	NAPHTHALENE (8260B)	CAM 5 METALS (6010B)
QA		170227		X					X					2	X	X									
MW-1		↓	0945	X					X					11	X	X		X					X	X	X
MW-3			0725	X					X					11	X	X		X					X	X	X
MW-4			0880	X					X					11	X	X		X					X	X	X

Remarks

Turnaround Time Requested (TAT) (please circle)

Standard | 5 day | 4 day | 72 hour | 48 hour | 24 hour

Data Package (circle if required) EDF/EDD

Type I - Full | Type VI (Raw Data)

EDD (circle if required)

EDFFLAT (default) | Other: _____

Relinquished by	Date	Time	Received by	Date	Time
[signature]	170227	1200	[signature]	27FEB17	1225
[signature]	27FEB17	1636	FX		

Relinquished by Commercial Carrier: UPS ____ FedEx X Other ____

Received by: [signature] Date: 2.28.17 Time: 945

Temperature Upon Receipt 1.7-2.0 °C

Custody Seals Intact? (Yes) No

The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

7050_0316

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 176662

Group Number(s): 1770638

Client: CA Office

Delivery and Receipt Information

Delivery Method:	BASC	Arrival Timestamp:	02/28/2017 9:45
Number of Packages:	4	Number of Projects:	4
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:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCL
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Timothy Cubberley (6520) at 12:26 on 02/28/2017

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT121	2.2	DT	Wet	Y	Bagged	N
2	DT121	3.0	DT	Wet	Y	Bagged	N
3	DT121	1.7	DT	Wet	Y	Bagged	N
4	DT121	2.6	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425
T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

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Explanation of Symbols and Abbreviations

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

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

< 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:

C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…
W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

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

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

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

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

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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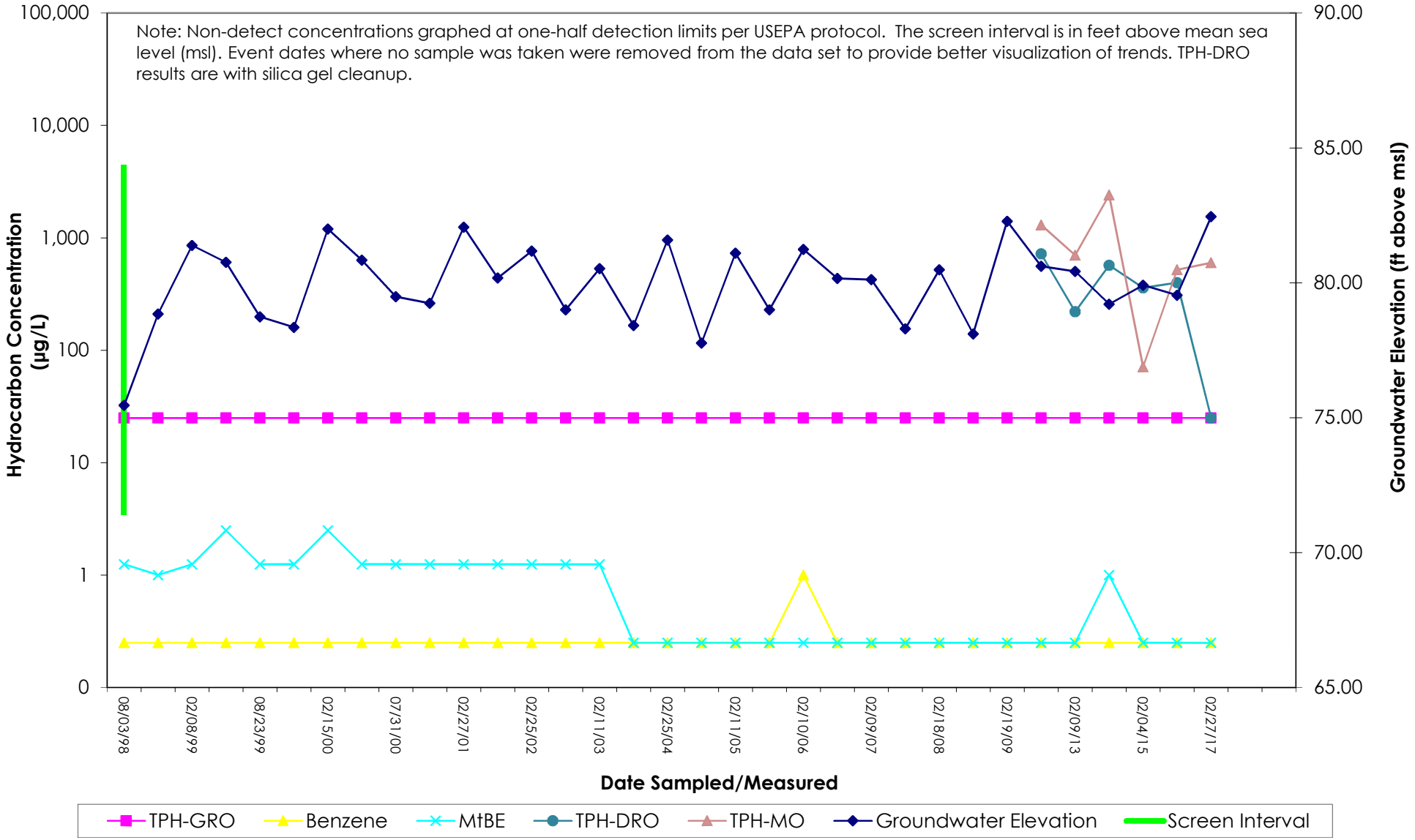
ATTACHMENT C
Hydrographs

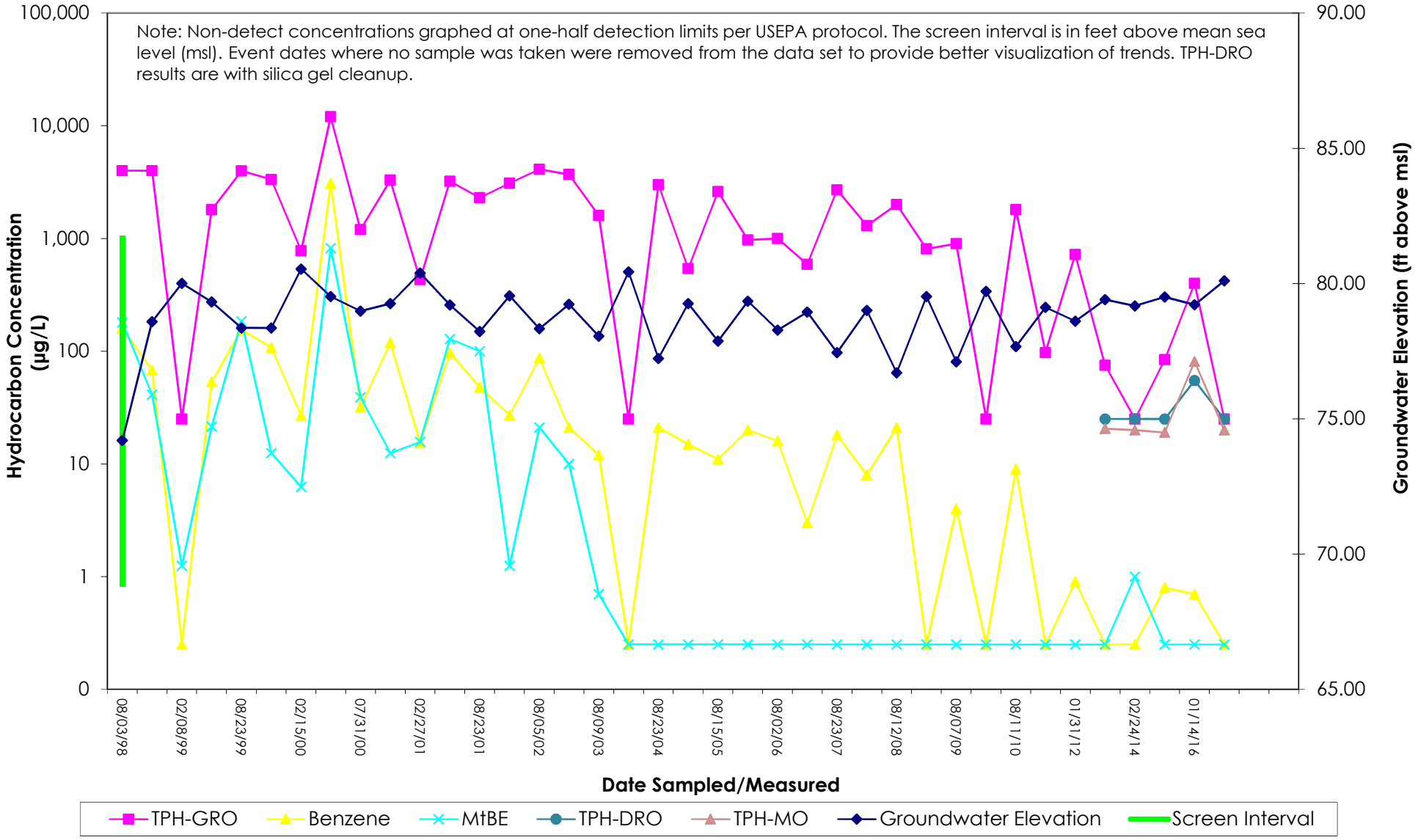
MW-1 TPH-GRO, TPH-DRO, TPH-MO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time

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