Fourth Quarter 2012 Semi-Annual Groundwater Monitoring Report

Former Chevron-branded Service Station 92029
890 West MacArthur Boulevard
Oakland, California
Case #: RO0002438

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By Alameda County Environmental Health at 4:59 pm, Jan 17, 2013

Submitted to:
Mr. Mark Detterman
Alameda County Environmental Health
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

January 14, 2013

Carryl MacLeod
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6506
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January 14, 2013

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 *Fourth Quarter 2012 Semi-Annual Groundwater Monitoring Report* for former Chevron-branded service station 92029, located at 890 West MacArthur Boulevard in Oakland, California (**Case #:** RO0002438). This report was prepared by Stantec Consulting Services Inc. (Stantec), upon whose assistance and advice I have relied. I declare under penalty of perjury that the information and/or recommendations contained in the attached report are true and correct, to the best of my knowledge.

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

Sincerely,

Carryl MacLeod

Carryl MacLeod
Project Manager

Stantec Consulting Services Inc.
15575 Los Gatos Boulevard, Building C
Los Gatos, CA 95032
Tel: (408) 356-6124
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January 14, 2013

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

RE: **Fourth Quarter 2012 Semi-Annual Groundwater Monitoring Report**
Former Chevron-branded Service Station 92029
890 West MacArthur Boulevard
Oakland, California
Case #: RO0002438

Dear Mr. Detterman:

On behalf of Chevron Environmental Management Company (Chevron), Stantec Consulting Services Inc. (Stantec) is pleased to submit the *Fourth Quarter 2012 Semi-Annual Groundwater Monitoring Report* for former Chevron-branded service station 92029, which was located at 890 West MacArthur Boulevard, Oakland, Alameda County, California (the Site - shown on ***Figure 1***). This report is presented in three sections: Site Background, Fourth Quarter 2012 Groundwater Monitoring and Sampling Program, and Conclusions and Recommendations.

SITE BACKGROUND

The Site is a former Chevron-branded service station located on the northeast corner at the intersection of West MacArthur Boulevard and Market Street in Oakland, California. The Site is currently a fenced vacant lot. A former Chevron-branded service station operated at the Site from approximately 1956 to 2004. Prior to 1970, Site features consisted of two 5,000-gallon and one 3,000-gallon gasoline underground storage tanks (USTs) located in the eastern portion of the Site, three fuel dispenser islands (one located in the northwestern portion of the Site and two located in the central portion of the Site), associated product piping, a station building with two hydraulic hoists, and a waste oil UST (unknown size) located in the northern portion of the Site. The product piping was replaced in 1970, and the 3,000-gallon UST was replaced with a 10,000-gallon UST sometime before 1978. In 1982, the two 5,000-gallon and one 10,000-gallon USTs were replaced with three 10,000-gallon fiberglass USTs. In 1984, the service station building was demolished, the hydraulic hoists were removed, and a kiosk was installed near the center of the Site. In addition, the three fuel dispensers were removed from the Site and replaced with five fuel dispensers (two located in the north-central portion of the Site and three located in the south-central portion of the Site). The fuel dispensers were replaced and the USTs were upgraded in 1997. The waste oil UST was removed from the Site sometime between 1984 and 1997. In 2005, the service station was closed and all Site structures, including the three 10,000-gallon fiberglass USTs and fuel dispensers, were removed. According to the *Well Installation Report*, prepared by Conestoga-Rovers & Associates (CRA) and dated November 18, 2008, extensive over-excavation was performed at this time and

approximately 5,135 tons of impacted soil and 25,500 gallons of groundwater were removed and disposed off Site.

Land use near the Site consists of a mixture of commercial and residential properties. The Site is bounded to the north by a residential area, on the west by Market Street, on the south by West MacArthur Boulevard, and to the east by a small hotel.

FOURTH QUARTER 2012 GROUNDWATER MONITORING AND SAMPLING PROGRAM

Gettler-Ryan, Inc. (G-R) performed the Fourth Quarter 2012 groundwater monitoring and sampling event on November 14, 2012. G-R's standard operating procedures (SOPs) and field data sheets are included in ***Attachment A***. G-R gauged depth-to-groundwater in four Site wells (MW-5, MW-6, MW-7, and MW-8) prior to collecting groundwater samples for laboratory analysis. All four wells, which are located down-gradient of the Site, were sampled this quarter.

Investigation-derived waste (IDW) generated during the Fourth Quarter 2012 groundwater monitoring and sampling event was transported by Clean Harbors Environmental Services to Evergreen Oil in Newark, 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 four Site wells were screened across the prevailing water table. Current and historical groundwater elevation data are presented in ***Table 2***. A groundwater elevation contour map (based on Fourth Quarter 2012 data) is shown on ***Figure 2***. The direction of groundwater flow at the time of sampling was generally towards the southwest at an approximate hydraulic gradient ranging from 0.01 to 0.03 feet per foot (ft/ft). This is generally consistent with the historical direction of groundwater flow, as shown by the Rose Diagram on ***Figure 3*** illustrating the direction of groundwater flow from Second Quarter 2011 to the present.

Schedule of Laboratory Analysis

Groundwater samples were collected and analyzed for total petroleum hydrocarbons as gasoline range organics (TPH-GRO) using United States Environmental Protection Agency (US EPA) Method 8015B modified (SW-846). Benzene, toluene, ethylbenzene, and total xylenes (BTEX compounds) and fuel oxygenates, including methyl *tertiary*-butyl ether (MtBE), di-isopropyl ether (DIPE), ethyl *tertiary*-butyl ether (EtBE), *tertiary*-amyl methyl ether (TAME), and *tertiary*-butyl alcohol (TBA), were analyzed using US EPA Method 8260B (SW-846).

Groundwater Analytical Results

During Fourth Quarter 2012, groundwater samples were collected from four Site wells (MW-5, MW-6, MW-7, and MW-8). Current and historical groundwater analytical results are included in ***Table 2*** and ***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 isoconcentration map is shown on ***Figure 6***. A MtBE isoconcentration map is shown on ***Figure 7***.

Certified laboratory analysis reports and chain-of-custody documents are presented as ***Attachment B***. Hydrographs based on current and historical groundwater elevations and analytical results are included in ***Attachment C***. A summary of Fourth Quarter 2012 groundwater analytical results follows:

- **TPH-GRO** was detected in three Site wells this quarter, at concentrations of 2,100 micrograms per liter (µg/L; well MW-5), 5,000 µg/L (well MW-7), and 6,400 µg/L (well MW-6), which are within historical limits for each respective well.

- **Benzene** was detected in two Site wells this quarter, at concentrations of 3 µg/L (well MW-5) and 290 µg/L (well MW-6), which are within historical limits for each respective well.

- **Toluene** was detected in two Site wells this quarter, at concentrations of 2 µg/L (well MW-5) and 9 µg/L (well MW-6), which are within historical limits for each respective well.

- **Ethylbenzene** was detected in three Site wells this quarter, at concentrations of 3 µg/L (well MW-5), 6 µg/L (well MW-7), and 180 µg/L (well MW-6), which are within historical limits for each respective well.

- **Total Xylenes** were detected in two Site wells this quarter, at concentrations of 0.6 µg/L (well MW-5) and 6 µg/L (well MW-6), which are within historical limits for each respective well.

- **MtBE** was detected in two Site wells this quarter, at concentrations of 4 µg/L (well MW-7) and 36 µg/L (well MW-6). Concentrations are within historical limits for each respective well with the exception of well MW-7, which is equal to the lowest detected concentration for this well.

- **DIPE** was not detected above the laboratory reporting limits (LRLs; 0.5 µg/L and 3 µg/L) in any Site well sampled this quarter.

- **EtBE** was not detected above the LRLs (0.5 µg/L and 3 µg/L) in any Site well sampled this quarter.

- **TAME** was detected in one Site well this quarter, at a concentration of 0.7 µg/L (well MW-6), which is within historical limits for this well.

- **TBA** was detected in one Site well this quarter, at a concentration of 16 µg/L (well MW-6), which is within historical limits for this well.

CONCLUSIONS AND RECOMMENDATIONS

Concentrations were conservatively compared to 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, and concentrations of TPH-GRO, benzene, ethylbenzene, MtBE, and TBA were observed above ESLs in select wells as follows:

- TPH-GRO concentrations exceed the ESL of 100 µg/L in wells MW-5, MW-6, and MW-7;
- Benzene concentrations exceed the ESL of 1 µg/L in wells MW-5 and MW-6;
- The ethylbenzene concentration exceeds the ESL of 30 µg/L in well MW-6;
- The MtBE concentration exceeds the ESL of 5 µg/L in well MW-6; and
- The TBA concentration exceeds the ESL of 12 µg/L in well MW-6.

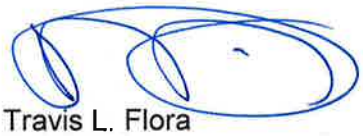
Maximum concentrations of petroleum hydrocarbons were observed in well MW-6, located down-gradient of former service station features (fuel dispensers and gasoline USTs) located in the southern and eastern portions of the Site. TPH-GRO and benzene were also detected above ESLs in well MW-5, located down-gradient of former service station features (fuel dispensers, hydraulic hoists, and waste oil UST) located in the northern portion of the Site, and TPH-GRO was also detected above the ESL in well MW-7, located down-gradient of well MW-6. The dissolved-phase petroleum hydrocarbon plume does not appear to extend to the furthest down-gradient well MW-8, which is approximately 190 feet southwest of the Site. In addition, a previous off-site subsurface investigation conducted by CRA in January 2011 indicated that the plume does not extend down-gradient of well MW-7. This investigation is documented in the *Additional Investigation Report*, dated March 31, 2011.

Current and historical groundwater quality data indicate that the petroleum hydrocarbon plume is generally stable or decreasing in size and concentration. In well MW-7, the MtBE concentration during Fourth Quarter 2012 was equal to the historical low. All other concentrations were within historical limits at all wells sampled.

Based on concentrations of TPH-GRO, benzene, ethylbenzene, MtBE, and TBA exceeding ESLs, Stantec recommends continuation of the semi-annual groundwater monitoring and sampling program. Reports will continue to be submitted to Alameda County Environmental Health (ACEH) within 60 days following groundwater monitoring and sampling events.

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 – Fourth Quarter 2012
Table 2 – Groundwater Monitoring Data and Analytical Results
Table 3 – Groundwater Analytical Results – Oxygenate Compounds

Figure 1 – Site Location Map
Figure 2 – Groundwater Elevation Contour Map – Fourth Quarter 2012
Figure 3 – Rose Diagram – Fourth Quarter 2012
Figure 4 – Site Plan Showing Groundwater Concentrations – Fourth Quarter 2012
Figure 5 – TPH-GRO Isoconcentration Map – Fourth Quarter 2012
Figure 6 – Benzene Isoconcentration Map – Fourth Quarter 2012
Figure 7 – MtBE Isoconcentration Map – Fourth Quarter 2012

Attachment A – Gettler-Ryan, Inc. Field Data Sheets and Standard Operating Procedures – Fourth Quarter 2012
Attachment B – Certified Laboratory Analysis Reports and Chain-of-Custody Documents
Attachment C – Hydrographs

cc:

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

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:

Erin O'Malley

Erin O'Malley
Engineering Project Specialist

Reviewed by:

Marisa Kaffenberger

Marisa Kaffenberger
Associate 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:

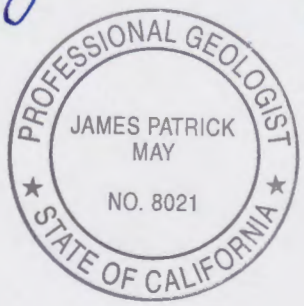
Licensed Approver:

Name: James May, P.G.

Signature: James P. May

Date: 14 JAN 2013

Stamp:



Tables

Table 1
Well Details / Screen Interval Assessment
Fourth Quarter 2012
Former Chevron-Branded Service Station 92029
890 West MacArthur Boulevard, 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-5	7/24/2008	Monitoring	2	49.39	25.00	25.01	8.89	5-25	Depth-to-groundwater within screen interval.
MW-6	7/24/2008	Monitoring	2	49.07	25.00	24.96	9.83	5-25	Depth-to-groundwater within screen interval.
MW-7	7/24/2008	Monitoring	2	48.74	25.00	24.90	9.79	5-25	Depth-to-groundwater within screen interval.
MW-8	7/24/2008	Monitoring	2	47.61	25.00	24.99	11.73	5-25	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 November 14, 2012.

Table 2

Groundwater Monitoring Data and Analytical Results

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

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-5									
08/22/08[1]	49.39	9.97	39.42	--	--	--	--	--	--
08/27/08[3]	49.39	10.03	39.36	54	0.5	0.8	<0.5	0.7	10
11/21/08[3]	49.39	8.42	40.97	6,000	93	6	37	6	8
02/13/09[3]	49.39	7.11	42.28	5,100	31	5	20	3	6
05/08/09[3]	49.39	7.21	42.18	3,600	18	4	14	2	2
08/07/09[3]	49.39	9.60	39.79	520	0.7	<0.5	<0.5	<0.5	2
11/05/09[3]	49.39	7.08	42.31	7,400	16	5	18	4	0.9
05/06/10[3]	49.39	6.08	43.31	3,500	4	2	3	0.9	0.9
11/03/10[5]	49.39	9.05	40.34	5,000	13	4	8	3	0.9
05/10/11[5]	49.39	7.26	42.13	3,200	6	4	7	0.9	<0.5
11/10/11[5]	49.39	7.60	41.79	2,600	6	3	10	2	<0.5
05/11/12[5]	49.39	6.48	42.91	3,300	<3	<3	<3	<3	<3
11/14/12[3]	**49.39**	**8.89**	**40.50**	**2,100**	**3**	**2**	**3**	**0.6**	**<0.5**
MW-6									
08/22/08[1]	49.07	8.98	40.09	--	--	--	--	--	--
08/27/08[3]	49.07	8.98	40.09	6,000	990	4	350	530	440
11/21/08[3]	49.07	8.12	40.95	14,000	1,000	15	1,300	550	300
02/13/09[3]	49.07	5.84	43.23	9,700	630	4	510	36	180
05/08/09[3]	49.07	5.77	43.30	7,600	240	4	470	67	38
08/07/09[3]	49.07	8.49	40.58	14,000	1,500	12	1,400	180	330
11/05/09[3]	49.07	6.72	42.35	22,000	870	8	1,300	130	160
05/06/10[3]	49.07	4.89	44.18	5,200	110	2	160	23	9
11/03/10[5]	49.07	8.05	41.02	13,000	1,100	8	670	58	160
05/10/11[4,5]	49.07	8.56	40.51	<50	0.6	<0.5	<0.5	<0.5	<0.5
11/10/11[5]	49.07	7.59	41.48	5,700	260	7	180	13	37
05/11/12[5]	49.07	5.68	43.39	1,200	36	0.6	0.8	<0.5	1
11/14/12[3]	**49.07**	**9.83**	**39.24**	**6,400**	**290**	**9**	**180**	**6**	**36**
MW-7									
08/22/08[1]	48.74	10.20	38.54	--	--	--	--	--	--
08/27/08[3]	48.74	10.19	38.55	<50	<0.5	0.6	<0.5	0.7	6
11/21/08[3]	48.74	9.51	39.23	1,100	80	<0.5	65	0.7	6
02/13/09[3]	48.74	7.95	40.79	630	30	<0.5	38	0.9	7
05/08/09[3]	48.74	8.04	40.70	1,200	83	<0.5	190	2	8
08/07/09[3]	48.74	9.88	38.86	8,900	240	0.7	770	5	5
11/05/09[3]	48.74	9.03	39.71	12,000	630	<1	1,300	420	5

Table 2

Groundwater Monitoring Data and Analytical Results

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

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-7 (cont)									
05/06/10[3]	48.74	7.88	40.86	4,000	190	<0.5	270	7	6
11/03/10[5]	48.74	9.48	39.26	5,700	150	0.7	45	2	4
05/10/11[5]	48.74	8.82	39.92	3,500	180	<0.5	150	2	5
11/10/11[5]	48.74	9.68	39.06	1,500	2	<0.5	2	<0.5	5
05/11/12[5]	48.74	8.37	40.37	9,200	440	<5	1,000	33	<5
11/14/12[3]	**48.74**	**9.79**	**38.95**	**5,000**	**<3**	**<3**	**6**	**<3**	**4**
MW-8									
08/22/08[1]	47.61	12.41	35.20	--	--	--	--	--	--
08/27/08[3]	47.61	12.42	35.19	<50	<0.5	0.7	<0.5	0.6	<0.5
11/21/08[3]	47.61	11.42	36.19	<50	<0.5	<0.5	<0.5	<0.5	<0.5
02/13/09[3]	47.61	8.87	38.74	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/08/09[3]	47.61	10.79	36.82	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/07/09[3]	47.61	12.33	35.28	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/05/09[3]	47.61	11.23	36.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/06/10[3]	47.61	10.28	37.33	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/03/10[5]	47.61	11.37	36.24	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/10/11[5]	47.61	11.55	36.06	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/10/11[5]	47.61	11.49	36.12	<50	<0.5	<0.5	<0.5	<0.5	<0.5
05/11/12[5]	47.61	10.89	36.72	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/14/12[3]	**47.61**	**11.73**	**35.88**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-1									
03/12/02[1]	50.71	6.50	44.21	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[2]
06/07/02	50.71	8.69	42.02	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[2]
09/13/02	50.71	9.28	41.43	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[2]
12/13/02	50.71	8.48	42.23	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[2]
03/01/03	50.71	7.34	43.37	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5[2]
06/27/03[3]	50.71	9.29	41.42	<50	<0.5	0.6	<0.5	<0.5	<0.5
09/30/03[3]	50.71	10.17	40.54	<50	<0.5	0.6	<0.5	<0.5	<0.5
12/03/03[3]	50.71	7.82	42.89	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/04[3]	50.71	6.57	44.14	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/30/04[3]	50.71	9.78	40.93	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04[3]	50.71	9.91	40.80	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/29/04[3]	50.71	2.90	47.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/23/05[3]	50.71	2.90	47.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/05[3]	50.71	8.59	42.12	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/05[3]	50.71	9.38	41.33	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/02/05	50.71	8.44	42.27	--	--	--	--	--	--

Table 2

Groundwater Monitoring Data and Analytical Results

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

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-1 (cont)									
03/20/06	50.71	3.05	47.66	--	--	--	--	--	--
06/01/06	50.71	6.77	43.94	--	--	--	--	--	--
09/11/06	50.71	9.18	41.53	--	--	--	--	--	--
DESTROYED									
MW-2									
03/12/02[1]	52.57	6.09	46.48	<50	<0.50	<0.50	<0.50	<1.5	<2.5/3[2]
06/07/02	52.57	8.65	43.92	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[2]
09/13/02	52.57	9.58	42.99	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[2]
12/13/02	52.57	8.50	44.07	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[2]
03/01/03	52.57	7.00	45.57	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5[2]
06/27/03[3]	52.57	9.59	42.98	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/03[3]	52.57	10.64	41.93	<50	<0.5	<0.5	<0.5	<0.5	0.7
12/03/03[3]	52.57	7.54	45.03	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/04[3]	52.57	6.05	46.52	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/30/04[3]	52.57	10.15	42.42	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04[3]	52.57	10.14	42.43	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/29/04[3]	52.57	2.29	50.28	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/23/05[3]	52.57	2.44	50.13	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/05[3]	52.57	8.99	43.58	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/05[3]	52.57	10.17	42.40	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/02/05	52.57	8.99	43.58	--	--	--	--	--	--
03/20/06	52.57	2.70	49.87	--	--	--	--	--	--
06/01/06	51.57	6.51	45.06	--	--	--	--	--	--
09/11/06	51.57	10.06	41.51	--	--	--	--	--	--
DESTROYED									
MW-3									
03/12/02[1]	50.31	6.50	43.81	12,000	600	8.5	1,100	370	700/650[2]
06/07/02	50.31	7.74	42.57	14,000	630	8.8	1,200	160	520/490[2]
09/13/02	50.31	9.73	40.58	3,000	270	3.2	200	11	600/640[2]
12/13/02	50.31	8.60	41.71	24,000	1,100	14	2,400	220	650/540[2]
03/01/03	50.31	6.75	43.56	16,000	500	9.0	1,200	130	460/330[2]
06/27/03[3]	50.31	9.25	41.06	9,500	390	6	450	30	470
09/30/03[3]	50.31	10.31	40.00	2,000	110	1	100	3	710
12/03/03[3]	50.31	8.18	42.13	19,000	970	8	2,100	85	420
03/10/04[3]	50.31	6.10	44.21	15,000	550	6	960	95	220

Table 2

Groundwater Monitoring Data and Analytical Results

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

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-3 (cont)									
06/30/04[3]	50.31	9.80	40.51	3,200	150	1	100	3	660
09/30/04[3]	50.31	10.18	40.13	1,900	66	0.8	84	4	690
12/29/04[3]	50.31	4.58	45.73	16,000	470	7	820	47	170
03/23/05[3]	50.31	5.07	45.24	18,000	380	6	960	58	140
06/22/05[3]	50.31	8.12	42.19	16,000	700	6	950	62	300
09/02/05[3]	50.31	9.41	40.90	8,400	380	4	510	41	440
12/02/05[3]	50.31	7.97	42.34	16,000	490	6	1,200	32	170
03/20/06[3]	50.31	5.32	44.99	4,200	79	0.8	2	10	34
06/01/06[3]	50.31	7.07	43.24	5,400	67	1	26	3	28
09/11/06[3]	50.31	9.07	41.24	14,000	270	5	240	38	97
DESTROYED									
MW-4									
03/12/02[1]	49.93	5.34	44.59	9,700	360	5.3	1,100	150	170/170[2]
06/07/02	49.93	8.52	41.41	7,300	170	2.7	280	21	200/120[2]
09/13/02	49.93	9.86	40.07	5,800	92	4.5	80	14	190/160[2]
12/13/02	49.93	9.42	40.51	10,000	250	2.2	330	19	170/200[2]
03/01/03	49.93	7.33	42.60	12,000	300	4.6	900	110	160/100[2]
06/27/03[3]	49.93	9.62	40.31	7,500	110	2	200	58	130
09/30/03[3]	49.93	11.13	38.80	3,600	18	<1	16	7	520
12/03/03[3]	49.93	7.80	42.13	16,000	1,000	6	720	52	73
03/10/04[3]	49.93	6.69	43.24	2,200	230	3	610	71	55
06/30/04[3]	49.93	10.33	39.60	7,700	59	<1	78	17	110
09/30/04[3]	49.93	10.75	39.18	4,800	100	1	33	10	400
12/29/04[3]	49.93	3.34	46.59	13,000	250	3	480	27	42
03/23/05[3]	49.93	4.24	45.69	12,000	130	2	280	16	24
06/22/05[3]	49.93	7.95	41.98	6,400	290	2	11	11	18
09/02/05[3]	49.93	9.46	40.47	3,700	180	1	13	7	18
12/02/05[3]	49.93	7.60	42.33	11,000	840	5	480	24	34
03/20/06[3]	49.93	4.50	45.43	790	14	<0.5	1	0.6	2
06/01/06[3]	49.93	7.30	42.63	5,100	48	0.8	42	4	2
09/11/06[3]	49.93	9.38	40.55	6,700	64	3	44	3	4
DESTROYED									

Table 2

Groundwater Monitoring Data and Analytical Results

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

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)
TRIP BLANK									
QA									
03/12/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
06/07/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/13/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
12/13/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
03/01/03	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
06/27/03[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/03[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
12/03/03[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/04[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/30/04[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04[3]	--	--	--	<50	<0.5	<0.7	<0.8	<0.8	<0.5
12/29/04[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/23/05[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/05[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/05[3]	--	--	--	<50	<0.5	1[4]	<0.5	1[4]	<0.5
12/02/05[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/20/06[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
06/01/06[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/11/06[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
08/27/08[3]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
11/21/08[5]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/13/09[5]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
05/08/09[5]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
08/07/09[5]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
11/14/12[3]	**--**	**--**	**--**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Table 2

Groundwater Monitoring Data and Analytical Results

Former Chevron-Branded Service Station 92029
890 West MacArthur Boulevard,
Oakland, California

EXPLANATIONS:

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
DTW = Depth to Water
GWE = Groundwater Elevation
(msl) = Mean sea level
(µg/L) = Micrograms per liter

TPH-GRO = Total Petroleum Hydrocarbons as Gasoline Range Organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MtBE = Methyl tertiary-butyl ether

-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank
EPA = Environmental Protection Agency

* Current TOC elevations were surveyed on October 1, 2008, by CRA. The benchmark for this survey was a USGS bronze disk located near the north end of the curb return at the Northwest corner of 38th Street and Broadway, (Benchmark Elevation = 85.41 feet, NGVD29).

[1] Well development performed.
[2] MtBE by EPA Method 8260.
[3] BTEX and MtBE by EPA Method 8260.
[4] Laboratory confirmed analytical result.
[5] BTEX by EPA Method 8260.

Table 3

Groundwater Analytical Results - Oxgenate Compounds

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

Oakland, California

WELL ID/ DATE	ETHANOL (µg/L)	TBA (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	1,2-DBA (µg/L)
MW-5								
08/27/08	--	2	10	<0.5	<0.5	<0.5	--	--
11/21/08	--	4	8	<0.5	<0.5	<0.5	--	--
02/13/09	--	3	6	<0.5	<0.5	<0.5	--	--
05/08/09	--	7	2	<0.5	<0.5	<0.5	--	--
08/07/09	--	<2	2	<0.5	<0.5	<0.5	--	--
11/05/09	--	2	0.9	<0.5	<0.5	<0.5	--	--
05/06/10	--	<2	0.9	<0.5	<0.5	<0.5	--	--
11/03/10	--	<2	0.9	<0.5	<0.5	<0.5	--	--
05/10/11	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
11/10/11	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
05/11/12	--	<10	<3	<3	<3	<3	--	--
11/14/12	**--**	**<2**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**--**	**--**
MW-6								
08/27/08	--	390	440	<0.5	<0.5	6	--	--
11/21/08	--	320	300	<13	<13	<13	--	--
02/13/09	--	100	180	<1	<1	4	--	--
05/08/09	--	16	38	<0.5	<0.5	0.9	--	--
08/07/09	--	190	330	<3	<3	5	--	--
11/05/09	--	86	160	<1	<1	4	--	--
05/06/10	--	2	9	<0.5	<0.5	<0.5	--	--
11/03/10	--	98	160	<3	<3	3	--	--
05/10/11[1]	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
11/10/11	--	19	37	<1	<1	<1	--	--
05/11/12	--	<2	1	<0.5	<0.5	<0.5	--	--
11/14/12	**--**	**16**	**36**	**<0.5**	**<0.5**	**0.7**	**--**	**--**
MW-7								
08/27/08	--	<2	6	<0.5	<0.5	<0.5	--	--
11/21/08	--	5	6	<0.5	<0.5	<0.5	--	--
02/13/09	--	<2	7	<0.5	<0.5	<0.5	--	--
05/08/09	--	<2	8	<0.5	<0.5	<0.5	--	--
08/07/09	--	4	5	<0.5	<0.5	<0.5	--	--
11/05/09	--	9	5	<1	<1	<1	--	--
05/06/10	--	3	6	<0.5	<0.5	<0.5	--	--
11/03/10	--	6	4	<0.5	<0.5	<0.5	--	--

Table 3

Groundwater Analytical Results - Oxgenate Compounds

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

Oakland, California

WELL ID/ DATE	ETHANOL (µg/L)	TBA (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	1,2-DBA (µg/L)
MW-7 (cont)								
05/10/11	--	3	5	<0.5	<0.5	<0.5	--	--
11/10/11	--	4	5	<0.5	<0.5	<0.5	--	--
05/11/12	--	<20	<5	<5	<5	<5	--	--
11/14/12	**--**	**<10**	**4**	**<3**	**<3**	**<3**	**--**	**--**
MW-8								
08/27/08	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
11/21/08	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
02/13/09	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
05/08/09	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
08/07/09	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
11/05/09	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
05/06/10	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
11/03/10	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
05/10/11	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
11/10/11	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
05/11/12	--	<2	<0.5	<0.5	<0.5	<0.5	--	--
11/14/12	**--**	**<2**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**--**	**--**
MW-1								
03/12/02	--	<100	<2	<2	<2	<2	<2	<2
06/07/02	--	<100	<2	<2	<2	<2	<2	<2
09/13/02	--	<100	<2	<2	<2	<2	<2	<2
12/13/02	--	<100	<2	<2	<2	<2	<2	<2
03/01/03	--	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06/27/03	--	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
12/03/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
12/31/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
03/23/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DESTROYED								

Table 3

Groundwater Analytical Results - Oxgenate Compounds

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

Oakland, California

WELL ID/ DATE	ETHANOL (µg/L)	TBA (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	1,2-DBA (µg/L)
MW-2								
03/12/02	--	<100	3	<2	<2	<2	<2	<2
06/07/02	--	<100	<2	<2	<2	<2	<2	<2
09/13/02	--	<100	<2	<2	<2	<2	<2	<2
12/13/02	--	<100	<2	<2	<2	<2	<2	<2
03/01/03	--	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06/27/03	--	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/03	<50	<5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
12/03/03	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
03/10/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09/30/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
12/31/04	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
03/23/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06/22/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09/02/05	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
DESTROYED								
MW-3								
03/12/02	--	<100	650	<2	<2	18	<2	<2
06/07/02	--	230	490	<5.0	<5.0	11	<5.0	<5.0
09/13/02	--	170	640	<2	<2	8	<2	<2
12/13/02	--	240	540	<2	<2	29	31	<2
03/01/03	--	160	330	<0.5	<0.5	10	<0.5	<0.5
06/27/03	--	200	470	<0.5	<0.5	11	<0.5	<0.5
09/30/03	<50	120	710	<0.5	<0.5	6	0.7	<0.5
12/03/03	<250	200	420	<3	<3	14	<3	<3
03/10/04	<50	140	220	<0.5	<0.5	5	<0.5	<0.5
06/30/04	<50	100	660	<0.5	<0.5	5	<0.5	<0.5
09/30/04	<50	72	690	<0.5	<0.5	4	0.5	<0.5
12/31/04	<50	77	170	<0.5	<0.5	5	<0.5	<0.5
03/23/05	<50	<5	140	<0.5	<0.5	4	<0.5	3
06/22/05	<250	150	300	<3	<3	6	<3	<3
09/02/05	<100	99	440	<1	<1	<1	<1	<1
12/02/05	<100	66	170	<1	<1	5	<1	<1
03/20/06	<50	14	34	<0.5	<0.5	<0.5	<0.5	<0.5
06/01/06	<50	12	28	<0.5	<0.5	0.8	<0.5	<0.5
09/11/06	<50	47	97	<0.5	<0.5	2	<0.5	<0.5
DESTROYED								

Table 3

Groundwater Analytical Results - Oxgenate Compounds

Former Chevron-Branded Service Station 92029

890 West MacArthur Boulevard,

Oakland, California

WELL ID/ DATE	ETHANOL (µg/L)	TBA (µg/L)	MtBE (µg/L)	DIPE (µg/L)	EtBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	1,2-DBA (µg/L)
MW-4								
03/12/02	--	<100	170	<2	<2	13	<2	<2
06/07/02	--	<100	120	<2	<2	14	<2	<2
09/13/02	--	<100	160	<2	<2	14	<2	<2
12/13/02	--	<100	200	<2	<2	17	<2	<2
03/01/03	--	19	100	<0.5	<0.5	8	<0.5	<0.5
06/27/03	--	22	130	<0.5	<0.5	11	<0.5	<0.5
09/30/03	<100	<10	520	<1	<1	9	<1	<1
12/03/03	<50	18	73	<0.5	<0.5	5	<0.5	<0.5
03/10/04	<50	11	55	<0.5	<0.5	4	<0.5	<0.5
06/30/04	<100	<10	110	<1	<1	6	<1	<1
09/30/04	<50	17	400	<0.5	<0.5	7	<0.5	<0.5
12/31/04	<50	11	42	<0.5	<0.5	2	<0.5	<0.5
03/23/05	<50	<5	24	<0.5	<0.5	1	<0.5	0.9
06/22/05	<50	15	18	<0.5	<0.5	1	<0.5	<0.5
09/02/05	<50	6	18	<0.5	<0.5	<0.5	<0.5	<0.5
12/02/05	<50	11	34	<0.5	<0.5	1	<0.5	<0.5
03/20/06	<50	<5	2	<0.5	<0.5	<0.5	<0.5	<0.5
06/01/06	<50	<5	2	<0.5	<0.5	<0.5	<0.5	<0.5
09/11/06	<50	<5	4	<0.5	<0.5	<0.5	<0.5	<0.5
DESTROYED								

Table 3

Groundwater Analytical Results - Oxgenate Compounds

Former Chevron-Branded Service Station 92029
890 West MacArthur Boulevard,
Oakland, California

EXPLANATIONS:

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

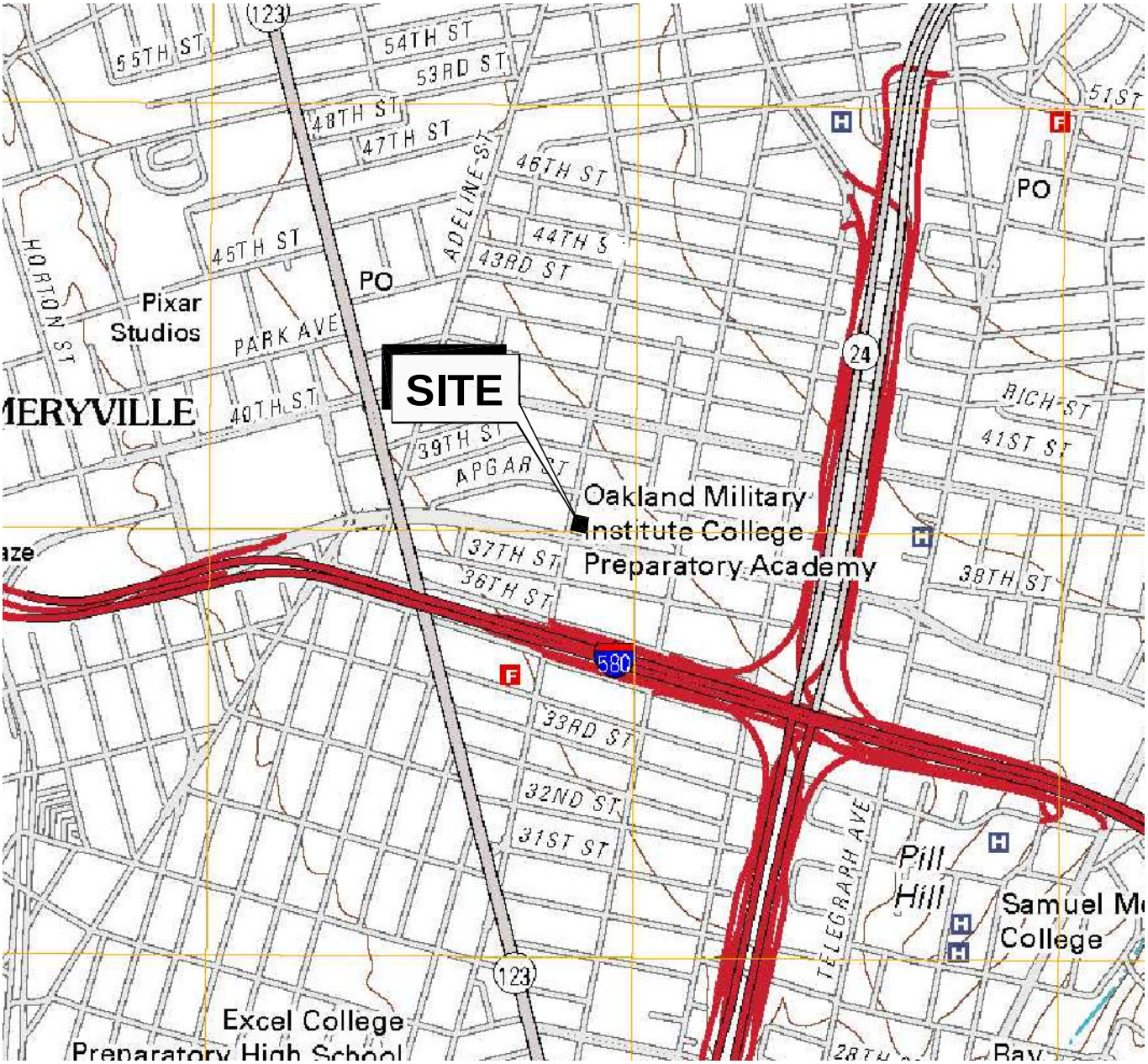
TBA = Tertiary-Butyl Alcohol
MtBE = Methyl tertiary-butyl ether
DIPE = Di-Isopropyl Ether
EtBE = Ethyl Tertiary-Butyl Ether
TAME = Tertiary-Amyl Methyl Ether
1,2-DCA = 1,2-Dichloroethane
1,2-DBA = 1,2-Dibromoethane
(µg/L) = Micrograms per liter
-- = Not Analyzed
EPA = Environmental Protection Agency

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

[1] Laboratory confirmed analytical result.

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 QUADRANGLE; OAKLAND WEST, CALIFORNIA; 2012

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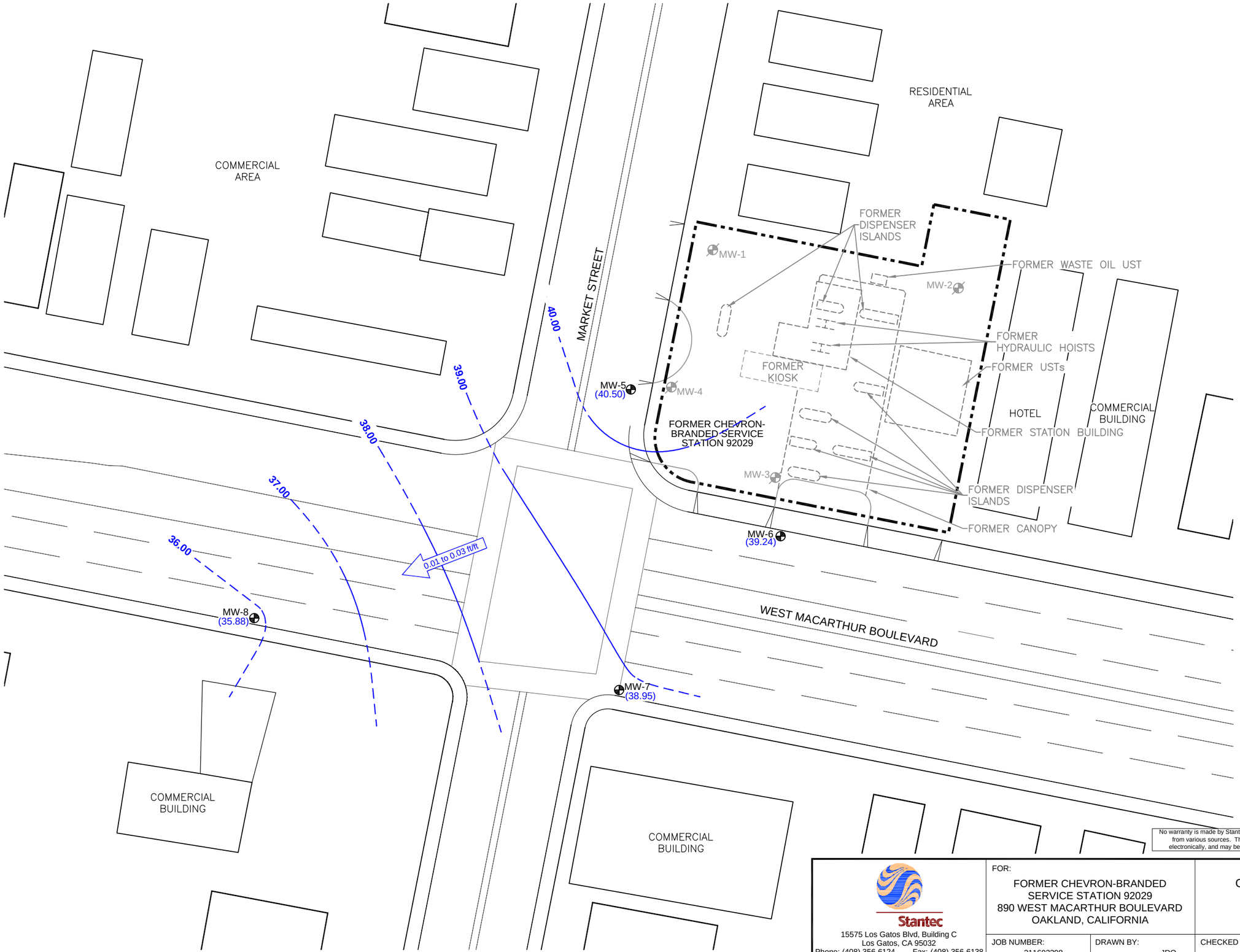
FOR:
FORMER CHEVRON-BRANDED SERVICE STATION 92029
890 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

SITE LOCATION MAP

FIGURE: 1

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602398	JRO	EEO/MRK	TLF	01/03/13

FILEPATH:P:\Chevron\N. CA Marketing Sites\Carryl MacLeod Portfolio\92029\GWM\2012\4Q12\Figures\92029_4Q12.dwg|jopalekopsahl|Jan 03, 2013 at 9:14|Layout: Fig 1_SLM



LEGEND

- APPROXIMATE SITE BOUNDARY
- UST — UNDERGROUND STORAGE TANK
- GROUNDWATER MONITORING WELL
- ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR; DASHED WHERE INFERRED (FEET ABOVE MEAN SEA LEVEL)
- (40.50) — GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW. HYDRAULIC GRADIENT RANGES FROM 0.01 TO 0.03 FEET PER FOOT (ft/ft).

NOTES

FORMER SITE FEATURES ARE IN APPROXIMATE LOCATIONS

GROUNDWATER ELEVATION DATA WERE COLLECTED ON NOVEMBER 14, 2012

GROUNDWATER CONTOURS WERE CREATED USING SURFER VERSION 8.0

N

0 40 80

APPROXIMATE SCALE IN FEET

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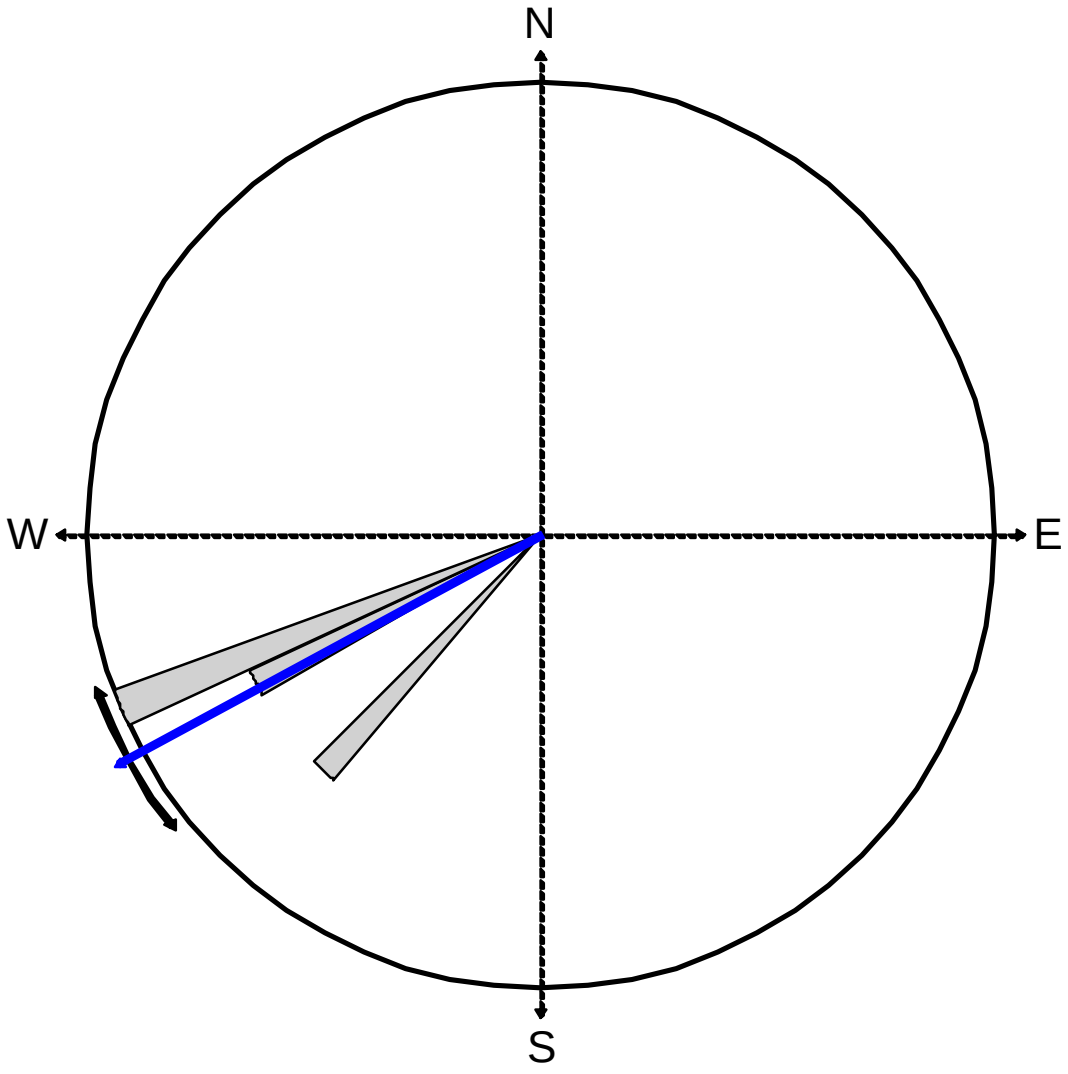
890 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

GROUNDWATER ELEVATION CONTOUR MAP - FOURTH QUARTER 2012

FIGURE: 2

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602398	JRO	EEO/MRK	TLF	01/03/13

FILEPATH:P:\Chevron\N. CA Marketing Sites\Carryl MacLeod Portfolio\92029\GWM\2012\4Q12\Figures\92029_4Q12.dwg|jopalekopsahl|Jan 03, 2013 at 8:44|Layout: Fig 2_GWE



Equal Area Plot

Number of Points	4
Class Size	5
Vector Mean	241.31
Vector Magnitude	3.94
Consistency Ratio	0.98

NOTE: ROSED DIAGRAM IS BASED ON THE DIRECTION OF GROUNDWATER FLOW BEGINNING SECOND QUARTER 2011.

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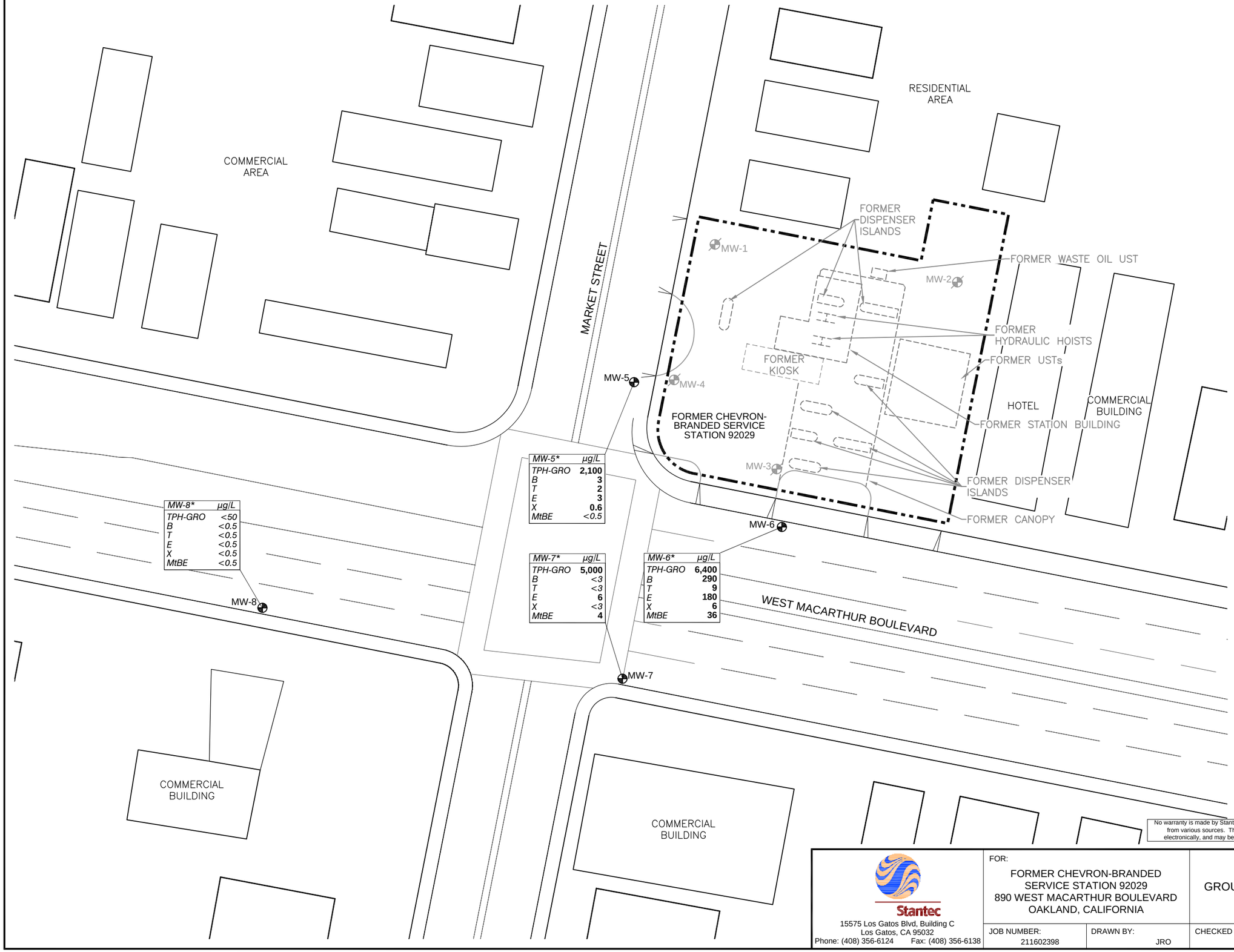
FOR:		FIGURE:
FORMER CHEVRON-BRANDED SERVICE STATION 92029 890 WEST MACARTHUR BOULEVARD OAKLAND, CALIFORNIA	ROSE DIAGRAM - FOURTH QUARTER 2012	3

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602398	JRO	EEO/MRK	TLF	01/03/13

FILEPATH:P:\Chevron\N. CA Marketing Sites\Carryl MacLeod Portfolio\92029\GWM\2012\4Q12\Figures\92029_4Q12.dwg|jopalekopsahl|Jan 03, 2013 at 8:22|Layout: Fig 3_Rose



LEGEND

- APPROXIMATE SITE BOUNDARY
- 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

NOTES

FORMER SITE FEATURES ARE IN APPROXIMATE LOCATIONS

N

0 40 80

APPROXIMATE SCALE IN FEET

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FOR:
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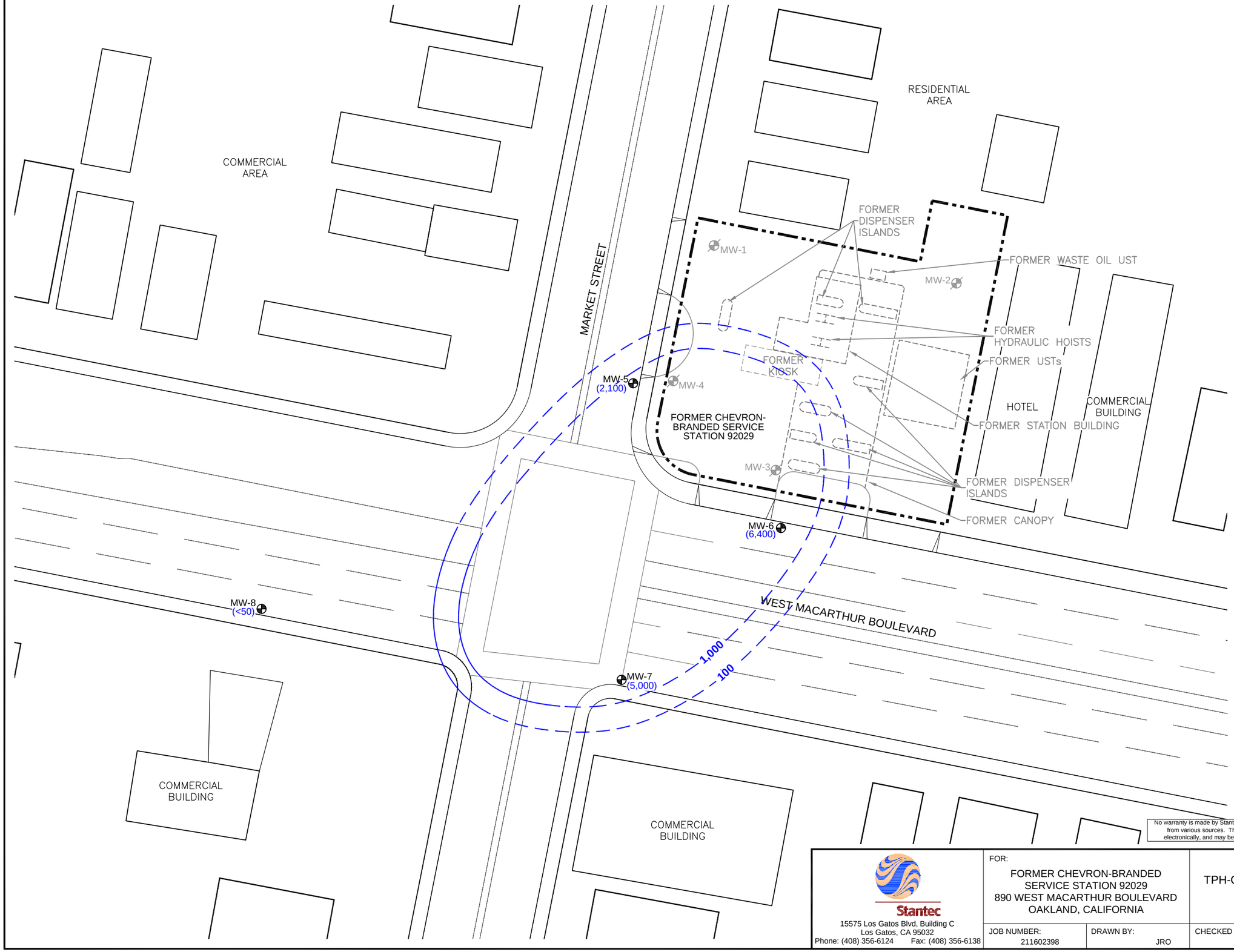
890 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

SITE PLAN SHOWING GROUNDWATER CONCENTRATIONS - FOURTH QUARTER 2012

FIGURE: 4

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602398	JRO	EEO/MRK	TLF	01/03/13

FILEPATH:P:\Chevron\N. CA Marketing Sites\Carryl MacLeod Portfolio\92029\GWM\2012\4Q12\Figures\92029_4Q12.dwg|jopalekopsahl|Jan 03, 2013 at 8:44|Layout: Fig 4_GWC



LEGEND

▬ ▪ ▬	APPROXIMATE SITE BOUNDARY
UST	UNDERGROUND STORAGE TANK
⊕	GROUNDWATER MONITORING WELL
⊕	ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL
(2,100)	TPH-GRO CONCENTRATION (µg/L)
———	TPH-GRO CONTOUR; DASHED WHERE INFERRED
TPH-GRO	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE RANGE ORGANICS
(µg/L)	MICROGRAMS PER LITER

NOTES

FORMER SITE FEATURES ARE IN APPROXIMATE LOCATIONS

N

0 40 80

APPROXIMATE SCALE IN FEET

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FOR:
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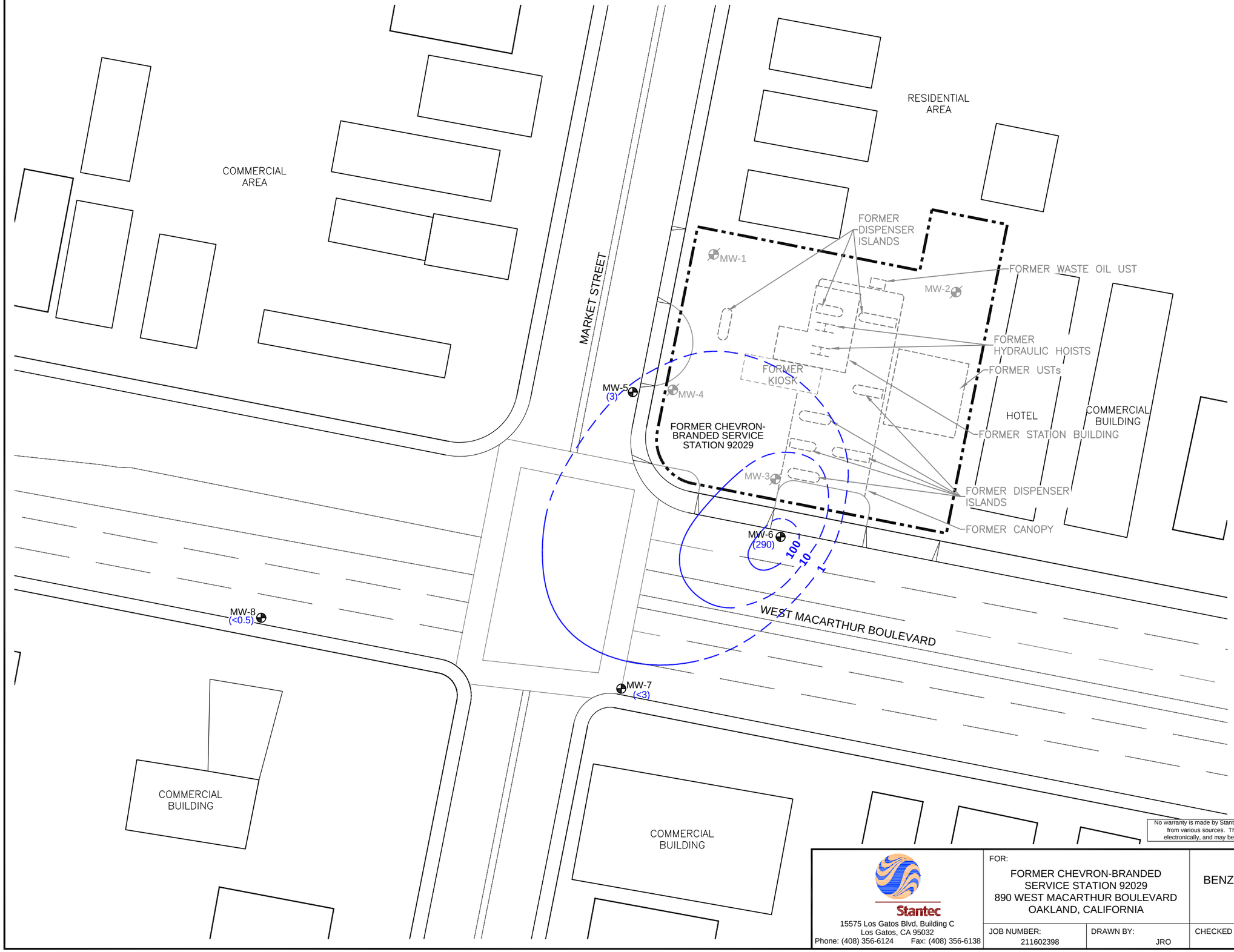
890 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

TPH-GRO ISOCONCENTRATION MAP - FOURTH QUARTER 2012

FIGURE: 5

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602398	JRO	EEO/MRK	TLF	01/03/13

FILEPATH:P:\Chevron\N. CA Marketing Sites\Carryl MacLeod Portfolio\92029\GWM\2012\4Q12\Figures\92029_4Q12.dwg|jopalekopsahl|Jan 08, 2013 at 8:49|Layout: Fig 5_TPHg



LEGEND

- APPROXIMATE SITE BOUNDARY
- UST — UNDERGROUND STORAGE TANK
- GROUNDWATER MONITORING WELL
- ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL
- (3) — BENZENE CONCENTRATION (µg/L)
- BENZENE CONTOUR; DASHED WHERE INFERRED
- (µg/L) — MICROGRAMS PER LITER

NOTES

FORMER SITE FEATURES ARE IN APPROXIMATE LOCATIONS

N

0 40 80

APPROXIMATE SCALE IN FEET

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FOR:
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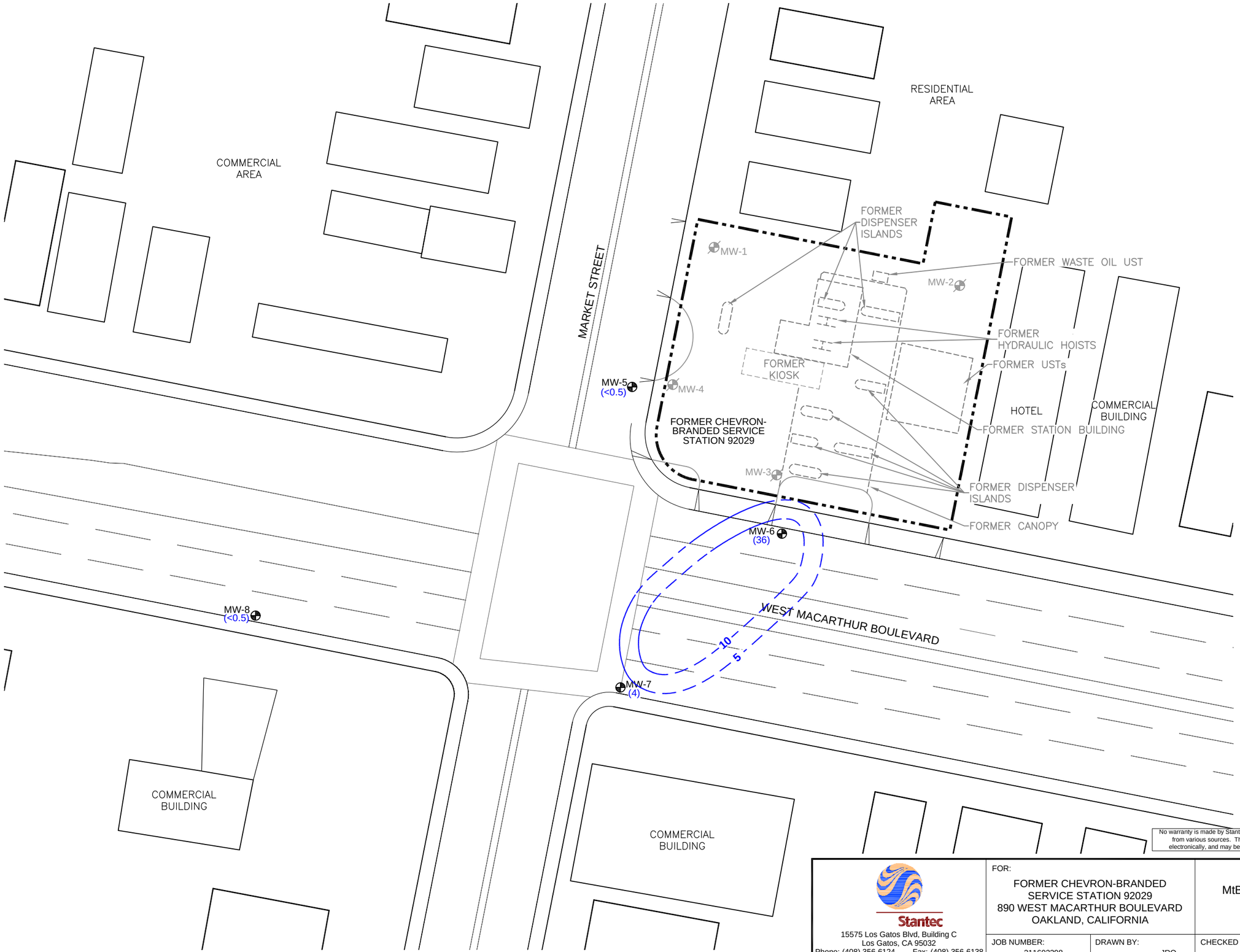
890 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

BENZENE ISOCONCENTRATION MAP - FOURTH QUARTER 2012

FIGURE: 6

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602398	JRO	EEO/MRK	TLF	01/03/13

FILEPATH:P:\Chevron\N. CA Marketing Sites\Carryl MacLeod Portfolio\92029\GWM\2012\4Q12\Figures\92029_4Q12.dwg|jopalekopsahl|Jan 08, 2013 at 8:54|Layout: Fig 6_BNZ



LEGEND

— · — · —	APPROXIMATE SITE BOUNDARY
UST	UNDERGROUND STORAGE TANK
⊕	GROUNDWATER MONITORING WELL
⊕	ABANDONED/ DESTROYED GROUNDWATER MONITORING WELL
(36)	MtBE CONCENTRATION (µg/L)
———	MtBE CONTOUR; DASHED WHERE INFERRED
MtBE	METHYL TERTIARY-BUTYL ETHER
(µg/L)	MICROGRAMS PER LITER

NOTES

FORMER SITE FEATURES ARE IN APPROXIMATE LOCATIONS

N

0 40 80

APPROXIMATE SCALE IN FEET

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890 WEST MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

MtBE ISOCONCENTRATION MAP - FOURTH QUARTER 2012

FIGURE: 7

JOB NUMBER:	DRAWN BY:	CHECKED BY:	APPROVED BY:	DATE:
211602398	JRO	EEO/MRK	TLF	01/03/13

FILEPATH:P:\Chevron\N. CA Marketing Sites\Carryl MacLeod Portfolio\92029\GWM\2012\4Q12\Figures\92029_4Q12.dwg|jopalekopsahl|Jan 03, 2013 at 9:12|Layout: Fig 7_MtBE

Attachment A

Gettler-Ryan, Inc. Field Data Sheets and Standard Operating Procedures – Fourth Quarter 2012

GETTLER-RYAN INC.

TRANSMITTAL

November 20, 2012
G-R #386911

TO: Mr. Travis Flora
Stantec
15575 Los Gatos Blvd., Building C
Los Gatos, California 95032

FROM: Deanna L. Harding
Project Coordinator
Gettler-Ryan Inc.
6747 Sierra Court, Suite J
Dublin, California 94568

RE: Former Chevron Service Station
#9-2029
890 West MacArthur Blvd.
Oakland, California
RO 0002438

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DESCRIPTION
VIA PDF	Groundwater Monitoring and Sampling Data Package **Second Semi-Annual Event of November 14, 2012**

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/9-2029

WELL CONDITION STATUS SHEET

Client/Facility #: Chevron #9-2029
Site Address: 890 West Macarthur Blvd.
City: Oakland, CA

Job # 386911
Event Date: 11.14.11
Sampler: FT

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	BOLTS (M) Missing (R) Replaced	Bolt Flanges B= Broken S= Stripped R=Retap	APRON Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y / N	REPLACE CAP Y / N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Yes / (No)
MW-5	OK							N	N	Morrison/6"/2	
MW-6	OK							Y	Y		
MW-7	OK							N	N		
MW-8	OK							N	N		

Comments

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards, as directed by the scope of work. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by Clean Harbors Environmental Services to Evergreen Oil located in Newark, California.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #9-2029 Job Number: 386911
Site Address: 890 West Macarthur Blvd. Event Date: 11-14-12 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-5 Date Monitored: 11-14-12
Well Diameter 2 in.
Total Depth 25.01 ft.
Depth to Water 8.89 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.

16.12 xVF .17 = 2.74 x3 case volume = Estimated Purge Volume: 8.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.11

Purge Equipment:
Disposable Bailer ✓
Stainless Steel Bailer
Stack Pump
Suction Pump
Grundfos
Peristaltic Pump
QED Bladder Pump
Other:

Sampling Equipment:
Disposable Bailer ✓
Pressure Bailer
Discrete Bailer
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: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 1110 Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1140 / 11-14-12 Water Color: LT. GRAY Odor: (Y) / N STRONG
Approx. Flow Rate: — gpm. Sediment Description: S. SILTY
Did well de-water? NO If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 10.12

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - (µS))	Temperature ((C) / F)	D.O. (mg/L)	ORP (mV)
1115	2.5	7.15	645	18.9		
1120	5.0	7.12	651	19.1		
1126	8.0	7.10	657	19.7		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)/ 5 OXYS (8260)

COMMENTS:

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #9-2029 Job Number: 386911
Site Address: 890 West Macarthur Blvd. Event Date: 11.14.12 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-6 Date Monitored: 11.14.12
Well Diameter 2 in.
Total Depth 24.96 ft.
Depth to Water 9.83 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.

15.13 xVF .17 = 2.57 x3 case volume = Estimated Purge Volume: 8.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.85

Purge Equipment:
- Disposable Bailer ✓
- Stainless Steel Bailer
- Stack Pump
- Suction Pump
- Grundfos
- Peristaltic Pump
- QED Bladder Pump
- Other:

Sampling Equipment:
- Disposable Bailer ✓
- Pressure Bailer
- Discrete Bailer
- 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: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 1020 Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1050 / 11.14.12 Water Color: LT. GRAY Odor: (Y) / N STRONG
Approx. Flow Rate: ✓ gpm. Sediment Description: S. SILTY
Did well de-water? ND If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 10.20

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1025	2.5	7.27	708	20.1		
1030	5.0	7.24	712	20.3		
1036	8.0	7.22	716	20.6		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-6	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)/ 5 OXYS (8260)

COMMENTS:

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-2029 Job Number: 386911
Site Address: 890 West Macarthur Blvd. Event Date: 11.14.12 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-7 Date Monitored: 11-14-12
Well Diameter 2 in.
Total Depth 24.90 ft.
Depth to Water 9.79 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.

15.11 xVF .17 = 2.56 x3 case volume = Estimated Purge Volume: 8.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.81

Purge Equipment:
- Disposable Bailer ✓
- Stainless Steel Bailer
- Stack Pump
- Suction Pump
- Grundfos
- Peristaltic Pump
- QED Bladder Pump
- Other:

Sampling Equipment:
- Disposable Bailer ✓
- Pressure Bailer
- Discrete Bailer
- 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: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 0930 Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1000 /11.14.12 Water Color: CLOUDY/LT GY Odor: Ⓨ / N MODERATE
Approx. Flow Rate: ✓ gpm. Sediment Description: SLIGHTLY
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 10.02

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm µS)	Temperature (Ⓒ / F)	D.O. (mg/L)	ORP (mV)
0935	2.5	7.22	635	19.1		
0940	5.0	7.17	638	19.5		
0946	8.0	7.15	642	19.8		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)/ 5 OXYS (8260)

COMMENTS:

Add/Replaced Lock: ✓ Add/Replaced Plug: ✓ (2") Add/Replaced Bolt:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-2029 | Job Number: 386911
Site Address: 890 West Macarthur Blvd. | Event Date: 11-14-11 (inclusive)
City: Oakland, CA | Sampler: FT

Well ID: MW-8 | Date Monitored: 11-14-11
Well Diameter: 2 in.
Total Depth: 24.99 ft.
Depth to Water: 11.73 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.

13.26 xVF .17 = 2.25 x3 case volume = Estimated Purge Volume: 7.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.38

Purge Equipment:
- Disposable Bailer: ✓
- Stainless Steel Bailer
- Stack Pump
- Suction Pump
- Grundfos
- Peristaltic Pump
- QED Bladder Pump
- Other:

Sampling Equipment:
- Disposable Bailer: ✓
- Pressure Bailer
- Discrete Bailer
- 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: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 1200 | Weather Conditions: CLOUDY / SUNNY
Sample Time/Date: 1225 / 11-14-11 | Water Color: BRN | Odor: Y / (N)
Approx. Flow Rate: ~ gpm. | Sediment Description: S. SILTY
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 12.26

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1205	2.5	7.38	602	19.6		
1210	5.0	7.35	597	19.9		
1215	7.0	7.31	594	20.1		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)/ 5 OXYS (8260)

COMMENTS:

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

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. #: _____ Sample # _____ Group #: 010550

111412-G3

Facility #: SS#9-2029-OML G-R#386911 Global ID#T0600173887

Site Address: 890 WEST MACARTHUR BLVD., OAKLAND, CA

Chevron PM: CM Lead Consultant: STANTECT Flora F

Consultant/Office: G-R. Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568

Consultant Prj. Mgr. Deanna L. Harding (deanna@grinc.com)

Consultant Phone #: 925-551-7555 Fax #: 925-551-7899

Sampler: Frank Tenanoni

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

- ☐ 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	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Water	Oil ☐ Air	Total Number of Containers	Analyses Requested / Preservation Codes: BTEX 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	Oxygenates (8260)	Total Lead Method ____	Dissolved Lead Method ____	MTBE (8260)
QA	11.14.12					W		2	X	X						X
MW-5		1140	X					6	X	X			X			
MW-6		1050	X					6	X	X			X			
MW-7		1000	X					6	X	X			X			
MW-8		1225	X					6	X	X			X			

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
STD. TAT 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I - Full
Type VI (Raw Data) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

EDF/EDD

	Date	Time		Date	Time
Relinquished by:	11.14.12	1336	Received by:	NOV12	1336
Relinquished by:			Received by:		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:		
Temperature Upon Receipt ____ C°			Custody Seals Intact? Yes No		

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:

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

January 14, 2013

Project: 92029

Submittal Date: 11/15/2012
Group Number: 1349488
PO Number: 0015116151
Release Number: MACLEOD
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
QA-T-121114 NA Water	6861618
MW-5-W-121114 Grab Water	6861619
MW-6-W-121114 Grab Water	6861620
MW-7-W-121114 Grab Water	6861621
MW-8-W-121114 Grab Water	6861622

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

ELECTRONIC COPY TO	Stantec c/o Gettler-Ryan	Attn: Rachelle Munoz
ELECTRONIC COPY TO	Stantec	Attn: Laura Viesselman
ELECTRONIC COPY TO	Stantec International	Attn: Travis Flora
ELECTRONIC COPY TO	Stantec	Attn: Erin O'Malley
ELECTRONIC COPY TO	Stantec	Attn: Marisa Kaffenberger

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax:717-656-2681• www.lancasterlabs.com

Respectfully Submitted,

Jill M. Parker

Jill M. Parker
Senior Specialist

(717) 556-7262

Sample Description: QA-T-121114 NA Water
Facility# 92029 Job# 386911 GRD
890 W MacArthur-Oakland T0600173887 QA

LLI Sample # WW 6861618
LLI Group # 1349488
Account # 10906

Project Name: 92029

Collected: 11/14/2012

Submitted: 11/15/2012 16:00
Reported: 01/14/2013 13:54

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WMOQA

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**	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	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

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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	D123242AA	11/19/2012 12:37	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D123242AA	11/19/2012 12:37	Anita M Dale	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12325A20A	11/20/2012 22:58	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12325A20A	11/20/2012 22:58	Marie D John	1

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2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 •717-656-2300 Fax:717-656-2681• www.lancasterlabs.com

Analysis Report

Sample Description: MW-5-W-121114 Grab Water
Facility# 92029 Job# 386911 GRD
890 W MacArthur-Oakland T0600173887 MW-5

LLI Sample # WW 6861619
LLI Group # 1349488
Account # 10906

Project Name: 92029

Collected: 11/14/2012 11:40 by FT

Submitted: 11/15/2012 16:00
Reported: 01/14/2013 13:54

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WMO05

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**	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1
10943	Benzene	71-43-2	3	0.5	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	3	0.5	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	2	0.5	1
10943	Xylene (Total)	1330-20-7	0.6	0.5	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	2,100	50	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
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	D123242AA	11/19/2012 17:10	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D123242AA	11/19/2012 17:10	Anita M Dale	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12325A20A	11/21/2012 00:48	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12325A20A	11/21/2012 00:48	Marie D John	1

Sample Description: MW-6-W-121114 Grab Water
Facility# 92029 Job# 386911 GRD
890 W MacArthur-Oakland T0600173887 MW-6

LLI Sample # WW 6861620
LLI Group # 1349488
Account # 10906

Project Name: 92029

Collected: 11/14/2012 10:50 by FT

Submitted: 11/15/2012 16:00
Reported: 01/14/2013 13:54

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WMO06

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**	
10943	t-Amyl methyl ether	994-05-8	0.7	0.5	1
10943	Benzene	71-43-2	290	5	10
10943	t-Butyl alcohol	75-65-0	16	2	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	180	0.5	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	36	0.5	1
10943	Toluene	108-88-3	9	0.5	1
10943	Xylene (Total)	1330-20-7	6	0.5	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	6,400	250	5

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
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	D123242AA	11/19/2012 17:33	Anita M Dale	1
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	D123262AA	11/21/2012 14:12	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D123242AA	11/19/2012 17:33	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D123262AA	11/21/2012 14:12	Daniel H Heller	10
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12325A20A	11/21/2012 05:34	Marie D John	5
01146	GC VOA Water Prep	SW-846 5030B	1	12325A20A	11/21/2012 05:34	Marie D John	5

Sample Description: MW-7-W-121114 Grab Water
Facility# 92029 Job# 386911 GRD
890 W MacArthur-Oakland T0600173887 MW-7

LLI Sample # WW 6861621
LLI Group # 1349488
Account # 10906

Project Name: 92029

Collected: 11/14/2012 10:00 by FT

Submitted: 11/15/2012 16:00
Reported: 01/14/2013 13:54

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WMO07

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	
10943	t-Amyl methyl ether	994-05-8	N.D.	3	5
10943	Benzene	71-43-2	N.D.	3	5
10943	t-Butyl alcohol	75-65-0	N.D.	10	5
10943	Ethyl t-butyl ether	637-92-3	N.D.	3	5
10943	Ethylbenzene	100-41-4	6	3	5
10943	di-Isopropyl ether	108-20-3	N.D.	3	5
10943	Methyl Tertiary Butyl Ether	1634-04-4	4	3	5
10943	Toluene	108-88-3	N.D.	3	5
10943	Xylene (Total)	1330-20-7	N.D.	3	5
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	5,000	250	5

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
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	Z123252AA	11/20/2012 18:02	Daniel H Heller	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z123252AA	11/20/2012 18:02	Daniel H Heller	5
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12325A20A	11/21/2012 05:56	Marie D John	5
01146	GC VOA Water Prep	SW-846 5030B	1	12325A20A	11/21/2012 05:56	Marie D John	5

Sample Description: MW-8-W-121114 Grab Water
Facility# 92029 Job# 386911 GRD
890 W MacArthur-Oakland T0600173887 MW-8

LLI Sample # WW 6861622
LLI Group # 1349488
Account # 10906

Project Name: 92029

Collected: 11/14/2012 12:25 by FT

Submitted: 11/15/2012 16:00
Reported: 01/14/2013 13:54

Chevron
6001 Bollinger Canyon Rd L4310
San Ramon CA 94583

WMO08

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**	
10943	t-Amyl methyl ether	994-05-8	N.D.	0.5	1
10943	Benzene	71-43-2	N.D.	0.5	1
10943	t-Butyl alcohol	75-65-0	N.D.	2	1
10943	Ethyl t-butyl ether	637-92-3	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	di-Isopropyl ether	108-20-3	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	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

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
10943	BTEX + 5 Oxygenates 8260 Water	SW-846 8260B	1	Z123252AA	11/20/2012 18:26	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z123252AA	11/20/2012 18:26	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12325A20A	11/21/2012 01:10	Marie D John	1
01146	GC VOA Water Prep	SW-846 5030B	1	12325A20A	11/21/2012 01:10	Marie D John	1

Quality Control Summary

Client Name: Chevron Group Number: 1349488
Reported: 01/14/13 at 01:54 PM

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D123242AA	Sample number(s): 6861618-6861620							
t-Amyl methyl ether	N.D.	0.5	ug/l	112		66-120		
Benzene	N.D.	0.5	ug/l	103		77-121		
t-Butyl alcohol	N.D.	2.	ug/l	98		68-125		
Ethyl t-butyl ether	N.D.	0.5	ug/l	120		66-120		
Ethylbenzene	N.D.	0.5	ug/l	107		79-120		
di-Isopropyl ether	N.D.	0.5	ug/l	115		71-124		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	119		68-121		
Toluene	N.D.	0.5	ug/l	103		79-120		
Xylene (Total)	N.D.	0.5	ug/l	100		77-120		
Batch number: D123262AA	Sample number(s): 6861620							
Benzene	N.D.	0.5	ug/l	88		77-121		
Batch number: Z123252AA	Sample number(s): 6861621-6861622							
t-Amyl methyl ether	N.D.	0.5	ug/l	96		66-120		
Benzene	N.D.	0.5	ug/l	117		77-121		
t-Butyl alcohol	N.D.	2.	ug/l	97		68-125		
Ethyl t-butyl ether	N.D.	0.5	ug/l	104		66-120		
Ethylbenzene	N.D.	0.5	ug/l	114		79-120		
di-Isopropyl ether	N.D.	0.5	ug/l	106		71-124		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	99		68-121		
Toluene	N.D.	0.5	ug/l	117		79-120		
Xylene (Total)	N.D.	0.5	ug/l	117		77-120		
Batch number: 12325A20A	Sample number(s): 6861618-6861622							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	85	82	75-135	3	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: D123242AA	Sample number(s): 6861618-6861620 UNSPK: P861409								
t-Amyl methyl ether	118*	122*	65-117	3	30				
Benzene	104	107	72-134	4	30				
t-Butyl alcohol	101	103	67-119	2	30				
Ethyl t-butyl ether	121	126*	74-122	4	30				
Ethylbenzene	86	97	71-134	11	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.

Quality Control Summary

Client Name: Chevron Group Number: 1349488
Reported: 01/14/13 at 01:54 PM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
di-Isopropyl ether	119	124	70-129	4	30				
Methyl Tertiary Butyl Ether	122	128*	72-126	5	30				
Toluene	98	103	80-125	5	30				
Xylene (Total)	80	91	79-125	13	30				
Batch number: D123262AA	Sample number(s): 6861620 UNSPK: P864467								
Benzene	83	83	72-134	0	30				
Batch number: Z123252AA	Sample number(s): 6861621-6861622 UNSPK: P861628								
t-Amyl methyl ether	83	85	65-117	2	30				
Benzene	103	108	72-134	5	30				
t-Butyl alcohol	73	80	67-119	2	30				
Ethyl t-butyl ether	89	92	74-122	2	30				
Ethylbenzene	103	109	71-134	6	30				
di-Isopropyl ether	91	93	70-129	2	30				
Methyl Tertiary Butyl Ether	86	88	72-126	2	30				
Toluene	105	112	80-125	6	30				
Xylene (Total)	106	111	79-125	4	30				

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: D123242AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6861618	115	102	99	108
6861619	110	98	100	100
6861620	112	102	102	99
Blank	113	100	99	110
LCS	115	102	98	113
MS	113	102	99	114*
MSD	113	104	98	111
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: D123262AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	111	99	99	108
LCS	112	104	98	113
MS	112	103	99	112
MSD	110	102	99	112
Limits:	80-116	77-113	80-113	78-113

*- 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: Chevron Group Number: 1349488
Reported: 01/14/13 at 01:54 PM

Surrogate Quality Control

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z123252AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6861621	90	89	100	97
6861622	96	95	97	89
Blank	95	96	98	90
LCS	91	95	97	97
MS	92	96	98	96
MSD	92	96	99	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 12325A20A

	Trifluorotoluene-F
6861618	77
6861619	138*
6861620	99
6861621	104
6861622	78
Blank	82
LCS	100
LCSD	99
Limits:	63-135

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. #: 10906 Sample # 6861618-22 Group #: 010550

111412-03 G#1349488

Facility #: SS#9-2029-OML G-R#386911 Global ID#T0600173887

Site Address: 890 WEST MACARTHUR BLVD., OAKLAND, CA

Chevron PM: CM Lead Consultant: STANTECT Flora F

Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568

Consultant Prj. Mgr. Deanna L. Harding (deanna@grinc.com)

Consultant Phone #: 925-551-7555 Fax #: 925-551-7899

Sampler: Frank Terminoni

Analyses Requested — Preservation Codes: H (BTEX), H (TPH 8015 MOD GRO), H (Oxygenates), H (MTBE)

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil ☐ Air	Total Number of Containers	BTEX [redacted] 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	5 Oxygenates (8260)	Total Lead Method	Dissolved Lead Method	MTBE (8260)
QA	11-14-12					W		2	X	X						X
MW-5	↓	1140	X			↓		6	X	X			X			
MW-6		1050	X					6	X	X			X			
MW-7		1000	X					6	X	X			X			
MW-8	↓	1225	X			↓		6	X	X			X			

Matrix: ☐ Potable ☐ NPDES

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 O = Other

☐ 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

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
(STD. TAT) 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I - Full
Type VI (Raw Data) ☐ Coelt Deliverable not needed EDF/EDD
WIP (RWQCB)
Disk

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	11-14-12	1334	[signature] 14	NOV12	1334
[signature]	14 NOV12	1630	DHL		
Relinquished by Commercial Carrier: UPS FedEx Other ____			[signature]	11/15/12	1600

Temperature Upon Receipt 0.8°-2.0° C°

Custody Seals Intact? (Yes) No

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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 limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ 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

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	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.

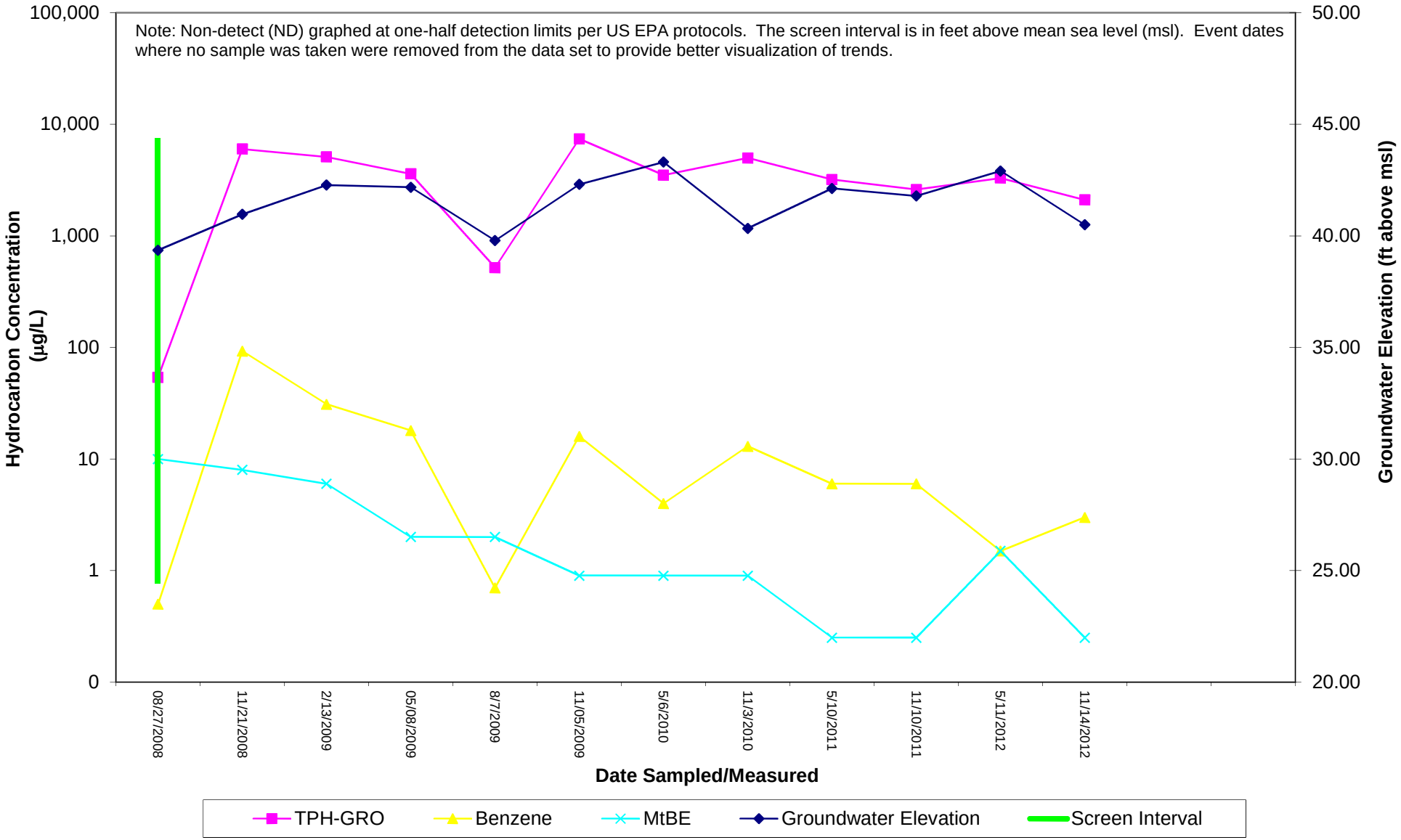
Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have 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.

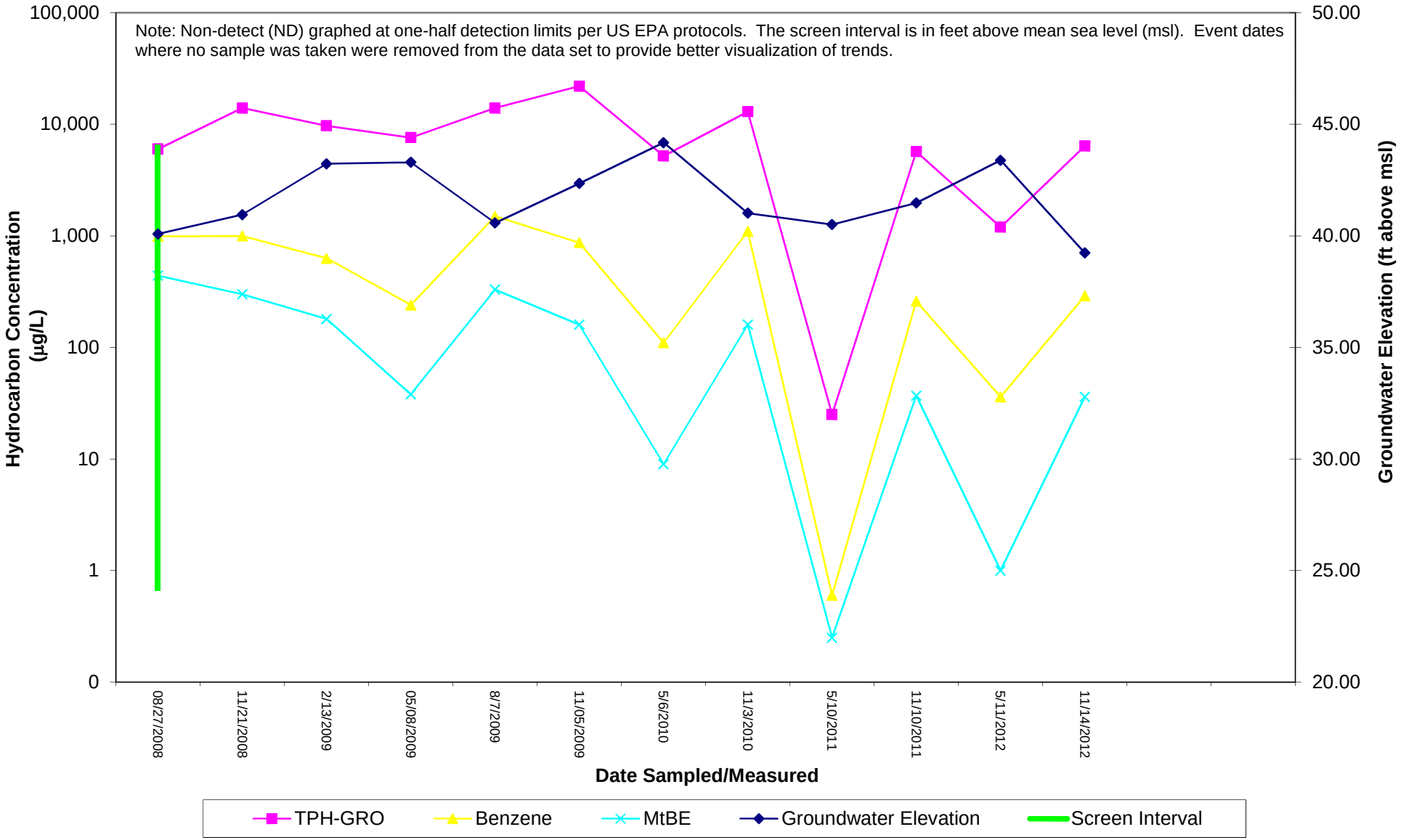
Attachment C

Hydrographs

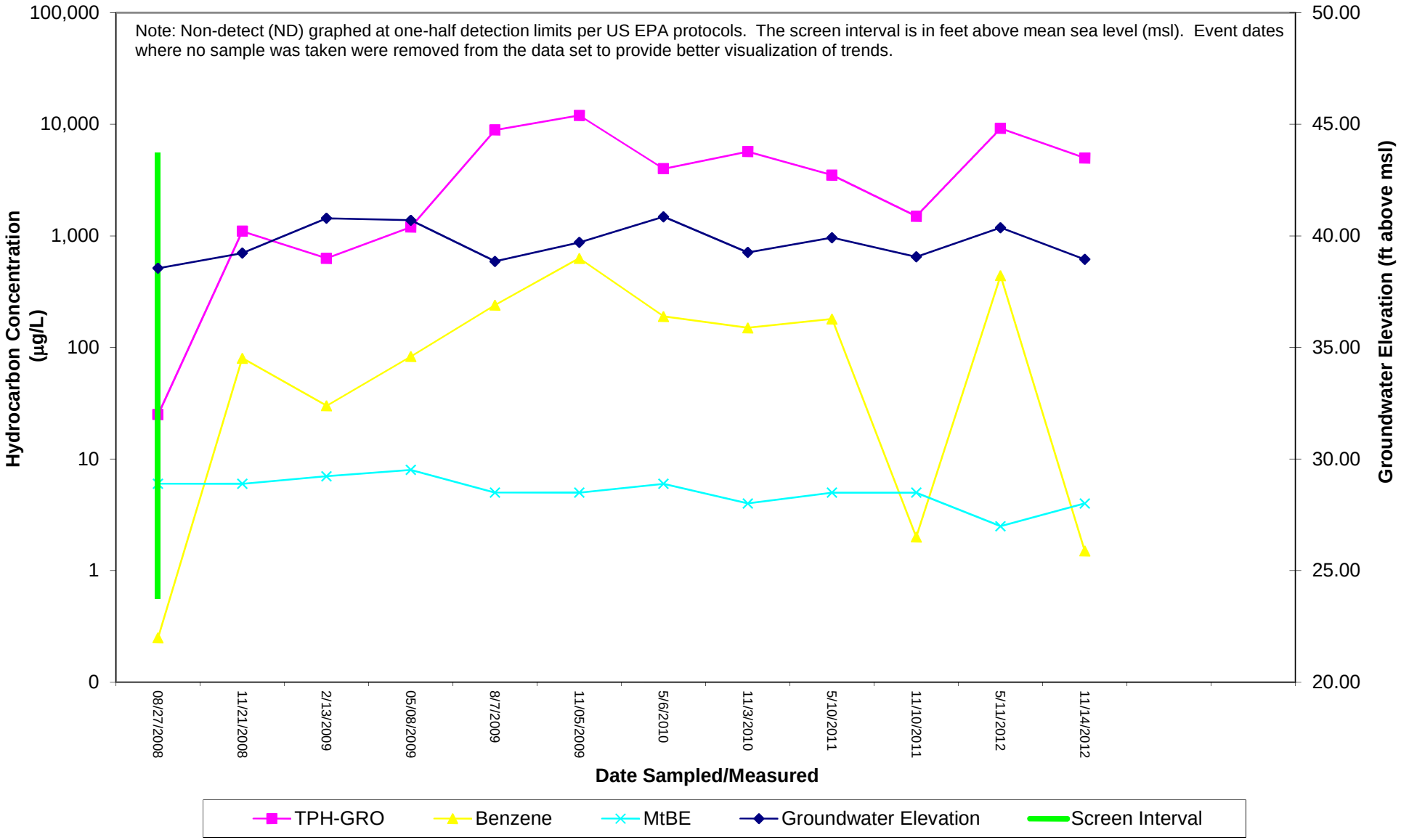
MW-5 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
Former Chevron-branded Service Station 92029
890 West MacArthur Boulevard
Oakland, California



MW-6 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
Former Chevron-branded Service Station 92029
890 West MacArthur Boulevard
Oakland, California



MW-7 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
Former Chevron-branded Service Station 92029
890 West MacArthur Boulevard
Oakland, California



MW-8 TPH-GRO, Benzene, & MtBE Concentrations and Groundwater Elevations vs. Time
Former Chevron-branded Service Station 92029
890 West MacArthur Boulevard
Oakland, California