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**First Quarter 2013 Semi-Annual
Groundwater Monitoring Report**

**Former Chevron-branded Service
Station 91723
9757 San Leandro Street
Oakland, California**

RECEIVED

By Alameda County Environmental Health at 9:08 am, May 02, 2013

Submitted to:

Mr. Mark Detterman
Alameda County Health Care
Services Agency
Department of Environmental Health
Services, Environmental Protection
Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Prepared for:

Chevron Environmental Management
Company
6101 Bollinger Canyon Road
San Ramon, CA 94583

Submitted by:

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

May 2, 2013



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

May 2, 2013

Mr. Mark Detterman
Alameda County Health Care Services Agency
Department of Environmental Health Services,
Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

Dear Mr. Detterman:

Attached for your review is the *First Quarter 2013 Semi-Annual Groundwater Monitoring Report* for former Chevron-branded service station 91723, located at 9757 San Leandro Street in Oakland, California. This report was prepared by Stantec Consulting Services Inc. (Stantec), upon whose assistance and advice I have relied. I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct, to the best of my knowledge.

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

Sincerely,

A handwritten signature in blue ink that reads "Carryl MacLeod".

Carryl MacLeod
Project Manager



Stantec Consulting Services Inc.
15575 Los Gatos Boulevard, Building C
Los Gatos, CA 95032
Tel: (408) 356-6124
Fax: (408) 356-6138

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May 2, 2013

Mr. Mark Detterman
Alameda County Health Care Services Agency
Department of Environmental Health Services, Environmental Protection Division
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

RE: **First Quarter 2013 Semi-Annual Groundwater Monitoring Report**
Former Chevron-branded Service Station 91723
9757 San Leandro Street
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 2013 Semi-Annual Groundwater Monitoring Report* for former Chevron-branded service station 91723, which was located at 9757 San Leandro Street, Oakland, Alameda County, California (the Site - shown on **Figure 1**). This report is presented in three sections: Site Background, First Quarter 2013 Groundwater Monitoring and Sampling Program, and Conclusions and Recommendations.

SITE BACKGROUND

The Site is a former Chevron-branded service station located on the western corner at the intersection of San Leandro Street and 98th Avenue in Oakland, California. The Site is currently a large parking area staging semi-trucks for a distribution company. A former Chevron-branded service station operated at the Site from approximately 1946 to 1978. Prior to 1966, three fuel underground storage tanks (USTs) and one fuel dispenser island (first generation) located in the eastern portion of the Site were removed. Second-generation fuel structures (installed between 1966 and 1968) included three fuel USTs located in the north central portion of the Site, one waste oil UST located in the western portion of the Site, and five fuel dispenser islands (four located in the central portion of the Site and one located in the southern portion of the Site). In 1978, the service station was closed and the second-generation fuel structures were removed from the Site.

Land use near the Site consists primarily of commercial and industrial properties. The Site is bounded on the northwest and southwest by a former food processing plant, on the northeast by San Leandro Street, and on the southeast by 98th Avenue. A Thrifty-branded service station was formerly located southeast of the Site at 9801 San Leandro Street (Case No.: RO0000894) and was granted closure on April 2, 1997.

FIRST QUARTER 2013 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Blaine Tech Services, Inc. (Blaine Tech) performed the First Quarter 2013 groundwater monitoring and sampling event on March 13, 2013. Blaine Tech's standard operating procedures (SOPs) and field data sheets are included in **Attachment A**. Blaine Tech gauged depth-to-groundwater in five Site wells (MW-2, MW-5, MW-6, MW-8, and MW-9) prior to collecting groundwater samples for laboratory analysis. All five Site wells were sampled this quarter.

Investigation-derived waste (IDW) generated during the First Quarter 2013 groundwater monitoring and sampling event was collected by Blaine Tech and transported under bill-of-lading to Integrated Wastestream Management, Inc. (IWM) facilities in San Jose, California.

Groundwater Elevation and Gradient

Well construction details and an assessment of whether groundwater samples were collected when groundwater elevations were measured across the well screen intervals are presented in **Table 1**. All wells are currently screened across the prevailing groundwater table, with the exception of well MW-2 where the groundwater elevation was measured above the screen interval, and the screen interval is submerged. Groundwater elevation data from Third Quarter 2011 to the present are included in **Table 2**. A groundwater elevation contour map (based on First Quarter 2013 data) is shown on **Figure 2**. The direction of groundwater flow at the time of sampling was generally towards the west at an approximate hydraulic gradient ranging from 0.002 to 0.003 feet per foot (ft/ft). This is consistent with the historical direction of groundwater flow, as shown by the Rose Diagram on **Figure 3** illustrating the direction of groundwater flow from Third Quarter 2011 to the present.

Schedule of Laboratory Analysis

Groundwater samples were collected and analyzed for the presence of total petroleum hydrocarbons as gasoline range organics (TPH-GRO), benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds), and methyl *tertiary*-butyl ether (MtBE) using United States Environmental Protection Agency (US EPA) Method 8260B (SW-846).

In addition, groundwater samples were analyzed for sulfate (SO_4^{2-}) and nitrate (NO_3^-) by US EPA Method 300.0, total alkalinity by SM 2320 B-1997, methane (CH_4) by US EPA Method 8015B modified (SW-846), ferrous iron (Fe^{2+}) by SM 3500-Fe B modified-1997, and sulfide by SM 4500-S2 D-2000 to further evaluate if Site conditions are suitable for monitored natural attenuation (MNA). Field measurements of post-purge dissolved oxygen (DO) and oxidation-reduction potential (ORP) were collected using an in-line flow-through cell.

Groundwater Analytical Results

During First Quarter 2013, groundwater samples were collected from five Site wells (MW-2, MW-5, MW-6, MW-8, and MW-9). Groundwater analytical results from Third Quarter 2011 to the present are included in **Table 2**. Parameters used to evaluate MNA are presented in **Table 3**. A figure showing the latest groundwater analytical data plotted on a Site map is included as **Figure 4**. A TPH-GRO isoconcentration map is shown on **Figure 5**. A benzene

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isoconcentration map is shown on **Figure 6**. An isoconcentration map was not developed for MtBE as concentrations in all Site wells were reported below the laboratory reporting limit (LRL) of 0.5 micrograms per liter ($\mu\text{g/L}$).

Certified laboratory analysis reports and chain-of-custody documents are presented as **Attachment B**. Hydrographs based on groundwater elevations and analytical results from Third Quarter 2011 to the present are included in **Attachment C**. A summary of First Quarter 2013 groundwater analytical results follows:

- **TPH-GRO** was detected in three Site wells this quarter, at concentrations of 110 $\mu\text{g/L}$ (well MW-2), 200 $\mu\text{g/L}$ (well MW-5), and 1,400 $\mu\text{g/L}$ (well MW-8), which are within historical limits for each respective well.
- **Benzene** was detected in one Site well this quarter, at a concentration of 31 $\mu\text{g/L}$ (well MW-8), which is within historical limits for this well.
- **Toluene** was detected in one Site well this quarter, at a concentration of 1 $\mu\text{g/L}$ (well MW-8), which is within historical limits for this well.
- **Ethylbenzene** was detected in one Site well this quarter, at a concentration of 7 $\mu\text{g/L}$ (well MW-8), which is within historical limits for this well.
- **Total Xylenes** were detected in one Site well this quarter, at a concentration of 5 $\mu\text{g/L}$ (well MW-8), which is within historical limits for this well.
- **MtBE** was not detected above the LRL (0.5 $\mu\text{g/L}$) in any Site well sampled this quarter.

Monitored Natural Attenuation Analytical Results

An evaluation of MNA involves assessing a variety of physical, chemical, and biological processes that, under favorable conditions, may effectively reduce the mass, toxicity, mobility, volume, or concentration of constituents in soil or groundwater. For petroleum hydrocarbons, intrinsic biodegradation is typically the most important natural attenuation mechanism for the reduction of concentrations in groundwater. Intrinsic biodegradation involves the transfer of energy in the form of electrons by microorganisms in the subsurface. Bacteria use petroleum hydrocarbon constituents such as TPH, BTEX compounds, and MtBE as electron donors while DO, NO_3^- , ferric iron (Fe^{3+}), SO_4^{2-} , and carbon dioxide (CO_2), in order of preference, act as electron acceptors.

The geochemical parameters measured at the Site include DO; NO_3^- ; Fe^{2+} , a metabolite of Fe^{3+} reduction; SO_4^{2-} ; sulfide, a metabolite of SO_4^{2-} reduction; CH_4 , a metabolite of CO_2 reduction; alkalinity; and ORP. These parameters provide lines of evidence for evaluating MNA and determining the most likely biodegradation mechanisms utilized within the plume (e.g., Fe^{3+} reduction, SO_4^{2-} reduction, etc.). MNA parameters are summarized in **Table 3**.

During First Quarter 2013, DO levels (post-purge) in Site wells ranged between 1.19 milligrams per liter (mg/L; well MW-5) and 2.61 mg/L (well MW-6). The DO levels indicate an anaerobic environment is generally present in Site wells within the petroleum hydrocarbon plume such as

wells MW-2, MW-5, and MW-8; consequently, alternative electron acceptors will be used for degradation in these wells. A slightly aerobic environment is currently observed in well MW-6, which is located outside of the petroleum hydrocarbon plume.

ORP levels (post-purge) ranged between -85 millivolts (mV; well MW-8) and 189 mV (well MW-9). Wells MW-2, MW-5, and MW-8 exhibited negative ORP values during First Quarter 2013, indicating reducing conditions in those wells. The positive ORP values in wells MW-6 and MW-9 indicate oxidizing conditions are present in those wells.

Concentrations of NO_3^- ranged from below the LRL of 250 $\mu\text{g/L}$ (wells MW-2, MW-6, and MW-8) to 2,400 $\mu\text{g/L}$ (well MW-9). Concentrations of SO_4^{2-} ranged from 4,400 $\mu\text{g/L}$ (well MW-6) to 33,400 $\mu\text{g/L}$ (well MW-9). Lower NO_3^- and SO_4^{2-} concentrations were generally found in wells with higher petroleum hydrocarbon concentrations such as well MW-8 (and vice versa; e.g., well MW-9), indicating that NO_3^- and SO_4^{2-} are likely being utilized as electron acceptors for bioremediation of dissolved-phase petroleum hydrocarbons by indigenous microbes. NO_3^- concentrations were below the LRL in wells MW-2, MW-6, and MW-8, indicating the natural supply of NO_3^- may be nearly exhausted.

Concentrations of Fe^{2+} ranged from below the LRL of 8.0 $\mu\text{g/L}$ (well MW-9) to 32,300 $\mu\text{g/L}$ (well MW-8). Concentrations of CH_4 ranged from below the LRL of 3.0 $\mu\text{g/L}$ (well MW-9) to 1,800 $\mu\text{g/L}$ (well MW-8). Higher concentrations of metabolic by-products Fe^{2+} and CH_4 were generally found in wells with higher petroleum hydrocarbon concentrations such as well MW-8 (and vice versa; e.g., well MW-9). This indicates that Fe^{3+} and CO_2 reduction are likely occurring.

Concentrations of sulfide were below the LRLs of 54 $\mu\text{g/L}$ and 540 $\mu\text{g/L}$ in all Site wells. Though it is difficult to draw a conclusion with no detections, this may indicate that SO_4^{2-} reduction has just begun to occur at the Site.

Total alkalinity measurements ranged from 398,000 $\mu\text{g/L}$ as calcium carbonate (CaCO_3 ; well MW-5) to 503,000 $\mu\text{g/L}$ as CaCO_3 (well MW-2). The enrichment of alkalinity in all Site wells suggests biodegradation is occurring.

In general, the subsurface is becoming oxygen depleted and it appears that the natural supply of NO_3^- may be nearly exhausted. Biodegradation appears to be occurring within Site wells, and Site conditions are currently becoming favorable for petroleum hydrocarbon degradation to occur via Fe^{3+} reduction. As Site conditions become more reducing, degradation rates may slow due to the lower levels of electron acceptors identified by groundwater sampling.

CONCLUSIONS AND RECOMMENDATIONS

Concentrations of TPH-GRO and benzene were observed above California Regional Water Quality Control Board – San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs) for groundwater that is a current or potential source of drinking water as follows:

- TPH-GRO concentrations exceed the ESL of 100 $\mu\text{g/L}$ in wells MW-2, MW-5, and MW-8; and
- The benzene concentration exceeds the ESL of 1 $\mu\text{g/L}$ in well MW-8.

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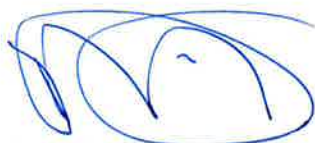
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Maximum concentrations of TPH-GRO and BTEX compounds were observed in well MW-8, which is located in the northern portion of the Site near the former second-generation USTs. TPH-GRO was also detected above the ESL in well MW-5, near the former first-generation dispenser island, and at well MW-2, approximately 200 feet southwest of well MW-5. Due to TPH-GRO and BTEX compounds below LRLs in well MW-6 (cross-gradient of well MW-8) and the potential for two distinct source areas, TPH-GRO has been represented as two distinct plumes at this time. MtBE was not detected above LRLs in any Site well sampled this quarter.

Stantec will complete a full evaluation of current Site conditions, including preparation of a conceptual Site model, which will be submitted under separate cover during Second Quarter 2013.

If you have any questions regarding the contents of this report, please contact the Stantec project manager, Travis Flora, at (408) 356-6124 or travis.flora@stantec.com.

Sincerely,
Stantec Consulting Services Inc.



Travis L. Flora
Project Manager

Attachments:

Table 1 – Well Details / Screen Interval Assessment – First Quarter 2013
Table 2 – Groundwater Monitoring Data and Analytical Results
Table 3 – Monitored Natural Attenuation Parameters

Figure 1 – Site Location Map
Figure 2 – Groundwater Elevation Contour Map – First Quarter 2013
Figure 3 – Rose Diagram – First Quarter 2013
Figure 4 – Site Plan Showing Groundwater Concentrations – First Quarter 2013
Figure 5 – TPH-GRO Isoconcentration Map – First Quarter 2013
Figure 6 – Benzene Isoconcentration Map – First Quarter 2013

Attachment A – Blaine Tech Groundwater Monitoring Report – First Quarter 2013
Attachment B – Certified Laboratory Analysis Reports and Chain-of-Custody Documents
Attachment C – Hydrographs

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LIMITATIONS AND CERTIFICATION

This report was prepared in accordance with the scope of work outlined in Stantec's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of Chevron for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Stantec. To the extent that this report is based on information provided to Stantec by third parties, Stantec may have made efforts to verify this third party information, but Stantec cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by Stantec.

Prepared by:



Kate Fayling
Geologic Project Specialist

Reviewed by:



Marisa Kaffenberger
Senior Engineer

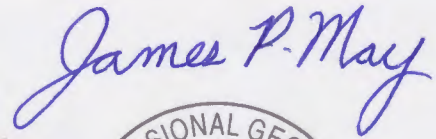
All information, conclusions, and recommendations provided by Stantec in this document regarding the Subject Property have been prepared under the supervision of and reviewed by the Licensed Professional whose signature appears below:

Licensed Approver:

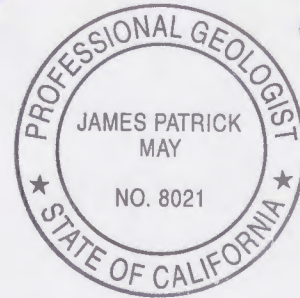
Name: James May, P.G.

Date: 02 MAY 2013

Signature:



Stamp:



cc:

Ms. Carryl MacLeod, Chevron Environmental Management Company, 6101 Bollinger Canyon Road, San Ramon, CA 94583 – Electronic Copy

Linda Hothem Trust c/o Mr. Jan Greben, Greben & Associates, 1332 Anacapa Street, Suite 110, Santa Barbara, CA 93101

Ms. Gene Kida, Gerber Products, 12 Vreeland Road, Florham Park, NJ 07932

Tables

Table 1
Well Details / Screen Interval Assessment
First Quarter 2013
Former Chevron-Branded Service Station 91723
9757 San Leandro Street, Oakland, California

Well ID	Date Installed	Well Type	Casing Diameter (inches)	Top of Casing (feet above msl)	Construction Well Depth (feet bgs)	Current Well Depth ¹ (feet bgs)	Current Depth to Groundwater ¹ (feet below TOC)	Screen Interval (feet bgs)	Screen Interval Assessment
MW-2	4/18/1987	Monitoring	2	21.31	22.00	21.57	9.52	12-22	Depth-to-groundwater above screen interval.
MW-5	5/18/1988	Monitoring	2	21.84	20.00	17.46	9.55	7-20	Depth-to-groundwater within screen interval.
MW-6	5/18/1988	Monitoring	2	21.71	20.00	19.60	9.70	7-20	Depth-to-groundwater within screen interval.
MW-8	5/19/1988	Monitoring	2	21.84	20.00	18.20	9.86	7-20	Depth-to-groundwater within screen interval.
MW-9	8/4/1989	Monitoring	4	20.55	20.00	20.07	9.07	5.5-20	Depth-to-groundwater within screen interval.

Notes:
bgs = below ground surface
msl = mean sea level
TOC = top of casing
¹ = As measured prior to groundwater sampling on March 13, 2013.

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-Branded Service Station 91723
9757 San Leandro Street, Oakland, California

WELL ID/ DATE	TOC (ft.)	DTW (ft.)	GWE (msl)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)
MW-2									
09/23/11	21.31	9.78	11.53	180	<0.5	<0.5	0.6	0.6	0.6
12/29/11	21.31	9.73	11.58	100	<0.5	<0.5	0.7	0.9	<0.5
03/30/12	21.31	8.02	13.29	180	<0.5	<0.5	2	4	<0.5
06/12/12	21.31	9.58	11.73	99	<0.5	<0.5	<0.5	<0.5	<0.5
09/27/12	21.31	9.81	11.50	93	<0.5	<0.5	<0.5	<0.5	<0.5
03/13/13	21.31	9.52	11.79	110	<0.5	<0.5	<0.5	<0.5	<0.5
MW-5									
09/23/11	21.84	9.85	11.99	190	<0.5	<0.5	<0.5	<0.5	<0.5
12/29/11	21.84	9.91	11.93	180	<0.5	<0.5	<0.5	<0.5	<0.5
03/30/12	21.84	7.92	13.92	190	<0.5	<0.5	<0.5	<0.5	<0.5
06/12/12	21.84	9.65	12.19	260	<0.5	<0.5	<0.5	<0.5	<0.5
09/27/12	21.84	9.83	12.01	230	<0.5	<0.5	<0.5	<0.5	<0.5
03/13/13	21.84	9.55	12.29	200	<0.5	<0.5	<0.5	<0.5	<0.5
MW-6									
09/23/11	21.71	9.99	11.72	<22	<0.5	<0.5	<0.5	<0.5	0.7
12/29/11	21.71	9.93	11.78	<22	<0.5	<0.5	<0.5	<0.5	0.6
03/30/12	21.71	8.00	13.71	<22	<0.5	<0.5	<0.5	<0.5	<0.5
06/12/12	21.71	9.76	11.95	66	<0.5	<0.5	<0.5	<0.5	<0.5
09/27/12	21.71	9.93	11.78	27	<0.5	<0.5	<0.5	<0.5	<0.5
03/13/13	21.71	9.70	12.01	<22	<0.5	<0.5	<0.5	<0.5	<0.5
MW-8									
09/23/11	21.84	10.15	11.69	1,900	55	2	10	8	<0.5
12/29/11	21.84	10.10	11.74	1,300	31	1	5	5	<0.5
03/30/12	21.84	8.12	13.72	2,200	65	3	20	14	<0.5
06/12/12	21.84	9.90	11.94	2,300	49	2	14	14	<0.5
09/27/12	21.84	10.12	11.72	1,900	43	2	10	8	<0.5
03/13/13	21.84	9.86	11.98	1,400	31	1	7	5	<0.5

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-Branded Service Station 91723
9757 San Leandro Street, Oakland, California

WELL ID/ DATE	TOC (ft.)	DTW (ft.)	GWE (msl)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MtBE (µg/L)
MW-9									
09/23/11	20.55	9.30	11.25	<22	<0.5	<0.5	<0.5	<0.5	<0.5
12/29/11	20.55	9.51	11.04	<22	<0.5	<0.5	<0.5	<0.5	<0.5
03/30/12	20.55	7.52	13.03	<22	<0.5	<0.5	<0.5	<0.5	<0.5
06/12/12	20.55	9.14	11.41	<22	<0.5	<0.5	<0.5	<0.5	<0.5
09/27/12	20.55	9.24	11.31	<22	<0.5	<0.5	<0.5	<0.5	<0.5
03/13/13	20.55	9.07	11.48	<22	<0.5	<0.5	<0.5	<0.5	<0.5
TRIP BLANK									
QA									
09/23/11	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5
12/29/11	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5
03/30/12	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5
06/12/12	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5
09/27/12	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5
03/13/13	--	--	--	<22	<0.5	<0.5	<0.5	<0.5	<0.5

Table 2
Groundwater Monitoring Data and Analytical Results
Former Chevron-Branded Service Station 91723
9757 San Leandro Street, Oakland, California

EXPLANATIONS:

Current groundwater monitoring data provided by Blaine Tech Services, Inc. Current laboratory analytical results provided by Eurofins Lancaster Laboratories.

TOC = Top of Casing
(ft.) = Feet

DTW = Depth to Water

GWE = Groundwater Elevation

(msl) = Mean Sea Level

TPH-GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes

MtBE = Methyl tertiary-butyl ether

(µg/L) = Micrograms per liter

-- = Not Measured/Not Analyzed

QA = Quality Assurance/Trip Blank

Table 3
Monitored Natural Attenuation Parameters
Former Chevron-Branded Service Station 91723
9757 San Leandro Street, Oakland, California

WELL ID/ DATE	METHANE (µg/L)	NITRATE (µg/L)	SULFATE (µg/L)	ALKALINITY TO pH 4.5 (µg/L as CaCO ₃)	ALKALINITY TO pH 8.3 (µg/L as CaCO ₃)	FERROUS IRON (µg/L)	SULFIDE (µg/L)	POST-PURGE DO (mg/L)	POST-PURGE ORP (mV)
MW-2									
03/30/12	330	320	10,600	545,000	<460	2,200	<270 ¹	1.08	219
06/12/12	300	290	12,900	460,000	<700	1,400	<220 ¹	0.86	135
09/27/12	250	710	14,200	448,000	<700	450	99	0.91	138
03/13/13	680	<250	13,000	503,000	--	700	<54	1.39	-7
MW-5									
03/30/12	110	440	30,200	370,000	<460	300	<270 ¹	1.11	222
06/12/12	120	890	44,800	387,000	<700	7,300	<220 ¹	0.87	124
09/27/12	110	980	30,200	370,000	<700	7,400	<110 ¹	0.98	136
03/13/13	170	570	30,600	398,000	---	2,600	<54	1.19	-34
MW-6									
03/30/12	62	<250	5,600	455,000	<460	210	<54	1.12	223
06/12/12	190	<250	6,300	458,000	<700	4,700	<110 ¹	0.84	115
09/27/12	170	640	8,500	434,000	<700	8,800	<110 ¹	0.96	133
03/13/13	190	<250	4,400	473,000	--	6,200	<54	2.61	7
MW-8									
03/30/12	2,100	2,300	32,200	454,000	<460	29,300	780 ¹	1.15	230
06/12/12	1,700	<250	9,200	441,000	<700	43,200	<220 ¹	0.98	47
09/27/12	1,900	420	7,900	444,000	<700	35,600	<270 ¹	1.21	50
03/13/13	1,800	<250	9,700	450,000	--	32,300	<540¹	1.61	-85
MW-9									
03/30/12	<5.0	<250	7,400	381,000	<460	31	<54	1.34	179
06/12/12	<5.0	2,900	32,900	397,000	<700	340	<54	0.92	128
09/27/12	<5.0	1,700	32,200	398,000	<700	53	<54	1.10	141
03/13/13	<3.0	2,400	33,400	414,000	--	<8.0	<54	1.38	189

Table 3
Monitored Natural Attenuation Parameters
Former Chevron-Branded Service Station 91723
9757 San Leandro Street, Oakland, California

EXPLANATIONS:

Current groundwater monitoring data provided by Blaine Tech Services, Inc. Current laboratory analytical results provided by Eurofins Lancaster Laboratories.

(µg/L) = Micrograms per liter

(µg/L as CaCO₃) = Micrograms per liter as calcium carbonate

DO = Dissolved Oxygen

(mg/L) = Milligrams per liter

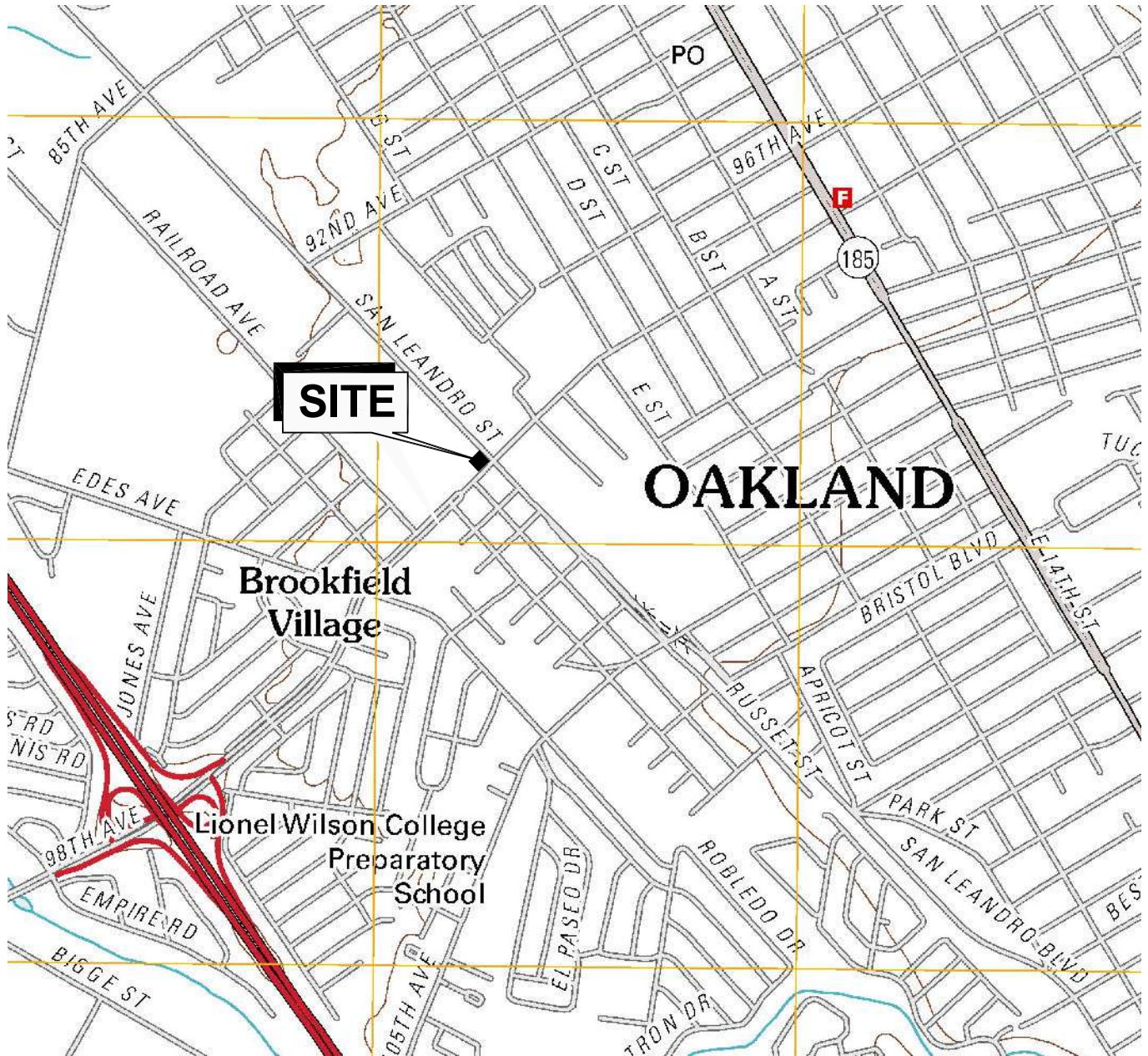
ORP = Oxidation Reduction Potential

(mV) = Millivolts

-- = Not Measured/Not Analyzed

¹ Laboratory report indicates reporting limits were raised due to interference from the sample matrix.

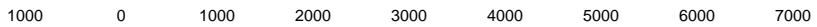
Figures



CALIFORNIA



SCALE IN MILES



SCALE IN FEET

REFERENCE: USGS 7.5 QUADRANGLE;
SAN LEANDRO, CALIFORNIA; 2012



Stantec

15575 Los Gatos Blvd, Building C
Los Gatos, CA 95032

Phone: (408) 356-6124 Fax: (408) 356-6138

FOR:
FORMER CHEVRON-BRANDED
SERVICE STATION 91723
9757 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE:

1

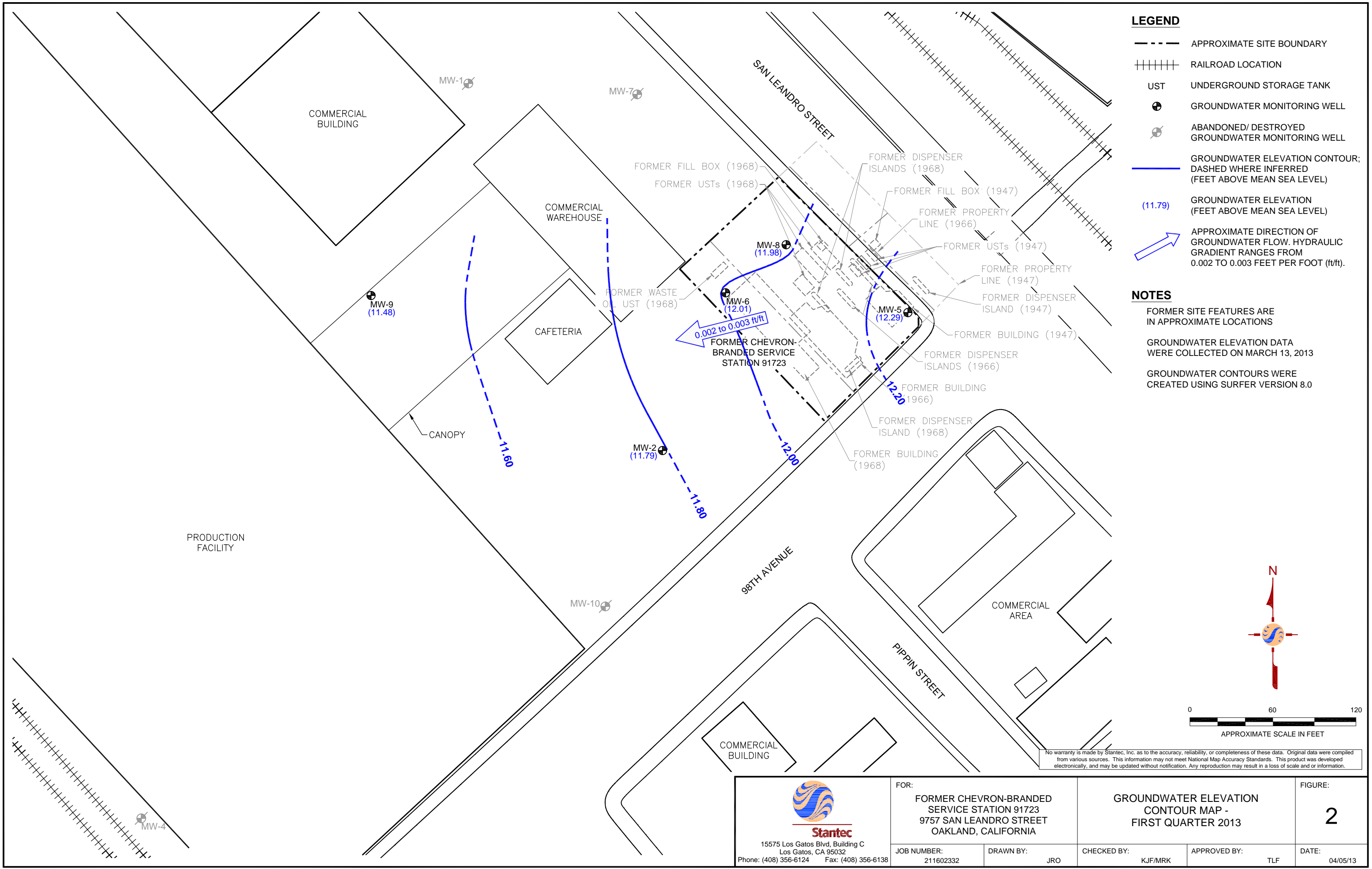
JOB NUMBER:
211602332

DRAWN BY:
JRO

CHECKED BY:
KJF/MRK

APPROVED BY:
TLF

DATE:
04/05/13

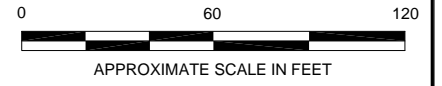
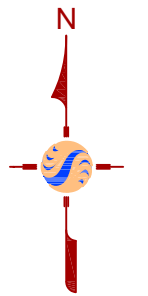


LEGEND

- APPROXIMATE SITE BOUNDARY
- RAILROAD LOCATION
- UST
- GROUNDWATER MONITORING WELL
- ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR; DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL)
- (11.79) GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW. HYDRAULIC GRADIENT RANGES FROM 0.002 TO 0.003 FEET PER FOOT (ft/ft).

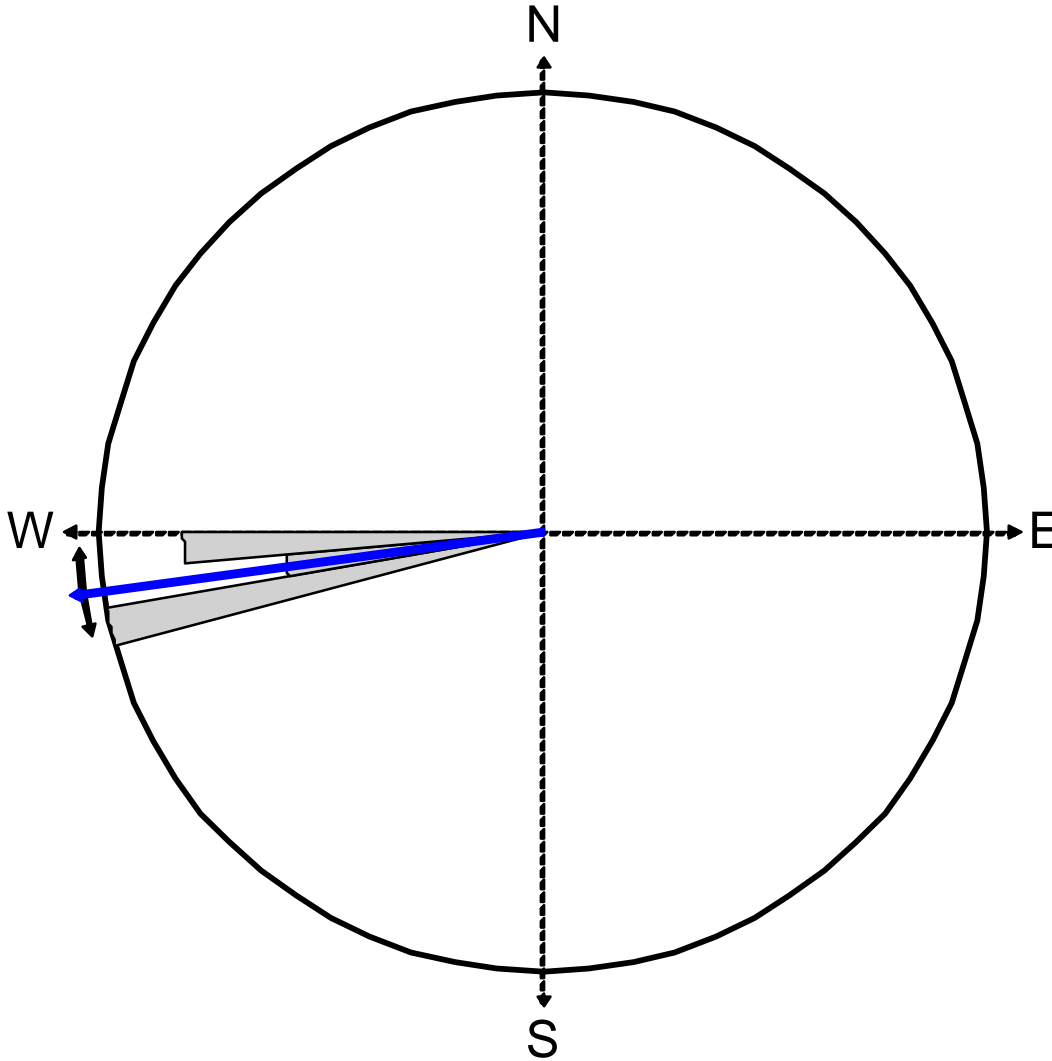
NOTES

- FORMER SITE FEATURES ARE IN APPROXIMATE LOCATIONS
- GROUNDWATER ELEVATION DATA WERE COLLECTED ON MARCH 13, 2013
- GROUNDWATER CONTOURS WERE CREATED USING SURFER VERSION 8.0



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	<p>JOB NUMBER: 211602332</p>	<p>DRAWN BY: JRO</p>	<p>CHECKED BY: KJF/MRK</p>	<p>APPROVED BY: TLF</p>	<p>DATE: 04/05/13</p>

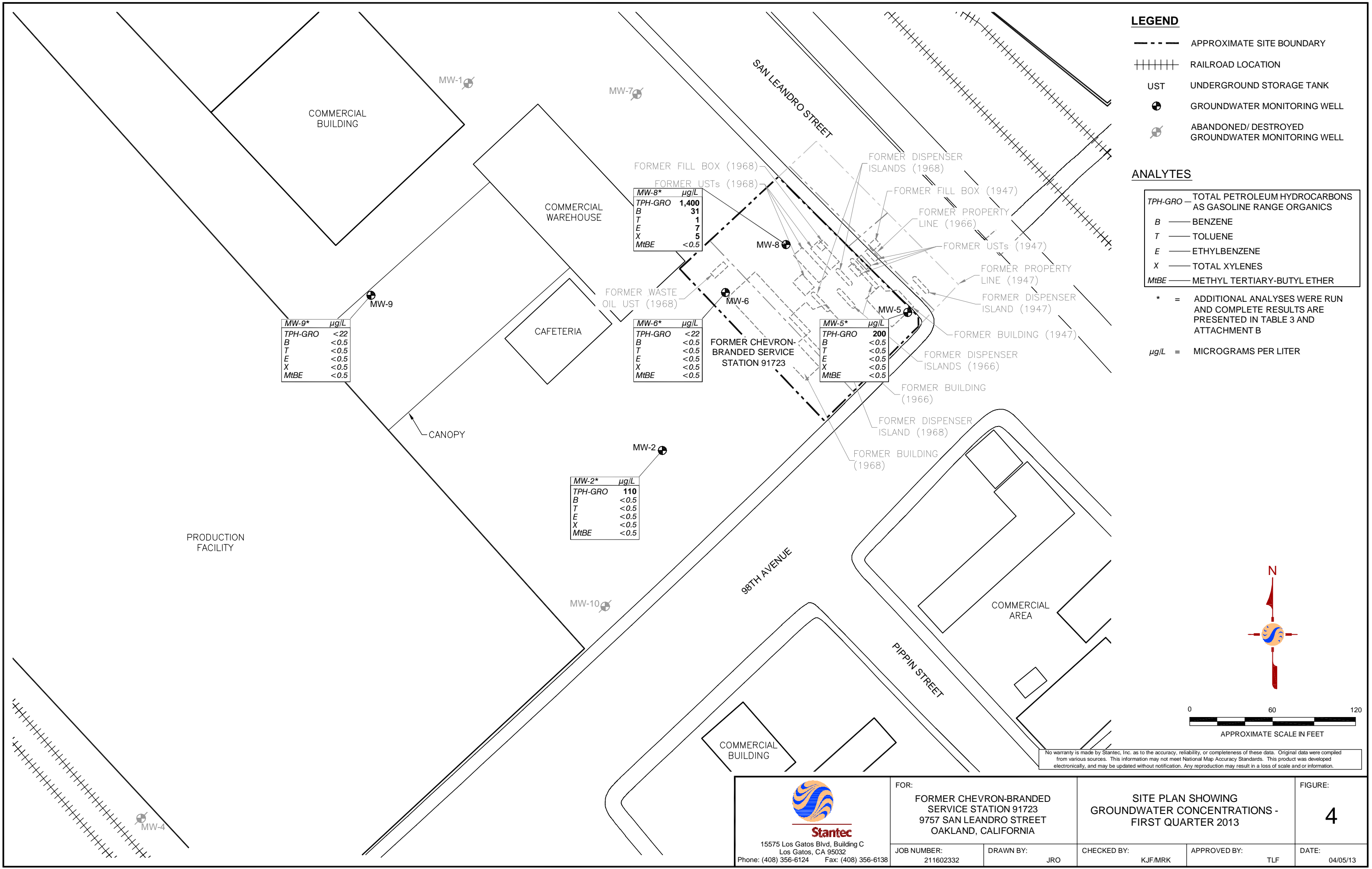


Equal Area Plot

Number of Points 6
 Class Size 5
 Vector Mean 262.50
 Vector Magnitude 5.97
 Consistency Ratio 0.99

NOTE: ROSE DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING THIRD QUARTER 2011.

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	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: KJF/MRK	APPROVED BY: TLF	DATE: 04/05/13



LEGEND

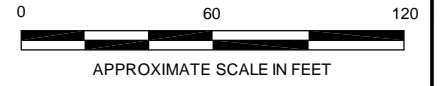
- APPROXIMATE SITE BOUNDARY
- ++++ RAILROAD LOCATION
- UST UNDERGROUND STORAGE TANK
- ⊕ GROUNDWATER MONITORING WELL
- ⊖ ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL

ANALYTES


TPH-GRO	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
B	BENZENE
T	TOLUENE
E	ETHYLBENZENE
X	TOTAL XYLENES
MtBE	METHYL TERTIARY-BUTYL ETHER

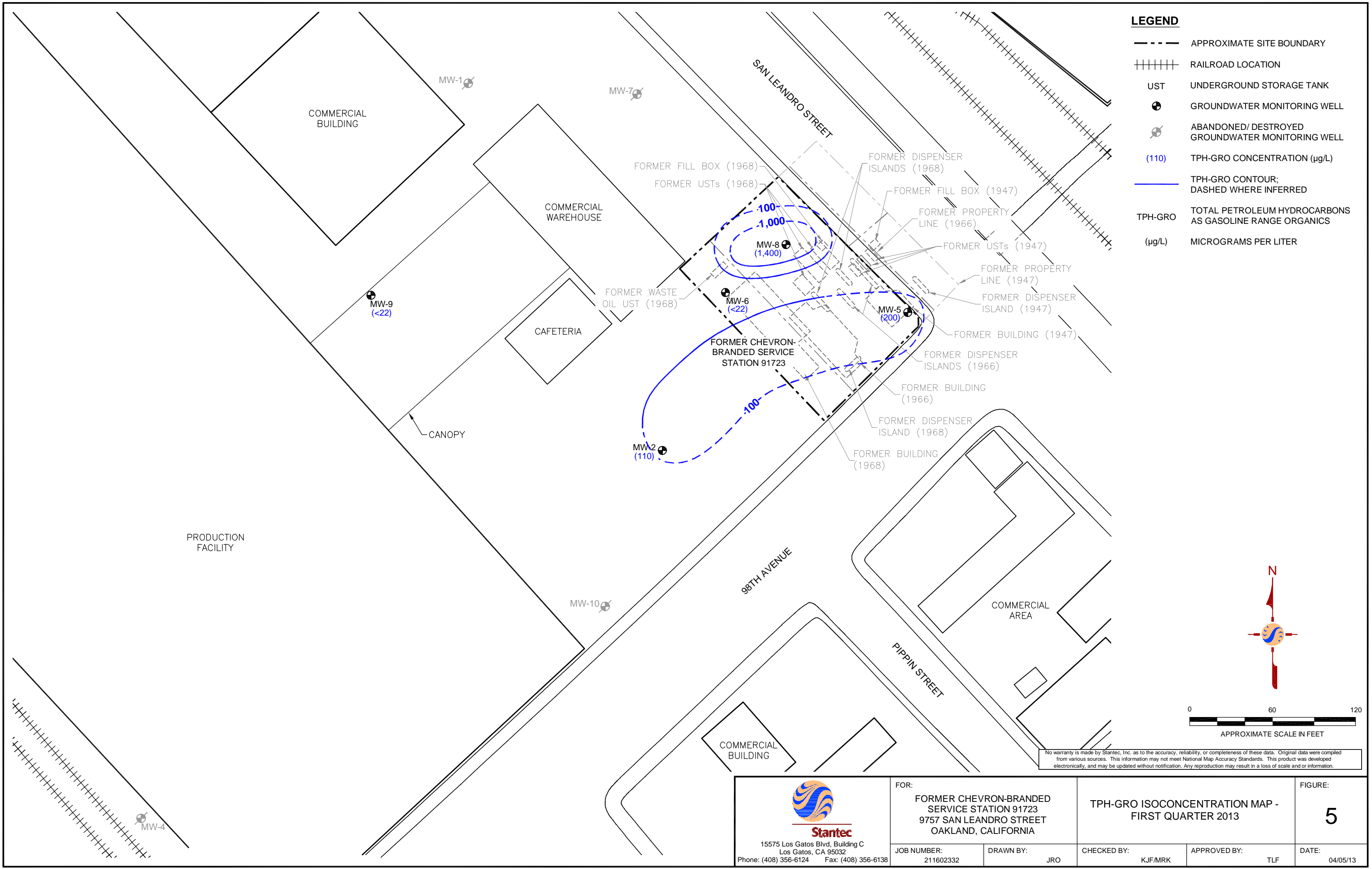
* = ADDITIONAL ANALYSES WERE RUN AND COMPLETE RESULTS ARE PRESENTED IN TABLE 3 AND ATTACHMENT B

µg/L = MICROGRAMS PER LITER



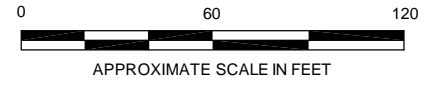
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	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: KJF/MRK	APPROVED BY: TLF	DATE: 04/05/13




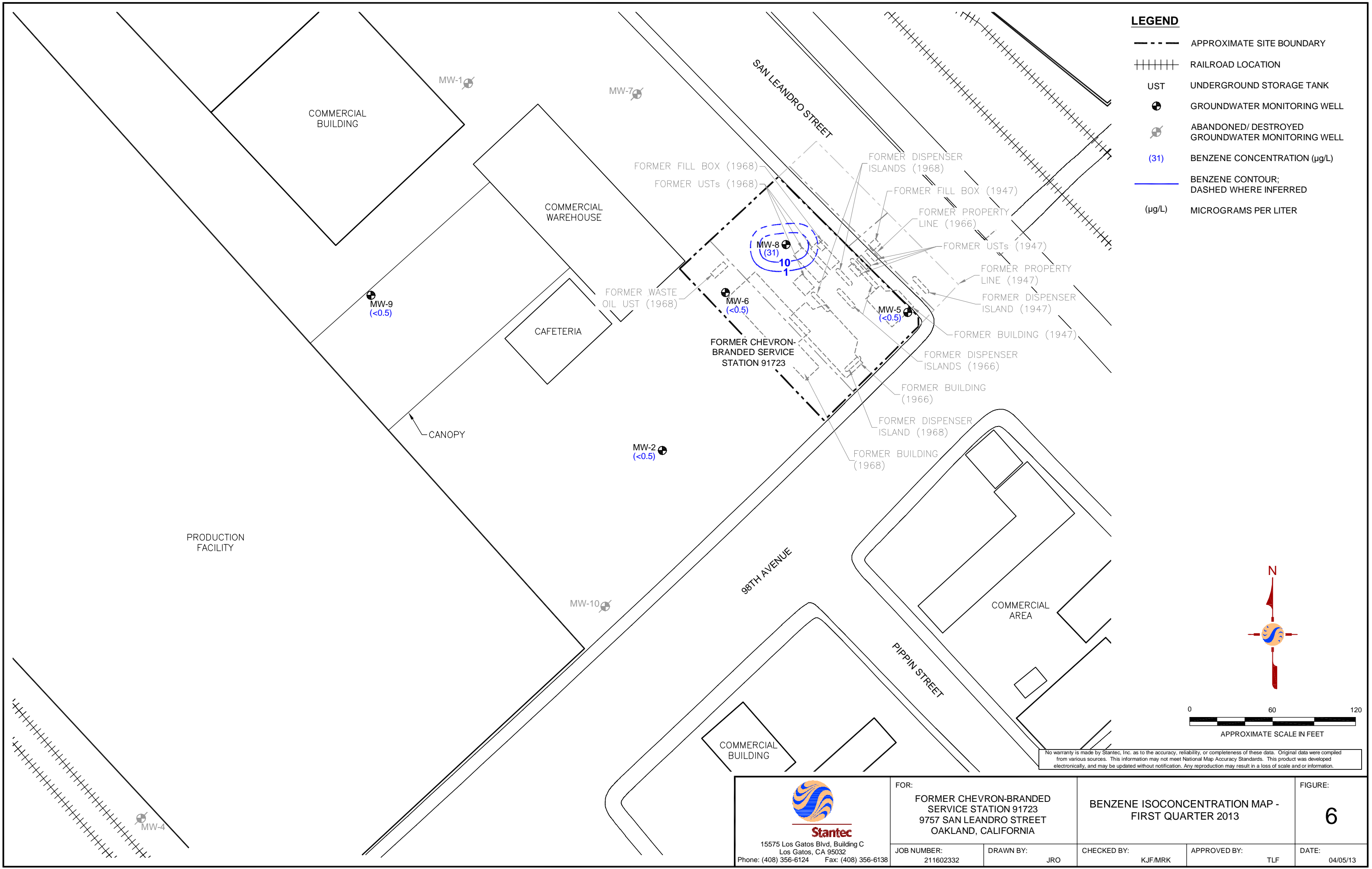
LEGEND

- APPROXIMATE SITE BOUNDARY
- ++++ RAILROAD LOCATION
- UST UNDERGROUND STORAGE TANK
- ⊕ GROUNDWATER MONITORING WELL
- ⊗ ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL
- (110) TPH-GRO CONCENTRATION (µg/L)
- TPH-GRO CONTOUR; DASHED WHERE INFERRED
- TPH-GRO TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS (µg/L)

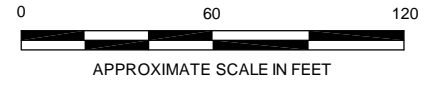


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	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: KJF/MRK	APPROVED BY: TLF	DATE: 04/05/13



- LEGEND**
- APPROXIMATE SITE BOUNDARY
 - ++++ RAILROAD LOCATION
 - UST UNDERGROUND STORAGE TANK
 - ⊕ GROUNDWATER MONITORING WELL
 - ⊖ ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL
 - (31) BENZENE CONCENTRATION (µg/L)
 - BENZENE CONTOUR; DASHED WHERE INFERRED
 - (µg/L) MICROGRAMS PER LITER



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	JOB NUMBER: 211602332	DRAWN BY: JRO	CHECKED BY: KJF/MRK	APPROVED BY: TLF	DATE: 04/05/13

Attachment A

Blaine Tech Groundwater Monitoring Report – First Quarter 2013



March 20, 2013

Chevron Environmental Management Company
Caryl MacLeod
6111 Bollinger Canyon Rd.
San Ramon, CA 94583

First Quarter 2013 Monitoring at
Chevron Service Station 91723
9757 San Leandro Blvd.
Oakland, CA

Monitoring performed on March 13, 2013

Blaine Tech Services, Inc. Groundwater Monitoring Event 130313-GR2

This submission covers the routine monitoring of groundwater wells conducted on March 13, 2013 at this location. Five monitoring wells were measured for depth to groundwater (DTW). Five monitoring wells were sampled. All sampling activities were performed in accordance with local, state and federal guidelines.

Water levels measurements were collected using an electronic slope indicator. All sampled wells were purged of three case volumes, depending on well recovery, or until water temperature, pH and conductivity stabilized. Purging was accomplished using electric submersible pumps, positive air displacement pumps, or stainless steel, Teflon, or disposable bailers. Subsequent sample collection and sample handling was performed in accordance with EPA protocols. Alternately, where applicable, wells were sampled utilizing no-purge methodology. All reused equipment was decontaminated in an integrated stainless steel sink with de-ionized water supplied Hotsy pressure washer and Liquinox or equivalent.

First Quarter Groundwater Monitoring at Chevron 91723, 9757 San Leandro Blvd., Oakland, CA

SAN JOSE

SACRAMENTO

LOS ANGELES

SAN DIEGO

1680 ROGERS AVENUE

SAN JOSE, CA 95112-1105

(408) 573-0555

FAX (408) 573-7771

LIC. 746684

www.blainetech.com

Samples were delivered under chain-of-custody to Lancaster Laboratories of Lancaster, Pennsylvania, for analysis. Monitoring well purgewater and equipment rinsate water was collected and transported under bill-of-lading to Blaine Tech of San Jose, California.

Enclosed documentation from this event includes copies of the Well Gauging Sheet, Well Monitoring Data Sheets, and Chain-of-Custody.

Blaine Tech Services, Inc.'s activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrogeologic conditions or formulation of recommendations was performed.

Please call if you have any questions.

Sincerely,



Dustin Becker
Blaine Tech Services, Inc.
Senior Project Manager

attachments: SOP
Well Gauging Sheet
Individual Well Monitoring Data Sheets
Chain of Custody
Wellhead Inspection Form
Bill of Lading

cc: Stantec
Attn: Travis Flora
15575 Los Gatos Blvd Building C
Los Gatos, CA 95032

First Quarter Groundwater Monitoring at Chevron 91723, 9757 San Leandro Blvd., Oakland, CA

SAN JOSE

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BLAINE TECH SERVICES, INC. METHODS AND PROCEDURES FOR THE ROUTINE MONITORING OF GROUNDWATER WELLS AT CHEVRON SITES

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. We specialize in groundwater monitoring assignments and intentionally limit the scope of our services to those centered on the generation of objective information.

To avoid conflicts of interest, Blaine Tech Services, Inc. personnel do not evaluate or interpret the information we collect. As a state licensed contractor (C-57 well drilling –water – 746684) performing strictly technical services, we do not make any professional recommendations and perform no consulting of any kind.

SAMPLING PROCEDURES OVERVIEW

SAFETY

All groundwater monitoring assignments performed for Chevron comply with Chevron's safety guidelines, 29 CFR 1910.120 and SB-198 Injury and Illness Prevention Program (IIPP). All Field Technicians receive the full 40-hour 29CFR 1910.120 OSHA SARA HAZWOPER course, medical clearance and on-the-job training prior to commencing any work on any Chevron site.

INSPECTION AND GAUGING

Wells are inspected prior to evacuation and sampling. The condition of the wellhead is checked and noted according to a wellhead inspection checklist.

Standard measurements include the depth to water (DTW) and the total well depth (TD) obtained with industry standard electronic water level indicators that are graduated in increments of hundredths of a foot.

The water in each well is inspected for the presence of immiscibles. When free product is suspected, its presence is confirmed using an electronic interface probe (e.g. GeoTech). No samples are collected from a well containing product.

TRADITIONAL PURGING & SAMPLING

Evacuation

Depth to water measurements are collected by our personnel prior to purging and minimum purge volumes are calculated anew for each well based on the height of the water column and the diameter of the well. Expected purge volumes are never less than three case volumes and are set at no less than four case volumes in some jurisdictions.

Well purging devices are selected on the basis of the well diameter and the total volume to be evacuated. In most cases the well will be purged using an electric submersible pump (i.e. Grundfos) suspended near (but not touching) the bottom of the well.

Parameter Stabilization

Well purging completion standards include minimum purge volumes, but additionally require stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature. Instrument readings are obtained at regular intervals during the evacuation process (no less than once per case volume).

Stabilization standards for routine quarterly monitoring of fuel sites include the following: Temperature is considered to have stabilized when successive readings do not fluctuate more than +/- 1 degree Celsius. Electrical conductivity is considered stable when successive readings are within 10%. pH is considered to be stable when successive readings remain constant or vary no more than 0.2 of a pH unit.

Sample Collection

All samples are collected using disposable bailers.

Sample Containers

Sample material is decanted directly from the sampling bailer into sample containers provided by the laboratory that will analyze the samples. The transfer of sample material from the bailer to the sample container conforms to specifications contained in the USEPA T.E.G.D. The type of sample container, material of construction, method of closure and filling requirements are specific to the intended analysis. Chemicals needed to preserve the sample material are commonly placed inside the sample containers by the laboratory or glassware vendor prior to delivery of the bottle to our personnel. The laboratory sets the number of replicate containers.

Dewatered Wells

Normal evacuation removes no less than three case volumes of water from the well. However, less water may be removed in cases where the well dewateres and does not immediately recharge.

Measuring Recharge

Upon completion of well purging, a depth to water measurement is collected and notated to ensure that the well has recharged to within 80% of its static, pre-purge level prior to sampling.

Wells that do not immediately show 80% recharge or dewatered wells will be allowed approximately 2 hours to recharge prior to sampling or will be sampled at site departure. All wells requiring off-site traffic control in the public right-of-way, the 80% recharge rule may be disregarded in the interests of Health and Safety. The sample may be collected as soon as there is sufficient water. The water level at time of sampling will be noted.

Dissolved Oxygen Measurements

Dissolved Oxygen readings are taken pre- and/or post-purge using YSI meters (e.g. YSI Model 550) or HACH field test kits.

The YSI meters are able to collect accurate in-situ readings. The probe allows downhole measurements to be taken from wells with diameters as small as two inches. The probe and reel is decontaminated between wells as described above. The meter is calibrated

as per the instructions in the operating manual. The probe is lowered into the water column and the reading is allowed to stabilize prior to collection.

Oxidation Reduction Potential Measurements (ORP)

All readings are obtained with either Corning or Myron-L meters (e.g. Corning ORP-65 or a Myron-L Ultrameter). The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual.

LOW FLOW SAMPLING USING SAMPLE-PRO BLADDER PUMP

Calibration

Calibrate YSI Flow Cell as per manufacturer's specifications. Thoroughly rinse probe and cup between parameters. Calibration order as follows:

1. pH (use 3-point calibration of 7, 4, 10)
2. Oxygen Reduction Potential (ORP)
3. Specific Conductance
4. Dissolved Oxygen (DO) (calibrate simulating 100% oxygen saturation)

Purging & Sampling Collection

1. Insert new bladder into Sample-Pro pump housing.
2. Remove dedicated PE tubing from the well or start with new PE tubing cut to the required length.
3. Attach the PE tubing to the Sample-Pro Bladder Pump.
4. Gently lower the Sample-Pro Bladder Pump, and PE tubing into the well, placing the Sample-Pro Bladder Pump intake at the center of the screened interval. Take care to minimize disturbance to the water column.
5. Direct effluent line into YSI 556 Flow Cell.
6. Set Sample-Pro Bladder Pump speed at 100 - 500 ml/min.
7. Collect water quality parameter measurements for temperature, pH, conductivity, turbidity, DO and ORP every 3-5 minutes.
8. Monitor drawdown during purging with electronic water level meter. Record water level with each parameter measurement. **MAXIMUM DRAWDOWN IS 0.33 FEET.**
9. Collect parameter measurements until stability is achieved. Stability is defined as three consecutive measurements where:

Temp	± 1 ° Celsius
pH	± 0.1
Conductivity	± 3%
Turbidity	± 10% NTU
DO	± 0.3 mg/l
ORP	± 10 Mv

10. Sample may be collected once stability is achieved and at least one system volume of water removed from the well.
11. Disconnect effluent line from YSI 556 Flow Cell.
12. Sample through effluent line while maintaining constant flow rate.
13. Remove Sample-Pro Bladder Pump, and PE tubing from well.
14. Detach and reinstall dedicated PE tubing in well.

PURGEWATER CONTAINMENT

All non-hazardous purgewater evacuated from each groundwater monitoring well is captured and contained in on-board storage tanks on the Sampling Vehicle and/or special water hauling trailers. Effluent from the decontamination of reusable apparatus (sounders, electric pumps and hoses etc.), consisting of groundwater combined with deionized water and non-phosphate soap, is also captured and pumped into effluent tanks.

Non-hazardous purgewater is transported under standard Bill of Lading or Non-Hazardous Waste Manifest to a Blaine Tech Services, Inc. facility before being transported to a Chevron approved disposal facility

TRIP BLANKS

Trip Blanks, if requested, are taken to the site and kept inside the sample cooler for the duration of the event. They are turned over to the laboratory for analysis with the samples from that site.

DUPLICATES

Duplicates, if requested, may be collected at a site.

SAMPLE STORAGE

All sample containers are promptly placed in food grade ice chests for storage in the field and transport (direct or via our facility) to the designated analytical laboratory. These ice chests contain quantities of restaurant grade ice as a refrigerant material. The samples are maintained in either an ice chest or a refrigerator until relinquished into the custody of the laboratory or laboratory courier.

DOCUMENTATION CONVENTIONS

A label must be affixed to all sample containers. In most cases these labels are generated by our office personnel and are partially preprinted. Labels can also be hand written by our field personnel. The site is identified with the store number and site address, as is the particular groundwater well from which the sample is drawn (e.g. MW-1, MW-2, S-1 etc.). The time and date of sample collection along with the initials of the person who collects the sample are handwritten onto the label. Field documentation is contemporaneous.

DECONTAMINATION

All equipment is brought to the site in clean and serviceable condition and is cleaned after use in each well and before subsequent use in any other well. Equipment such as hose reels, pumps and bailers is decontaminated before leaving the site.

The primary decontamination device is a commercial steam cleaner. The steam cleaner is de-tuned to function as a hot pressure washer that is then operated with high quality deionized water that is produced at our facility and stored onboard our sampling vehicle. Cleaning is

facilitated by the use of proprietary fixtures and devices included in the patented workstation (U.S. Patent 5,535,775) that is incorporated in each sampling vehicle.

Any sensitive equipment or parts (i.e. Dissolved Oxygen sensor membrane, water level indicator, etc.) that cannot be washed using the high pressure water, will be sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water.

FERROUS IRON MEASUREMENTS

All field measurements are collected at time of sampling with a HACH test kit.

CHEVRON WELL MONITORING DATA SHEET

Project #: 130313-GR2	Station #: 9-1723
Sampler: GR	Date: 03/13/2013
Weather: mostly sunny	Ambient Air Temperature: 78 °F
Well I.D.: MW-2	Well Diameter: ② 3 4 6 8
Total Well Depth: 21.57	Depth to Water: 9.52
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.93	

Purge Method:

- Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

1.9 (Gals.) X	3	= 5.7 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1350	67.6	6.95	916.2	260	2.0	
1353	67.9	6.92	922.1	1000	4.0	
1356	68.6	6.90	916.8	71000	6.0	DTW - 9.56

Did well dewater? Yes No Gallons actually evacuated: 6.0

Sampling Date: 03/13/2013 Sampling Time: 1405 Depth to Water: 9.56

Sample I.D.: MW-2 Laboratory: Lancaster Other _____

Analyzed for: TPH-G BTEX MTBE OXYS Other: See LOC

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other: _____

D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: 1.39 mg/L

O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: -7 mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 130313-GRZ	Station #: 9-1723
Sampler: GR	Date: 03/13/2013
Weather: mostly sunny	Ambient Air Temperature: 78°F
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8
Total Well Depth: 17.46	Depth to Water: 9.55
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.13	

Purge Method: Bailer Disposable Bailer Positive Air Displacement Electric Submersible

Sampling Method: Waterra Disposable Bailer Extraction Port Dedicated Tubing Other: _____

Waterra Peristaltic Extraction Pump Other: _____

1.3 (Gals.) X	3	= 3.9 Gals.
I Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	Gals. Removed	Observations
1420	68.7	7.00	830.0	>1000	1.5	
1423	66.8	7.03	826.2	>1000	3.0	
1425	65.9	7.02	828.3	>1000	4.5	DTW - 9.68

Did well dewater? Yes No Gallons actually evacuated: 4.5

Sampling Date: 03/13/2013 Sampling Time: 1435 Depth to Water: 9.68

Sample I.D.: MW-5 Laboratory: (Lancaster) Other: _____

Analyzed for: TPH-G BTEX MTBE OXYS (Other) see CO2

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	(Post-purge):	1.19	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	(Post-purge):	-34	mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 130313-GR2	Station #: 9-1723
Sampler: SK	Date: 03/13/2013
Weather: mostly sunny	Ambient Air Temperature: 78.2 °F
Well I.D.: MW-6	Well Diameter: ② 3 4 6 8
Total Well Depth: 19.60	Depth to Water: 9.70
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.68	

Purge Method: Disposable Bailer Waterra Disposable Bailer
 Bailer Peristaltic Extraction Port
 Positive Air Displacement Extraction Pump Dedicated Tubing
 Electric Submersible Other _____ Other: _____

1.5 (Gals.) X 3 = 4.5 Gals.
 I Case Volume Specified Volumes Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
1418	67.2	6.6	1149	>1000	1.5	
1420	67.5	6.73	1073	>1000	3.0	
1422	67.5	6.78	994	>1000	4.5	

Did well dewater? Yes No Gallons actually evacuated: 4.5

Sampling Date: 03/13/2013 Sampling Time: 1425 Depth to Water: 9.78

Sample I.D.: MW-6 Laboratory: Lancaster Other _____

Analyzed for: TPH-G BTEX MTBE OXYS Other: see LOC

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	<u>Post-purge</u>	2.61	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	<u>Post-purge</u>	7	mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 130313-GRZ	Station #: 9-1723
Sampler: SIC	Date: 03/13/2013
Weather: mostly sunny	Ambient Air Temperature: 78.6
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8
Total Well Depth: 18.20	Depth to Water: 9.86
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): (YSI) HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.53	

Purge Method:

- Bailer
- Disposable Bailer
- Positive Air Displacement
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other _____

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: _____

1.3 (Gals.) X	3	= 3.9 Gals.
1 Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
1438	70.7	6.9	856	>1000	1.5	
1439	69.3	6.9	852	>1000	3.0	
1440	69.1	6.9	899	>1000	4.0	

Did well dewater? Yes No Gallons actually evacuated: 4.0

Sampling Date: 03/13/2013 Sampling Time: 1445 Depth to Water: 9.96

Sample I.D.: MW-8 Laboratory: (Lancaster) Other _____

Analyzed for: TPH-G BTEX MTBE OXYS (Other) see COC

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	(Post-purge)	1.61	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	(Post-purge)	-85	mV

CHEVRON WELL MONITORING DATA SHEET

Project #: 130313-GR2	Station #: 9-1723
Sampler: GR	Date: 03/13/2013
Weather: mostly sunny	Ambient Air Temperature: 76 °F
Well I.D.: MW-9	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 20.07	Depth to Water: 9.07
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): <u>YSI</u> HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.27	

Purge Method: Bailer Waterra Disposable Bailer Peristaltic Positive Air Displacement Extraction Pump Electric Submersible Other _____

Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____

7.2	(Gals.) X	3	=	21.6	Gals.
1 Case Volume		Specified Volumes		Calculated Volume	

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius ² * 0.163

Time	Temp (°F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	Gals. Removed	Observations
1317	64.0	7.02	942.6	121	7.5	
1319	62.8	7.01	866.1	43	15.0	
1321	62.7	7.02	865.1	33	22.5	DPW - 9.65

Did well dewater? Yes No Gallons actually evacuated: 22.5

Sampling Date: 03/13/2013 Sampling Time: 1330 Depth to Water: 9.65

Sample I.D.: MW-9 Laboratory: Lancaster Other _____

Analyzed for: TPH-G BTEX MTBE OXYS Other: see COC

Duplicate I.D.: Analyzed for: TPH-G BTEX MTBE OXYS Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	<u>Post-purge:</u>	1.38	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	<u>Post-purge:</u>	1.89	mV

Attachment B

Certified Laboratory Analysis Reports and Chain-of-Custody Documents

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

ChevronTexaco
L4310
6001 Bollinger Canyon Rd.
San Ramon CA 94583

March 25, 2013

Project: 91723

Submittal Date: 03/14/2013
Group Number: 1375501
PO Number: 0015118372
Release Number: MACLEOD
State of Sample Origin: CA

Client Sample Description

QA-T-130313 NA Water
MW-2-W-130313 NA Groundwater
MW-5-W-130313 NA Groundwater
MW-6-W-130313 NA Groundwater
MW-8-W-130313 NA Groundwater
MW-9-W-130313 NA Groundwater

Lancaster Labs (LLD)

6983306
6983307
6983308
6983309
6983310
6983311

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

ELECTRONIC Stantec
COPY TO
ELECTRONIC Stantec
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ELECTRONIC Stantec
COPY TO
ELECTRONIC Stantec
COPY TO

Attn: Laura Viesselman
Attn: Travis Flora
Attn: Erin O'Malley
Attn: Marisa Kaffenberger

Respectfully Submitted,



Jill M. Parker
Senior Specialist

(717) 556-7262

Sample Description: QA-T-130313 NA Water
Facility# 91723 BTST
9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983306
LLI Group # 1375501
Account # 10869

Project Name: 91723

Collected: 03/13/2013 13:00

ChevronTexaco

Submitted: 03/14/2013 09:15

L4310

Reported: 03/25/2013 14:45

6001 Bollinger Canyon Rd.
San Ramon CA 94583

SLOQA

CAT No.	Analysis Name	CAS Number	As Received Result	As Received 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	C6-C12-TPH-GRO	n.a.	N.D.	22	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

General Sample Comments

State of California Lab Certification No. 2501

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	GRO/BTEX/MTBE 8260 Water	SW-846 8260B	1	F130791AA	03/20/2013 10:51	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130791AA	03/20/2013 10:51	Anita M Dale	1

Sample Description: MW-2-W-130313 NA Groundwater
Facility# 91723 BTST
9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983307
LLI Group # 1375501
Account # 10869

Project Name: 91723

Collected: 03/13/2013 14:05 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	C6-C12-TPH-GRO	n.a.	110	22	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 Miscellaneous			SW-846 8015B modified	ug/l	
07105	Methane	74-82-8	680	30	10
Wet Chemistry			EPA 300.0	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	13,000	1,500	5
			SM 2320 B-1997	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	503,000	700	1
			SM 3500-Fe B modified-1997	ug/l	
08344	Ferrous Iron	n.a.	700	32	4
			SM 4500-S2 D-2000	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of California Lab Certification No. 2501

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	GRO/BTEX/MTBE 8260 Water	SW-846 8260B	1	F130791AA	03/20/2013 11:13	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130791AA	03/20/2013 11:13	Anita M Dale	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130800029A	03/22/2013 08:33	Nicholas R Rossi	10
00368	Nitrate Nitrogen	EPA 300.0	1	13073655901B	03/14/2013 20:09	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13073655901B	03/14/2013 20:09	Christopher D Meeks	5

Sample Description: MW-2-W-130313 NA Groundwater
 Facility# 91723 BTST
 9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983307
 LLI Group # 1375501
 Account # 10869

Project Name: 91723

Collected: 03/13/2013 14:05 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12150	Total Alkalinity	SM 2320 B-1997	1	13073002104A	03/15/2013 07:41	Clayton C Litchmore	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13075834401A	03/16/2013 07:30	Daniel S Smith	4
00230	Sulfide	SM 4500-S2 D-2000	1	13078023001A	03/19/2013 09:00	Michele L Graham	1

Sample Description: MW-5-W-130313 NA Groundwater
Facility# 91723 BTST
9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983308
LLI Group # 1375501
Account # 10869

Project Name: 91723

Collected: 03/13/2013 14:35 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	C6-C12-TPH-GRO	n.a.	200	22	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 Miscellaneous			SW-846 8015B modified	ug/l	
07105	Methane	74-82-8	170	3.0	1
Wet Chemistry			EPA 300.0	ug/l	
00368	Nitrate Nitrogen	14797-55-8	570	250	5
00228	Sulfate	14808-79-8	30,600	1,500	5
			SM 2320 B-1997	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	398,000	700	1
			SM 3500-Fe B modified-1997	ug/l	
08344	Ferrous Iron	n.a.	2,600	80	10
			SM 4500-S2 D-2000	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of California Lab Certification No. 2501

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	GRO/BTEX/MTBE 8260 Water	SW-846 8260B	1	F130791AA	03/20/2013 11:35	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130791AA	03/20/2013 11:35	Anita M Dale	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130800029A	03/21/2013 22:23	Nicholas R Rossi	1
00368	Nitrate Nitrogen	EPA 300.0	1	13073655901B	03/14/2013 23:07	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13073655901B	03/14/2013 23:07	Christopher D Meeks	5

Sample Description: MW-5-W-130313 NA Groundwater
 Facility# 91723 BTST
 9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983308
 LLI Group # 1375501
 Account # 10869

Project Name: 91723

Collected: 03/13/2013 14:35 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12150	Total Alkalinity	SM 2320 B-1997	1	13073002104A	03/15/2013 07:47	Clayton C Litchmore	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13075834401A	03/16/2013 07:30	Daniel S Smith	10
00230	Sulfide	SM 4500-S2 D-2000	1	13078023001A	03/19/2013 09:00	Michele L Graham	1

Sample Description: MW-6-W-130313 NA Groundwater
Facility# 91723 BTST
9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983309
LLI Group # 1375501
Account # 10869

Project Name: 91723

Collected: 03/13/2013 14:25 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO06

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	C6-C12-TPH-GRO	n.a.	N.D.	22	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 Miscellaneous			SW-846 8015B modified	ug/l	
07105	Methane	74-82-8	190	3.0	1
Wet Chemistry			EPA 300.0	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	4,400	1,500	5
			SM 2320 B-1997	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	473,000	700	1
			SM 3500-Fe B modified-1997	ug/l	
08344	Ferrous Iron	n.a.	6,200	160	20
			SM 4500-S2 D-2000	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of California Lab Certification No. 2501

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	GRO/BTEX/MTBE 8260 Water	SW-846 8260B	1	F130791AA	03/20/2013 11:57	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130791AA	03/20/2013 11:57	Anita M Dale	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130800029A	03/21/2013 22:41	Nicholas R Rossi	1
00368	Nitrate Nitrogen	EPA 300.0	1	13073655901B	03/14/2013 23:23	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13073655901B	03/14/2013 23:23	Christopher D Meeks	5

Sample Description: MW-6-W-130313 NA Groundwater
 Facility# 91723 BTST
 9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983309
 LLI Group # 1375501
 Account # 10869

Project Name: 91723

Collected: 03/13/2013 14:25 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12150	Total Alkalinity	SM 2320 B-1997	1	13073002104A	03/15/2013 07:53	Clayton C Litchmore	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13075834401A	03/16/2013 07:30	Daniel S Smith	20
00230	Sulfide	SM 4500-S2 D-2000	1	13078023001A	03/19/2013 09:00	Michele L Graham	1

Sample Description: MW-8-W-130313 NA Groundwater
Facility# 91723 BTST
9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983310
LLI Group # 1375501
Account # 10869

Project Name: 91723

Collected: 03/13/2013 14:45 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	31	0.5	1
10945	C6-C12-TPH-GRO	n.a.	1,400	22	1
10945	Ethylbenzene	100-41-4	7	0.5	1
10945	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10945	Toluene	108-88-3	1	0.5	1
10945	Xylene (Total)	1330-20-7	5	0.5	1
GC Miscellaneous			SW-846 8015B modified	ug/l	
07105	Methane	74-82-8	1,800	30	10
Wet Chemistry			EPA 300.0	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	9,700	1,500	5
			SM 2320 B-1997	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	450,000	700	1
			SM 3500-Fe B modified-1997	ug/l	
08344	Ferrous Iron	n.a.	32,300	1,600	200
			SM 4500-S2 D-2000	ug/l	
00230	Sulfide	18496-25-8	N.D.	540	10
Reporting limits were raised due to interference from the sample matrix.					

General Sample Comments

State of California Lab Certification No. 2501

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	GRO/BTEX/MTBE 8260 Water	SW-846 8260B	1	F130791AA	03/20/2013 12:19	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130791AA	03/20/2013 12:19	Anita M Dale	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130800029A	03/22/2013 08:51	Nicholas R Rossi	10
00368	Nitrate Nitrogen	EPA 300.0	1	13073655901B	03/15/2013 00:12	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13073655901B	03/15/2013 00:12	Christopher D Meeks	5

Sample Description: MW-8-W-130313 NA Groundwater
 Facility# 91723 BTST
 9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983310
 LLI Group # 1375501
 Account # 10869

Project Name: 91723

Collected: 03/13/2013 14:45 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12150	Total Alkalinity	SM 2320 B-1997	1	13073002104A	03/15/2013 07:58	Clayton C Litchmore	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13075834401A	03/16/2013 07:30	Daniel S Smith	200
00230	Sulfide	SM 4500-S2 D-2000	1	13078023001A	03/19/2013 09:00	Michele L Graham	10

Sample Description: MW-9-W-130313 NA Groundwater
Facility# 91723 BTST
9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983311
LLI Group # 1375501
Account # 10869

Project Name: 91723

Collected: 03/13/2013 13:30 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
10945	Benzene	71-43-2	N.D.	0.5	1
10945	C6-C12-TPH-GRO	n.a.	N.D.	22	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 Miscellaneous			SW-846 8015B modified	ug/l	
07105	Methane	74-82-8	N.D.	3.0	1
Wet Chemistry			EPA 300.0	ug/l	
00368	Nitrate Nitrogen	14797-55-8	2,400	250	5
00228	Sulfate	14808-79-8	33,400	1,500	5
			SM 2320 B-1997	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	414,000	700	1
			SM 3500-Fe B modified-1997	ug/l	
08344	Ferrous Iron	n.a.	N.D.	8.0	1
			SM 4500-S2 D-2000	ug/l	
00230	Sulfide	18496-25-8	N.D.	54	1

General Sample Comments

State of California Lab Certification No. 2501

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	GRO/BTEX/MTBE 8260 Water	SW-846 8260B	1	F130791AA	03/20/2013 12:40	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130791AA	03/20/2013 12:40	Anita M Dale	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130800029A	03/21/2013 23:16	Nicholas R Rossi	1
00368	Nitrate Nitrogen	EPA 300.0	1	13073655901B	03/15/2013 00:28	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13073655901B	03/15/2013 00:28	Christopher D Meeks	5

Sample Description: MW-9-W-130313 NA Groundwater
 Facility# 91723 BTST
 9757 San Leandro-Oakland T0600101789

LLI Sample # WW 6983311
 LLI Group # 1375501
 Account # 10869

Project Name: 91723

Collected: 03/13/2013 13:30 by GR

ChevronTexaco

L4310

Submitted: 03/14/2013 09:15

6001 Bollinger Canyon Rd.

Reported: 03/25/2013 14:45

San Ramon CA 94583

SLO09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
12150	Total Alkalinity	SM 2320 B-1997	1	13073002104A	03/15/2013 06:16	Clayton C Litchmore	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13075834401A	03/16/2013 07:30	Daniel S Smith	1
00230	Sulfide	SM 4500-S2 D-2000	1	13078023001A	03/19/2013 09:00	Michele L Graham	1

Quality Control Summary

Client Name: ChevronTexaco
Reported: 03/25/13 at 02:45 PM

Group Number: 1375501

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

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

Laboratory Compliance Quality Control

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F130791AA	Sample number(s): 6983306-6983311							
Benzene	N.D.	0.5	ug/l	92		77-121		
C6-C12-TPH-GRO	N.D.	22.	ug/l	109	112	80-160	2	30
Ethylbenzene	N.D.	0.5	ug/l	89		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		68-121		
Toluene	N.D.	0.5	ug/l	91		79-120		
Xylene (Total)	N.D.	0.5	ug/l	92		77-120		
Batch number: 130800029A	Sample number(s): 6983307-6983311							
Methane	N.D.	3.0	ug/l	103		80-120		
Batch number: 13073655901B	Sample number(s): 6983307-6983311							
Nitrate Nitrogen	N.D.	50.	ug/l	100		90-110		
Sulfate	N.D.	300.	ug/l	99		90-110		
Batch number: 13073002104A	Sample number(s): 6983307-6983311							
Total Alkalinity	1,100	700.	ug/l as CaCO3	103		90-110		
Batch number: 13075834401A	Sample number(s): 6983307-6983311							
Ferrous Iron	N.D.	10.	ug/l	100		93-105		
Batch number: 13078023001A	Sample number(s): 6983307-6983311							
Sulfide	N.D.	54.	ug/l	109		90-110		

Sample Matrix Quality Control

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

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

<u>Analysis Name</u>	<u>MS %REC</u>	<u>MSD %REC</u>	<u>MS/MSD Limits</u>	<u>RPD</u>	<u>RPD MAX</u>	<u>BKG Conc</u>	<u>DUP Conc</u>	<u>DUP RPD</u>	<u>Dup RPD Max</u>
Batch number: F130791AA	Sample number(s): 6983306-6983311 UNSPK: P983213								
Benzene	99	94	72-134	5	30				
Ethylbenzene	98	91	71-134	7	30				
Methyl Tertiary Butyl Ether	98	96	72-126	2	30				
Toluene	99	95	80-125	4	30				
Xylene (Total)	101	93	79-125	9	30				
Batch number: 130800029A	Sample number(s): 6983307-6983311 UNSPK: 6983307								
Methane	-177	-356	35-157	21*	20				

*- 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.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 03/25/13 at 02:45 PM

Group Number: 1375501

Sample Matrix Quality Control

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

<u>Analysis Name</u>	<u>MS</u> <u>%REC</u> (2)	<u>MSD</u> <u>%REC</u> (2)	<u>MS/MSD</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>BKG</u> <u>MAX</u> <u>Conc</u>	<u>DUP</u> <u>Conc</u>	<u>DUP</u> <u>RPD</u>	<u>Dup RPD</u> <u>Max</u>
Batch number: 13073655901B	Sample number(s): 6983307-6983311 UNSPK: 6983307 BKG: 6983307							
Nitrate Nitrogen	104		90-110		N.D.	N.D.	0 (1)	20
Sulfate	96		90-110		13,000	13,000	0 (1)	20
Batch number: 13073002104A	Sample number(s): 6983307-6983311 UNSPK: P981885 BKG: P981885							
Total Alkalinity	69*		73-121		179,000	180,000	0	5
Batch number: 13075834401A	Sample number(s): 6983307-6983311 UNSPK: P981787 BKG: P981787							
Ferrous Iron	98	87	81-112	7*	6	4,600	4,700	1 (1)
Batch number: 13078023001A	Sample number(s): 6983307-6983311 UNSPK: P984967 BKG: P984967							
Sulfide	91	92	43-137	1	16	N.D.	N.D.	0 (1)

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: UST VOCs + GRO by 8260B-Water
Batch number: F130791AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6983306	101	101	97	92
6983307	99	99	99	95
6983308	99	101	99	94
6983309	101	100	99	95
6983310	97	97	99	96
6983311	100	100	98	93
Blank	100	100	97	93
LCS	98	102	98	95
LCSD	97	98	98	96
MS	99	102	98	94
MSD	99	103	98	95
Limits:	80-116	77-113	80-113	78-113

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 130800029A
Propene

6983307	97
6983308	79
6983309	76
6983310	93
6983311	68
Blank	89
LCS	91

*- 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.

Quality Control Summary

Client Name: ChevronTexaco
Reported: 03/25/13 at 02:45 PM

Group Number: 1375501

Surrogate Quality Control

MS	79
MSD	69

Limits: 42-131

*- 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.

CHAIN OF CUSTODY FORM

Chevron Environmental Management Company ■ 6111 Bollinger Canyon Rd. ■ San Ramon, CA 94583 COC of

Chevron Site Number: 91723
 Chevron Site Global ID: T0600101789
 Chevron Site Address: 9757 San Leandro St., Oakland, CA
 Chevron PM: CARRYL MACLEOD
 Chevron PM Phone No.: (925)790-6506

Retail and Terminal Business Unit (RTBU) Job
 Construction/Retail Job

Chevron Consultant: STANTEC
 Address: 15575 Los Gatos Blvd., Bldg. C Los Gatos, CA
 CA Consultant Contact: Travis Flora
 Consultant Phone No. 408-356-6124
 Consultant Project No. 130313-GR2
 Sampling Company: Blaine Tech Services
 Sampled By (Print): Gregory Roberts
 Sampler Signature: *[Signature]*

ANALYSES REQUIRED

Preservation Codes
 H = HCL T = Thiosulfate
 N = HNO₃ B = NaOH
 S = H₂SO₄ O = Other
 Oct* 1086A
 Cap* 1375501
 Sample# 6983306-11

Charge Code: NWRTB 00SITE NUMBER-0-WBS
(WBS ELEMENTS:
 SITE ASSESSMENT: A1L REMEDIATION IMPLEMENTATION: R5L
 SITE MONITORING: OML OPERATION MAINTENANCE & MONITORING: M1L

THIS IS A LEGAL DOCUMENT. ALL FIELDS MUST BE FILLED OUT CORRECTLY AND COMPLETELY.

Lancaster Laboratories
 Lancaster, PA
 Lab Contact: Jill Parker
 2425 New Holland Pike, Lancaster, PA 17601
 Phone No: (717)656-2300

Other Lab
 Temp. Blank Check Time Temp.

EPA 8260B/GC/MS	<input checked="" type="checkbox"/>	EPA 8015B	<input checked="" type="checkbox"/>	EPA 8021B	<input type="checkbox"/>	EPA 6010 Ca, Fe, K, Mg, Mn, Na	<input type="checkbox"/>	EPA 6010/7000 TITLE 22 METALS	<input type="checkbox"/>	EPA 150.1 PH	<input checked="" type="checkbox"/>	SM2510B SPECIFIC CONDUCTIVITY	<input type="checkbox"/>	EPA 418.1 TRPH	<input type="checkbox"/>	EPA 413.1 OIL & GREASE	<input type="checkbox"/>
TPH/LG	<input checked="" type="checkbox"/>	BIEX	<input checked="" type="checkbox"/>	MTBE	<input checked="" type="checkbox"/>	OXYGENATES	<input type="checkbox"/>	HVOC	<input type="checkbox"/>	ORO	<input type="checkbox"/>	HC SCREEN	<input type="checkbox"/>	EPA 310.1 ALKALINITY	<input checked="" type="checkbox"/>		

Handwritten notes: 300.0 (Su fide + nitrate), SM20 4500 S2D (sulfide), SM20 3500B (Ferrous Iron)

SAMPLE ID				Sample Time	# of Containers	Container Type	ANALYSES REQUIRED										Notes/Comments
Field Point Name	Matrix	Top Depth	Date (yymmdd)				EPA 8260B/GC/MS	EPA 8015B	EPA 8021B	EPA 6010 Ca, Fe, K, Mg, Mn, Na	EPA 6010/7000 TITLE 22 METALS	EPA 150.1 PH	SM2510B SPECIFIC CONDUCTIVITY	EPA 418.1 TRPH	EPA 413.1 OIL & GREASE		
QA	T	-	130313	1300	2	Voa	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MW-2	WG	9.56	↓	1405	13	mixed	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MW-5	WG	9.68		1435	13		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MW-6	WG	9.78		1425	13		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MW-8	WG	9.96		1445	13		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MW-9	WG	9.65		1330	13		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Relinquished By: *[Signature]* Company: BTS Date/Time: 3/13/13 @ 1555
 Relinquished To: A. Bulger LLI Date/Time: 13MAR13 1655

Relinquished By: A. Bulger LLI Date/Time: 13MAR13 1635
 Relinquished To: FEDAX Date/Time: 3.14.13

Turnaround Time: Standard 24 Hours 48 hours 72 Hours Other

Sample Integrity: (Check by lab on arrival)
 Intact: On Ice: Temp: 0.9-3.1
 COC #

Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	BMQL	Below Minimum Quantitation Level
N.D.	none detected	MPN	Most Probable Number
TNTC	Too Numerous To Count	CP Units	cobalt-chloroplatinate units
IU	International Units	NTU	nephelometric turbidity units
umhos/cm	micromhos/cm	ng	nanogram(s)
C	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 - The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
J	estimated value – The result is \geq the Method Detection Limit (MDL) and $<$ the Limit of Quantitation (LOQ).		
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 of gas 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.		

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers		Inorganic Qualifiers	
A	TIC is a possible aldol-condensation product	B	Value is $<$ CRDL, but \geq IDL
B	Analyte was also detected in the blank	E	Estimated due to interference
C	Pesticide result confirmed by GC/MS	M	Duplicate injection precision not met
D	Compound quantitated on a diluted sample	N	Spike sample not within control limits
E	Concentration exceeds the calibration range of the instrument	S	Method of standard additions (MSA) used for calculation
N	Presumptive evidence of a compound (TICs only)	U	Compound was not detected
P	Concentration difference between primary and confirmation columns $>$ 25%	W	Post digestion spike out of control limits
U	Compound was not detected	*	Duplicate analysis not within control limits
X,Y,Z	Defined in case narrative	+	Correlation coefficient for MSA $<$ 0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

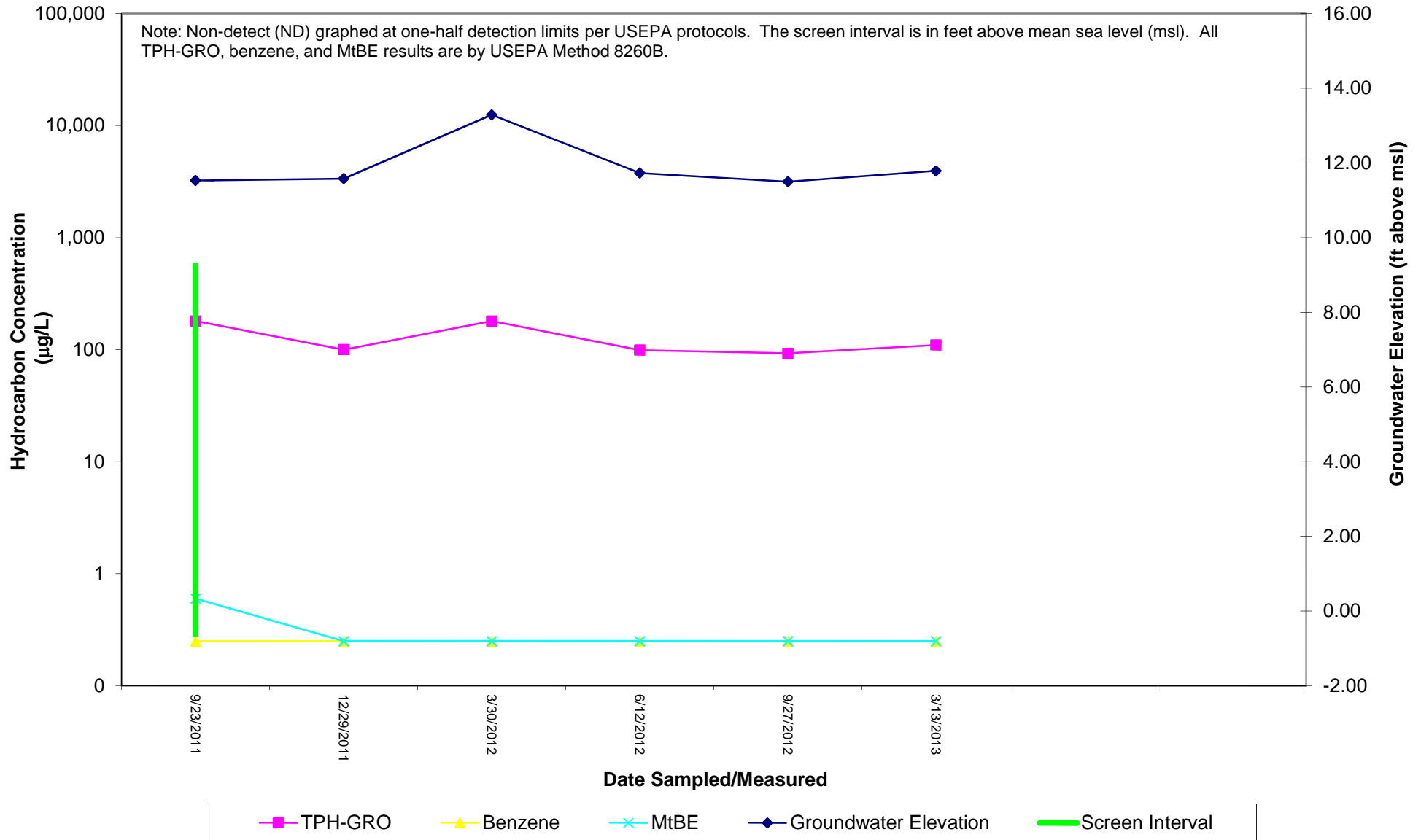
Times are local to the area of activity. Parameters listed in the 40 CFR part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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

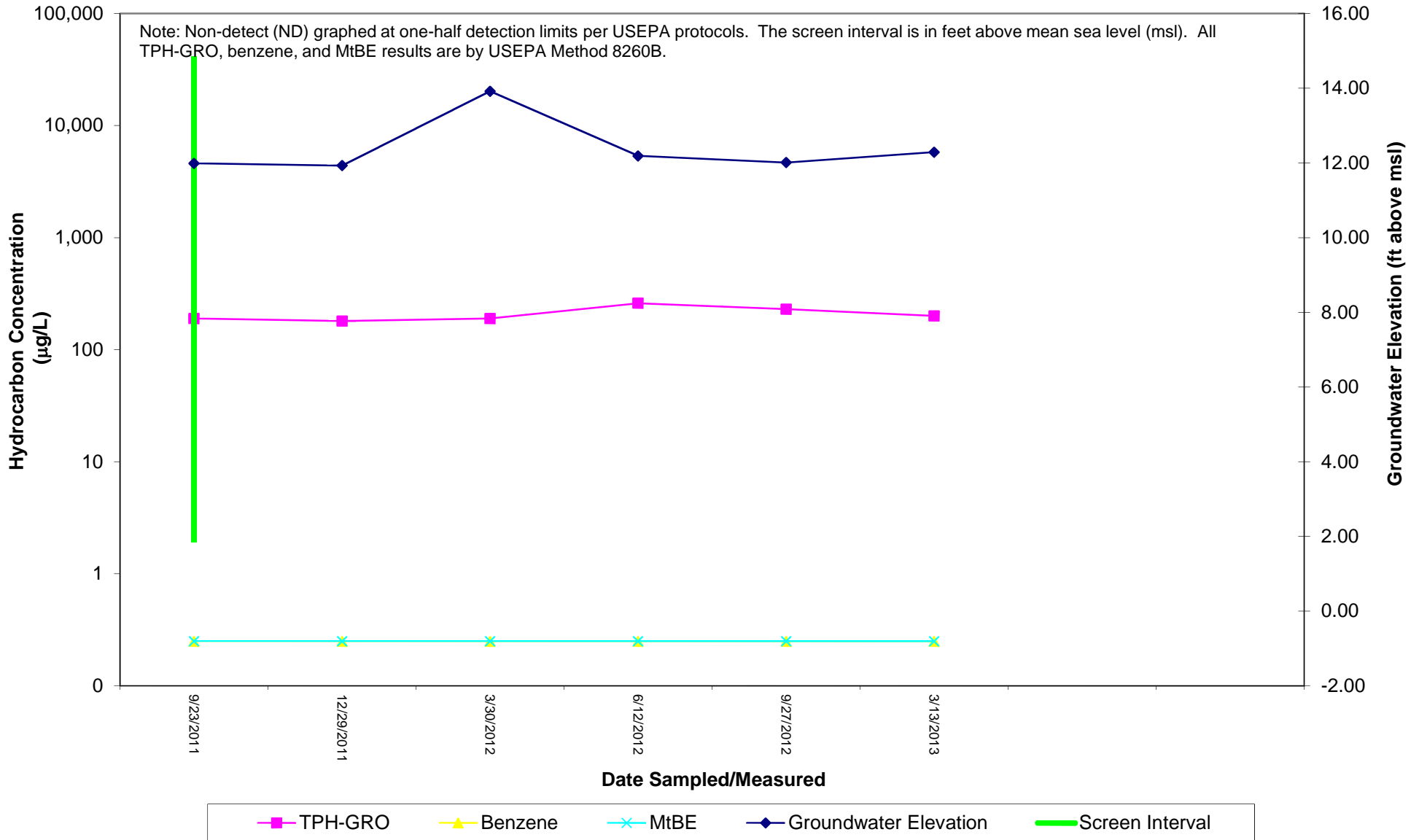
Attachment C

Hydrographs

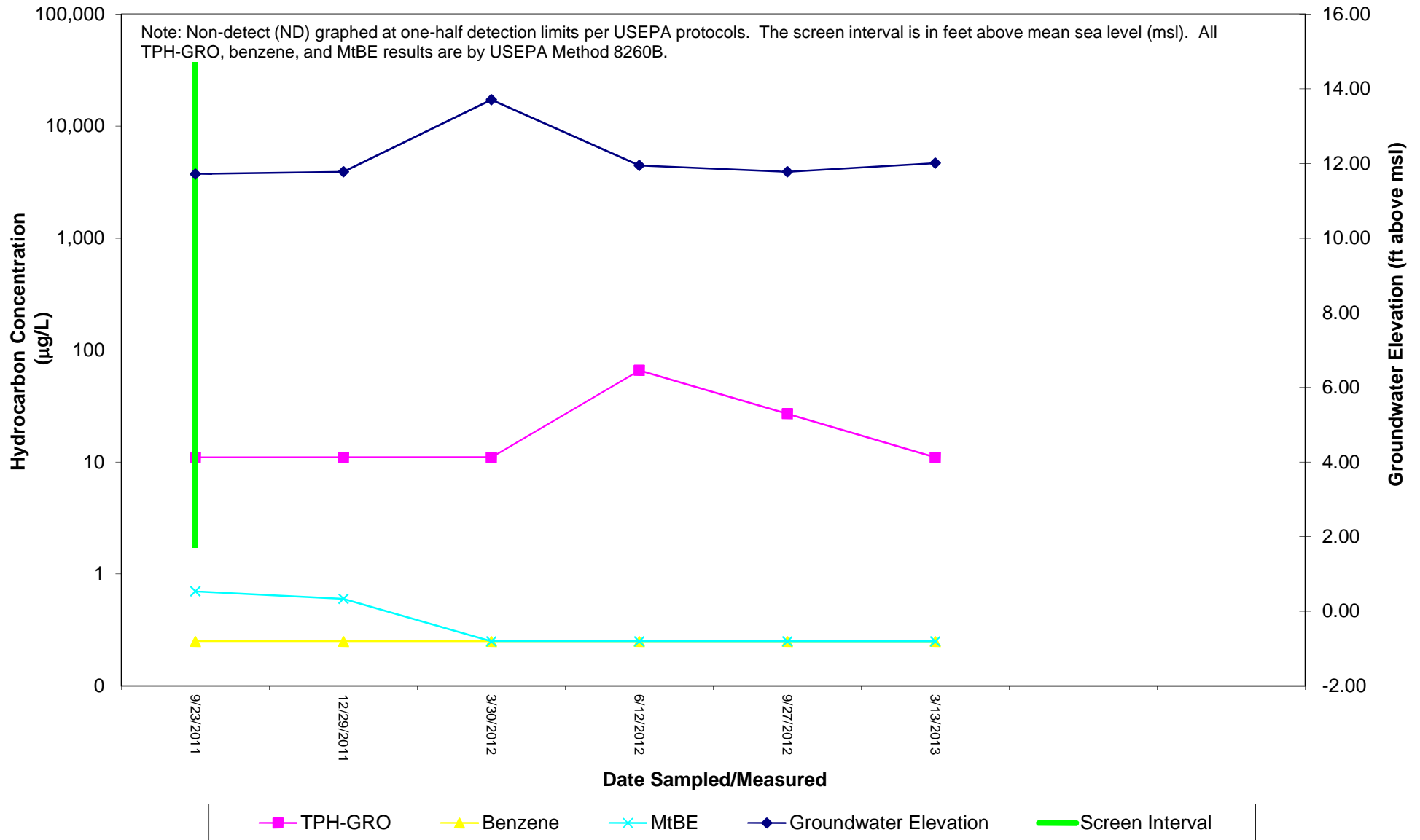
MW-2 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
 Former Chevron-branded Service Station 91723
 9757 San Leandro Street
 Oakland, California



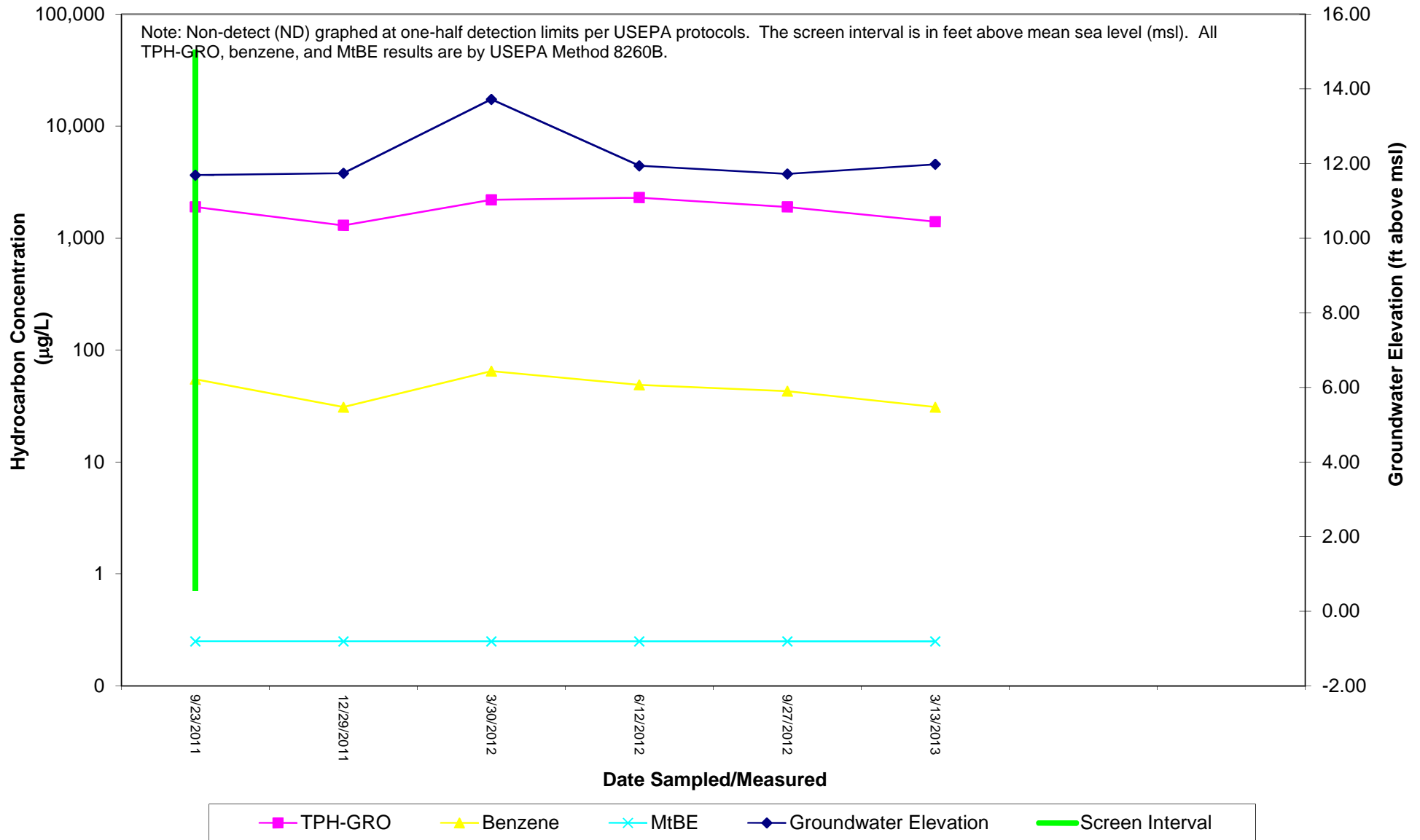
MW-5 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
 Former Chevron-branded Service Station 91723
 9757 San Leandro Street
 Oakland, California



MW-6 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
 Former Chevron-branded Service Station 91723
 9757 San Leandro Street
 Oakland, California



MW-8 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
 Former Chevron-branded Service Station 91723
 9757 San Leandro Street
 Oakland, California



MW-9 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
 Former Chevron-branded Service Station 91723
 9757 San Leandro Street
 Oakland, California

