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Alameda County Environmental Health

October 28, 2009

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Reference No. 631916

Mr. Jerry Wickham Alameda County Environmental Health (ACEH) 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502--6577

Re: Third Quarter 2009 Groundwater Monitoring Report Former Signal Oil Marine Storage and Distribution Facility (Former Chevron Bulk Plant 20-6127) 2301-2311 Blanding Avenue Alameda, California SLIC Case RO0002466

Dear Mr. Wickham:

Conestoga-Rovers & Associates (CRA) is submitting this *Third Quarter 2009 Groundwater Monitoring Report* on behalf of Chevron Environmental Management Company (Chevron) for the site referenced above. The current monitoring and sampling program consists of gauging and sampling groundwater from wells MW-1 through MW-5 onsite and collecting a surface water sample (CS-2) from the adjacent Alameda Canal on a quarterly basis. Site background information, summary of previous investigation, the results of the current monitoring and sampling activities, CRA's conclusions and recommendations, and anticipated future activities are discussed below.

SITE BACKGROUND

Site Description: The approximately 3.5-acre site is located on the northeast side of Blanding Avenue between Oak and Park Streets in Alameda, California (Figures 1 and 2). Land use in the site vicinity is primarily commercial and industrial. The Alameda Canal and a marina are located adjacent to the northeast side of the site. The site is currently occupied by three large commercial buildings, which are used for office, retail, and storage space, and identified as Park Street Landing at 2307-2337 Blanding Avenue.

Site History: A Sanborn map dated 1897 showed the site as occupied by several residential structures and outbuildings; the southeast portion of the site was shown as occupied by a laundry facility and a blacksmith. From at least 1930 until approximately 1961, the northwestern portion of the site was occupied by a petroleum bulk plant operated by Signal Oil & Gas Company. Former bulk plant facilities consisted of one large and seven smaller gasoline aboveground storage tanks (ASTs) within concrete secondary containment, underground piping, an office building, a loading rack, and a small structure containing gasoline pumps

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(Figure 2). The northeast portion of the facility was shown as occupied by a structure identified as an auto garage and also used for paint storage on Sanborn maps dated between 1932 and 1950. A rail spur was shown to service the facilities on Blanding Avenue. The central portion of the site was shown as occupied by two structures identified as wholesale tires and a can warehouse. An additional larger structure was shown in the central portion of the site that was identified as vacant on the 1948 Sanborn map and as a ladder factory on the 1950 Sanborn map. Several structures appeared present in the southeast portion of the site in the 1939 aerial photograph. However, only one or two small sheds were shown in this area on the 1948 and 1950 Sanborn maps. In the 1958 aerial photograph, the ladder factory structure no longer appeared present and the southeast portion of the site appeared vacant and used for parking. Between 1957 and 1963, the buildings at the site were reportedly removed; it is assumed that the ASTs and piping were also removed at this time. In the 1965 aerial photograph, all the bulk plant facilities appear to have been removed and the majority of the site appears occupied by a construction materials yard with several small structures. Several additional structures also appear present in the southeast portion of the site. From 1973 to 1983, the northwestern portion of the site reportedly was used as a construction yard and for boat repair activities; and the southeastern portion was occupied by a restaurant, paved parking area, and a possible automobile sales lot. In 1987, the site was redeveloped with the current configuration.

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To date, 5 groundwater monitoring wells, 6 vapor wells, and 7 sub-slab vapor points have been installed at the site. Additionally, 28 soil borings have been advanced and 3 surface soil samples collected at the site. Quarterly monitoring and sampling initiated in 2001 is ongoing. A summary of previous environmental investigations conducted to date at the site is presented as Attachment A. Well construction information is presented in Table 1.

Site Geology and Hydrogeology: The soils encountered beneath the site generally consist of silty sand and clayey sand from just beneath grade to approximately 5 and 9 feet below grade (fbg). Fill consisting of black sand and concrete fragments has been reported in several borings at shallow depths. A 4- to 5-foot-thick layer of clay with some sand underlies the silty sand and clayey sand. Below the clay is silty sand and sandy silt to the maximum depth of explored of approximately 20.5 fbg. Groundwater is encountered in site borings at approximately 14.5 to 15 fbg within the silty sand and sandy silt and subsequently rises in the borings/wells to approximately 7 to 10 fbg. Historical depth to water and groundwater elevation data is included in Gettler-Ryan's (G-R's) quarterly monitoring and sampling report (Attachment B).

RESULTS OF THIRD QUARTER 2009 MONITORING AND SAMPLING EVENT

Groundwater Monitoring and Sampling: On July 3, 2009, G-R gauged and sampled monitoring wells MW-1 through MW-5, and collected grab surface water samples from canal sampling location CS-2 (Figure 2). This was the initial sampling event for newly installed wells MW-2



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through MW-5. G-R's August 25, 2009 *Groundwater Monitoring and Sampling Report* is included as Attachment B. Third quarter monitoring and sampling results are discussed below.

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Depth to groundwater in site wells ranged from 3.91 fbg in well MW-2 to 8.08 fbg in well MW-1. Groundwater flow direction was calculated towards the north-northeast at a gradient of 0.008 to 0.02 (Figure 1 of Attachment B).

Groundwater samples collected quarterly from the site wells are analyzed for total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene and xylenes (BTEX). In addition, samples from well MW-1 and surface water sampling point CS-2 are analyzed for methyl tertiary butyl ether (MTBE), and samples from wells MW-2 through MW-5 were analyzed for California Assessment Manual metals (CAM 17).

Total Petroleum Hydrocarbons as Diesel:

- TPHd was detected in wells MW-1, MW-3 and MW-5 at concentrations of 1,300 micrograms per liter (μg/L), 170 μg/L and 110 μg/L, respectively (Figure 3)
- No TPHd was detected in wells MW-2 and MW-4, or at canal sampling location CS-2
- The TPHd concentration observed this quarter in MW-1 is within historical ranges and is consistent with seasonal fluctuations (Table 1 of Attachment B)

Total Petroleum Hydrocarbons as Gasoline:

- TPHg was also detected in wells MW-1, MW-3 and MW-5 at concentrations of 51 µg/L, 310 µg/L and 930 µg/L, respectively (Figure 4)
- No TPHg was detected in wells MW-2 and MW-4, or at canal sampling location CS-2
- The TPHg concentration observed this quarter in MW-1 is within historical ranges and have generally decreased overtime (Table 1 of Attachment B)

Benzene, Toluene, Ethylbenzene and Xylenes:

- Benzene was detected in only wells MW-3 and MW-5 at concentrations of 1 μ g/L and 33 μ g/L, respectively (Figure 5)
- Toluene and xylenes were only detected in well MW-5 at concentrations of 2 μ g/L and 3 μ g/L, and ethylbenzene was detected in only wells MW-3 and MW-5 at 2 μ g/L and 0.6 μ g/L
- No BTEX was detected in wells MW-1, MW-2 and MW-4, or at canal sampling location CS-2



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Methyl tertiary butyl ether:

• No MTBE was detected in samples from well MW-1 or at the canal sampling location CS-2

Metals:

- No CAM 17 metals were detected above environmental screening levels (ESLs), with the exception of copper in well MW-3 and nickel in well MW-2
- The ESL for copper (3.1 $\mu g/L)$ was slightly exceeded in well MW-3 at a concentration of 3.3 $\mu g/L$
- The ESL for nickel (8.2 μg/L) was slightly exceeded in well MW-2 at a concentration of 10.6 μg/L
- Metal analytical results are summarized in Table 2 of Attachment B.

CONCLUSIONS AND RECOMMENDATION

Results of the third quarter 2009 sampling event indicate that the dissolved hydrocarbon concentrations in well MW-1 are generally stable. Based on the analytical data from the recently installed wells MW-2 through MW-5, the dissolved plume is localized north of the former ASTs in the area of the former fuel pumps (Figures 3 through 5). Further, the majority of current and past analytical results of grab samples collected from canal sampling location CS-2 indicate no current impact from the site to Alameda Canal.

The primary constituent of concern is TPHd; however, TPHg concentrations were also observed in wells MW-3 and MW-5. Given the site history, the copper and nickel concentrations detected slightly above ESLs are unlikely to have come from former Signal Oil's fueling operations at the site. As such, CRA recommends that metals analysis be removed from the suite of analysis for the groundwater and canal grab samples collected during future events at the site. CRA recommends continued quarterly monitoring and sampling of wells MW-1 through MW-5 and surface water sampling location CS-2 to determine seasonal hydrocarbon concentration trends in groundwater beneath the site and to monitor the potential impact from the site to Alameda Canal.

ANTICIPATED FUTURE ACTIVITIES

Quarterly Groundwater and Surface Water Sampling: G-R will gauge and sample wells MW-1 through MW-5 and surface water sampling location CS-2. Upon completion of this event, CRA will prepare a summary of the site conditions and monitoring results.



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Sub-Slab Vapor Point Reinstallation and Vapor Sampling: Due to leaks observed during the initial sub-slab vapor sampling event in vapor points VP-9 through VP-13, CRA will reinstall the vapor points and collect vapor samples from each reinstalled vapor point. CRA will also sample vapor wells VP-1 through VP-6 to confirm the initial vapor sampling results. A summary report will be prepared and submitted to ACEH by December 2, 2009.

We appreciate the opportunity to work with you on this project. Please contact Mr. Brian Silva at (916) 889-8908 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Brian Silva

OY/jt/8 Encl.

Greg Barclay, PG 6260



Figure 1	Vicinity Map
Figure 2	Site Plan
Figure 3	TPHd Concentrations in Groundwater - July 3, 2009
Figure 4	TPHg Concentrations in Groundwater - July 3, 2009
Figure 5	Benzene Concentrations in Groundwater - July 3, 2009
Table 1	Well Construction Specifications
Attachment A	Summary of Previous Environmental Work
Attachment B	G-R Groundwater Monitoring and Sampling Report
cc: Mike Bauer, C	Chevron Environmental Management Company (<i>electroni</i>

ic only) Julie Beck Ball Peter Reinhold Beck Monroe Wingate Tom Foley, Gallagher & Miersch

FIGURES

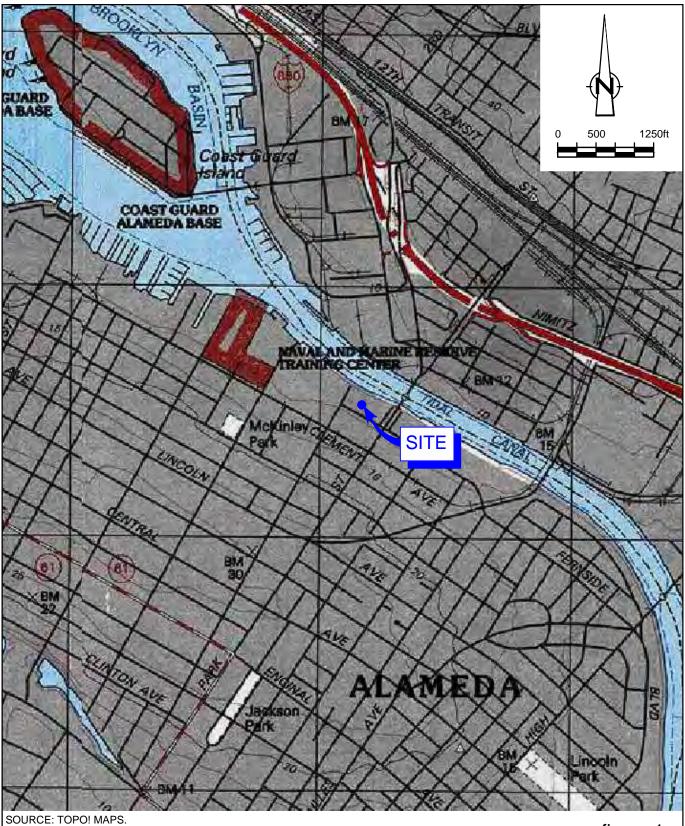
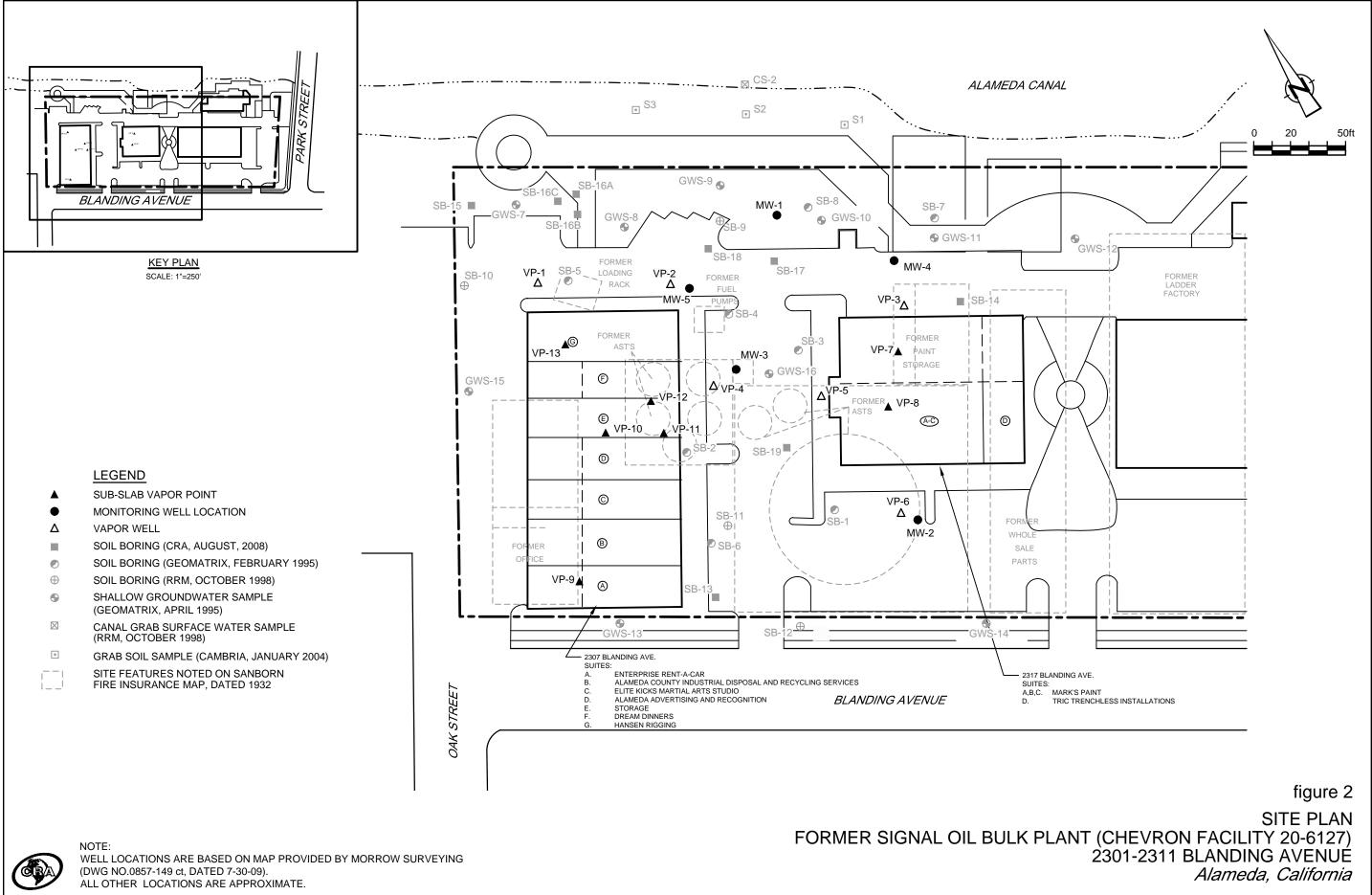
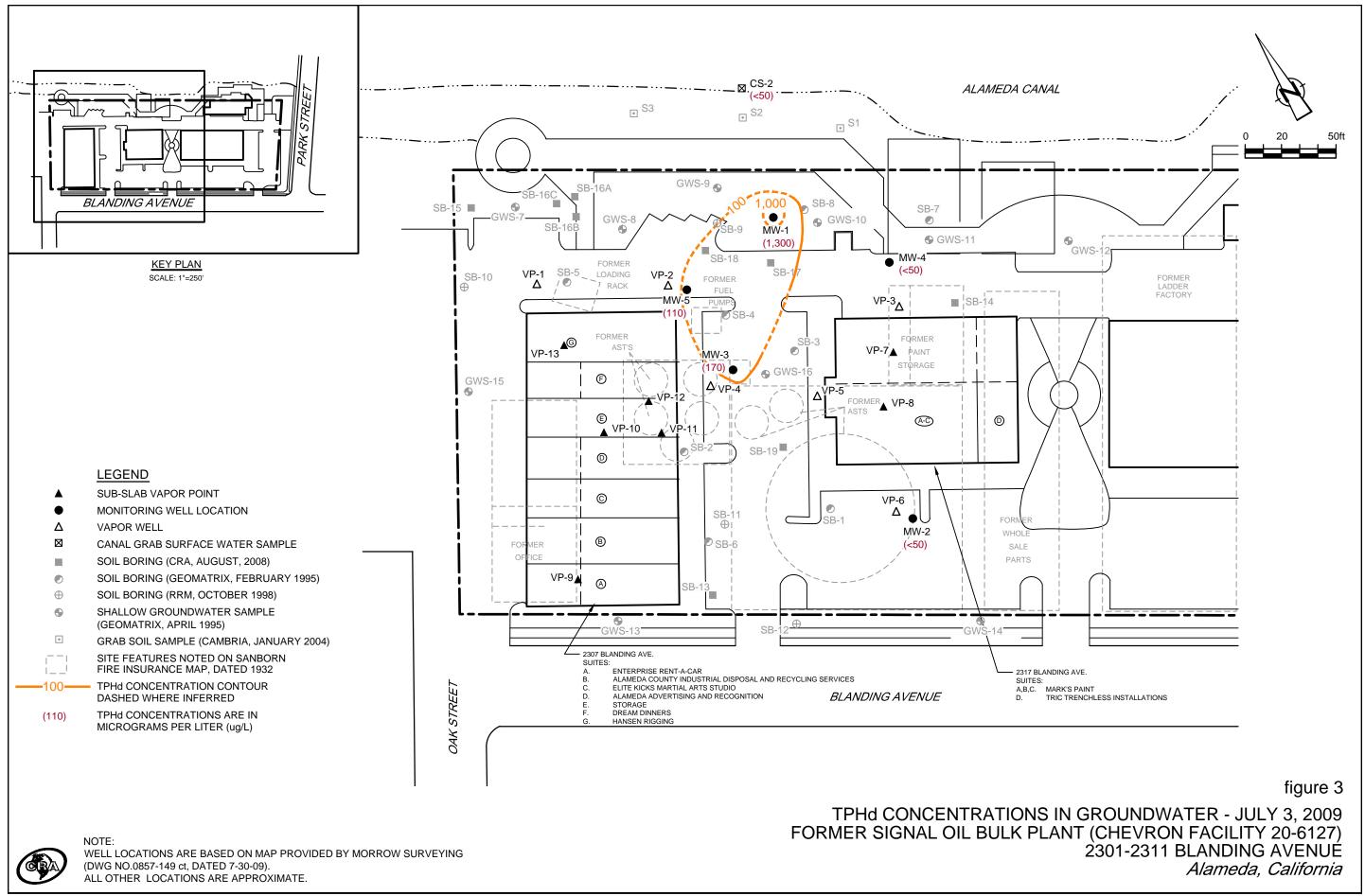


figure 1

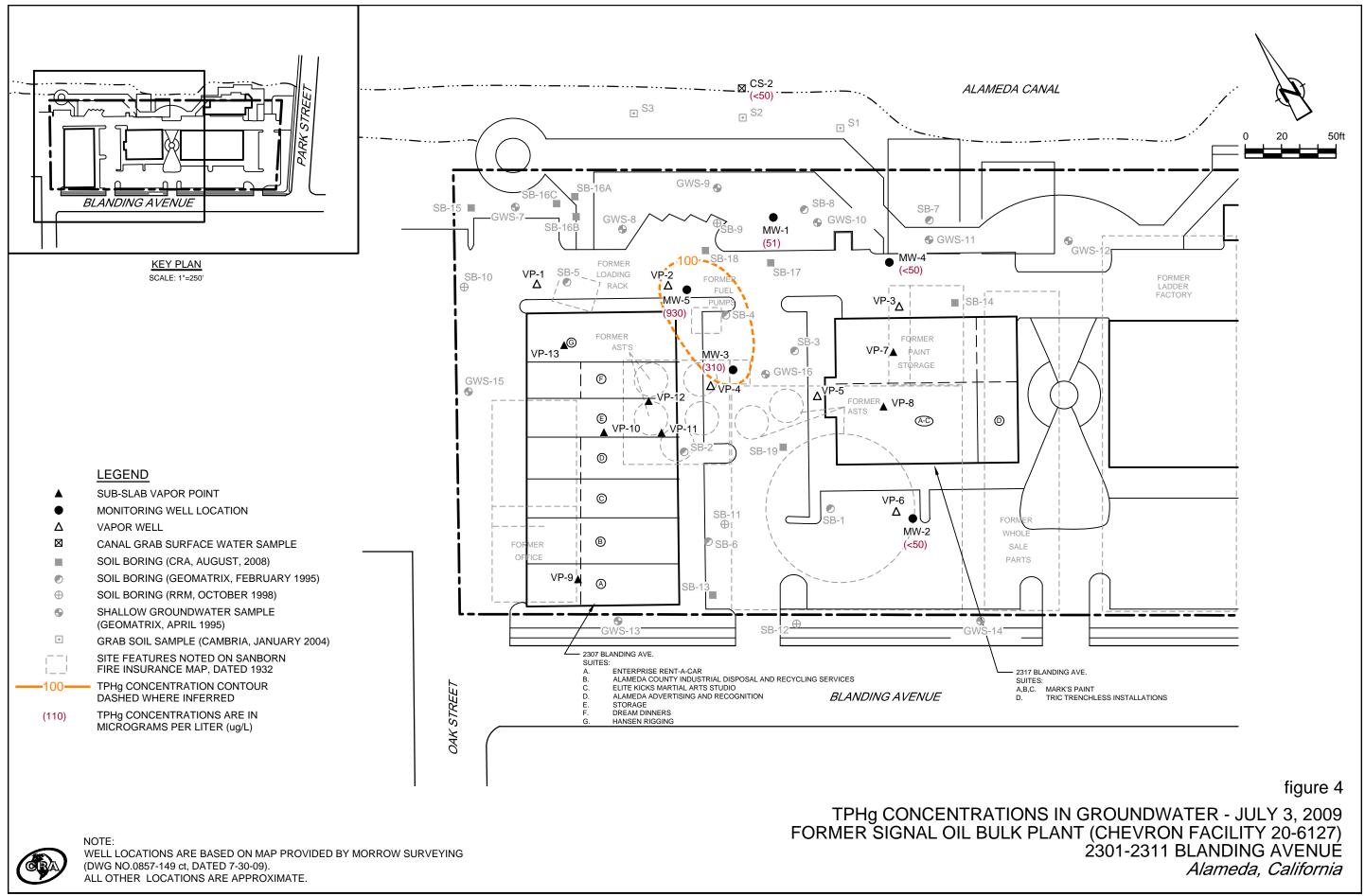
VICINITY MAP FORMER SIGNAL OIL BULK PLANT (CHEVRON FACILITY 20-6127) 2301-2311 BLANDING AVENUE Alameda, California



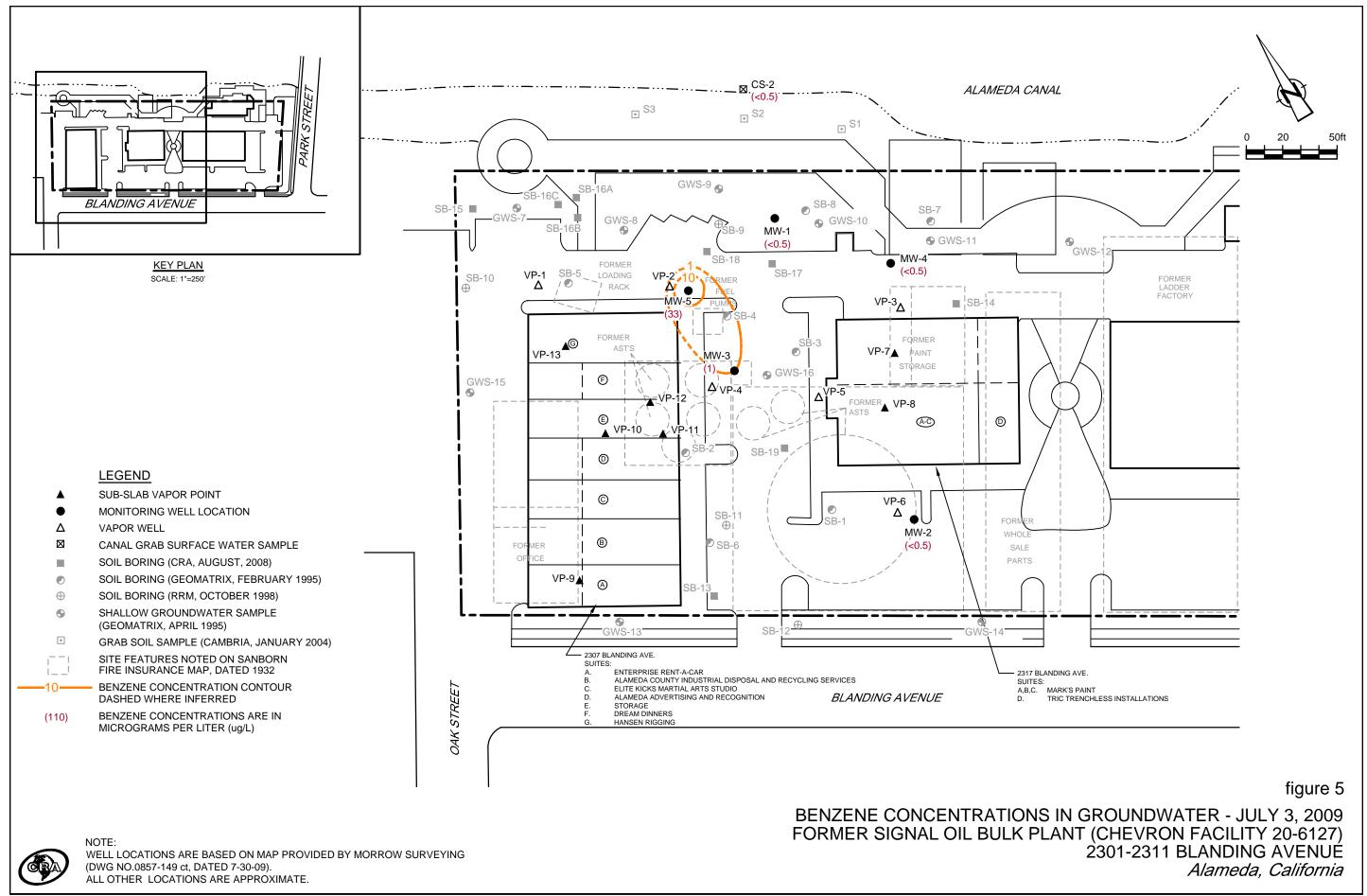
631916-2009(008)GN-WA002 OCT 22/2009



631916-2009(008)GN-WA003 OCT 26/2009



631916-2009(008)GN-WA004 OCT 26/2009



631916-2009(008)GN-WA005 OCT 22/2009

TABLE

TABLE 1

WELL CONSTRUCTION SPECIFICATIONS FORMER SIGNAL OIL MARINE STORAGE AND DISTRIBUTION FACILITY (FORMER CHEVRON BULK PLANT 20-6127) 2301-2311 BLANDING AVENUE ALAMEDA, CALIFORNIA

Well ID	Date Installed	тос	Total Depth (fbg)	Casing Diameter ¹ (inches)	Slot Size (inches)	Screen Interval (fbg)	Filter Pack (fbg)	Status
MW-1	8/15/1990	13.49	19.5	2	0.020	4-19	3-19.5	Active
MW-2	6/19/2009	10.63	18	2	0.020	10.5-15.5	10-16	Active
MW-3	6/19/2009	10.72	18.5	2	0.020	13.5-18.5	12.5-18.5	Active
MW-4	6/19/2009	11.40	20.5	2	0.020	15.5-20.5	14.5-20.5	Active
MW-5	6/23/2009	10.5	18	2	0.020	13-18	12-18	Active
VP-1 ² VP-2 ² VP-3 ² VP-4 ² VP-5 ² VP-6 ² VP-7 ³ VP-8 ³ VP-9 ³	7/9/2008 7/9/2008 7/14/2008 7/14/2008 7/14/2008 7/9/2008 7/17/2009 7/17/2009 7/17/2009 7/22/2009	NS NS NS NS NS NS NS	4.25 4.75 5.75 5.75 5.75 5.75 0.5 0.5 0.5	$ \begin{array}{c} 1\\ 1\\ 1\\ 1\\ 1\\ 0.25\\ 0.25\\ 0.25\\ 0.25\\ 0.25\\ \end{array} $	0.020 0.020 0.020 0.020 0.020 0.020 NA NA NA	3.75-4.25 4.25-4.75 5.25-5.75 5.25-5.75 5.25-5.75 5.25-5.75 NA NA NA	3.5-4.5 4-5 5-6 5-6 5-6 5-6 NA NA NA	Vapor only Vapor only Vapor only Vapor only Vapor only Vapor only Vapor only Vapor only Vapor only
$VP-10^3$, ,	NS	0.5	0.25	NA	NA	NA	1 5
VP-10 VP-11 ³	7/22/2009	NS NS						Vapor only
VP-11 $VP-12^3$	7/17/2009	NS NS	0.5 0.5	0.25 0.25	NA NA	NA NA	NA	Vapor only
VP-12 VP-13 ³	7/22/2009 7/22/2009	NS NS	0.5	0.25	NA	NA	NA NA	Vapor only Vapor only
vr-13	7/22/2009	IND	0.5	0.23	INA	INA	INA	vapor only

Abbreviations / Notes

TOC = Top of casing elevation (feet above mean sea level)

¹ = Casing material: Schedule 40 PVC

² = Wells VP-1 through VP-6 are vapor wells

³ = Wells VP-7 through VP-13 are sub-slab vapor points

fbg = Feet below grade

NA = Not applicable

NS = Not surveyed

ATTACHMENT A

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

Former Signal Oil Bulk Plant 20-6127 2301-2311 Blanding Avenue, Alameda, California

1995 Soil and Groundwater Investigation: In February 1995, Geomatrix Consultants, Inc. (Geomatrix) advanced eight soil borings (SB-1 through SB-8) to approximately 10 feet below grade (fbg) in the northwestern portion of the site to evaluate if previous site uses had impacted soil and groundwater quality. Groundwater was not encountered in the borings. Two to three soil samples were collected at various depths from each boring for laboratory analysis. Nineteen samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd); and benzene, toluene, ethylbenzene, and xylenes (BTEX). TPHg was detected in six of the samples at concentrations ranging from 4.0 to 2,000 milligrams per kilogram (mg/kg). TPHd was detected in the majority of the samples at concentrations ranging from 10 to 250 mg/kg. BTEX were also detected in several of the samples (benzene up to 3.7 mg/kg). The highest concentrations of petroleum hydrocarbons generally were detected in borings SB-2 and SB-4 located in the vicinity of the former ASTs and gasoline pump, respectively, between 4 and 7 fbg. One sample from each boring (depths ranging from 0.5 to 3 fbg) was also analyzed for CAM 17 metals. The detected metals concentrations generally appeared to be within the range of natural background levels with the exception of slightly elevated arsenic in a few samples. Arsenic was detected in the samples collected at 1 fbg from borings SB-3, SB-4, and SB-6 at 68 mg/kg, 46 mg/kg, and 130 mg/kg, respectively. As a result, deeper samples collected from borings SB-3 (6.5 fbg) and SB-6 (8 fbg) were also analyzed for arsenic; arsenic was not detected in the sample collected from SB-3, but was detected at 2.5 mg/kg in the sample collected from SB-6. Based on these results, the soil impacted with arsenic appeared to be of limited vertical extent. Three soil samples (SB-4-7', SB-5-6', and SB-8-7') were also analyzed for VOCs, which were not detected. Based on the soil analytical results, a shallow groundwater survey was recommended to evaluate if groundwater had been impacted by petroleum hydrocarbons.

In April 1995, Geomatrix collected grab-groundwater samples from 10 shallow borings (GWS-7 through GWS-16) drilled to depths of 15 to 21.5 fbg at the site. Borings GWS-7 through GWS-12 were located in the northeastern portion of the site adjacent to Alameda Canal to evaluate if impacted groundwater was flowing toward the canal; based on an assumed groundwater flow direction toward the canal. Borings GWS-13 through GWS-15 were located on the southwest and northwest property boundaries in the assumed upgradient and perimeter crossgradient directions to evaluate the quality of groundwater coming onto the site. Boring GWS-16 was located to the northeast of the former ASTs and was drilled approximately 6 feet deeper than the remaining borings to evaluate deeper groundwater quality. The groundwater samples were analyzed for TPHg, BTEX, and TPHd; the samples were filtered by the laboratory to remove turbidity and a silica-gel cleanup was performed to remove non-petroleum organic matter prior to the TPHd analysis. TPHg was detected in the samples collected from borings GWS-8 through GWS-11 at concentrations ranging from 70 (GWS-16) to 22,000 micrograms per liter (μ g/L) (GWS-9). TPHd was detected in the samples collected from borings GWS-8 through GWS-11 at concentrations ranging from 60 (GWS-8) to 1,200 μ g/L

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(GWS-9). Benzene was detected in the samples collected from borings GWS-8 through GWS-10 and GWS-16 at concentrations of $36 \ \mu g/L$, $6,200 \ \mu g/L$, and $880 \ \mu g/L$, respectively. Toluene, ethylbenzene, and xylenes (up to $1,200 \ \mu g/L$) were also detected in several of the samples. The maximum concentrations were detected in boring GWS-9 located downgradient of the gasoline pump and loading rack. Petroleum hydrocarbons were not detected in the upgradient borings GWS-13 through GWS-15. The deeper sample (GWS-16) contained only low to trace hydrocarbon concentrations.

A black granular material was encountered in boring GWS-7 in the northern corner of the site from approximately 2.5 to 6 fbg. This material appeared similar to a small pile of black granular material observed on the northwestern property boundary that appeared to have originated from the adjacent property (a metal fabrication company). A sample of this material was collected and analyzed for TPHd, VOCs, semi-VOCs, and CAM 17 metals. An elevated concentration of copper (1,700 mg/kg) was detected in the sample. The detected concentration did not exceed the Total Threshold Limit Concentration (TTLC) of 2,500 mg/kg, which is the concentration above which a waste may be considered hazardous in California. The sample was also analyzed for soluble copper using the Waste Extraction Test (WET) method; which was detected at 0.04 milligrams per liter (mg/L). The detected soluble lead concentration did not exceed the Soluble Threshold Limit Concentration (STLC) of 25 mg/L, which is also the concentration above which a waste may be considered hazardous in California. Details of this investigation were presented in the report entitled *Soil Investigation and Shallow Groundwater Survey, Northwestern Portion of the Park Street Landing Site*, prepared by Geomatrix and dated September 1995.

1998 RBCA Tier 1 Evaluation: In July 1998, RRM, Inc. (RRM) performed a Tier 1 Risk-Based Corrective Action (RBCA) assessment to evaluate the potential health risks posed by residual petroleum hydrocarbons in soil and groundwater at the site. Based on the results, RRM recommended the collection of site-specific data to complete a Tier 2 RBCA evaluation; the identification of the beneficial uses of groundwater beneath the site; an evaluation of background water quality in Alameda Canal; and to provide evidence that biodegradation was reducing hydrocarbon concentrations. Details of this investigation were presented in the report entitled *Risk-Based Corrective Action (RBCA) Tier 1 Evaluation, Park Street Landing Site*, prepared by RRM and dated July 24, 1998.

1998 Soil and Groundwater Investigation: In October 1998, RRM performed an additional soil and groundwater investigation at the site. The purpose of the investigation was to: 1) collect site-specific data to complete a Tier 2 RBCA evaluation; 2) identify the beneficial uses of groundwater beneath the site; 3) evaluate the background water quality in Alameda Canal; and 4) evaluate whether biodegradation of petroleum hydrocarbons was occurring beneath the site. Four additional borings (SB-9 through SB-12) were advanced to depths of 15 to 18 fbg during the investigation. A total of eight soil samples were collected at various depths from the borings and analyzed for TPHg, TPHd, BTEX, and methyl tertiary butyl ether (MTBE). TPHg was detected in the soil samples collected at 5 and 13 fbg from boring SB-9 (130 and 900 mg/kg, respectively); and in the sample collected at 6 fbg from boring SB-11 (140 mg/kg). TPHd was detected in the soil samples collected at 5, 13, and 15 fbg from boring SB-9 (3,300 mg/kg,

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1,300 mg/kg, and 1.2 mg/kg, respectively); in the sample collected at 5.5 fbg from boring SB-10 (130 mg/kg); and in the sample collected at 6 fbg from boring SB-11 (60 mg/kg). BTEX (up to 3.3 mg/kg) were detected in the soil samples collected from borings SB-9 and SB-11; MTBE (using EPA Method 8020) was only detected in the sample collected at 13 fbg from boring SB-9 (12 mg/kg). Following the initial TPHd analysis, two rounds of silica gel cleanup followed by TPHd analysis were performed on the soil samples from boring SB-9. The detected TPHd concentrations were reduced after each round, indicating that biodegradation was occurring, and natural organic matter was present in the subsurface.

Grab-groundwater samples were collected from each boring and analyzed for TPHg, TPHd, BTEX, and MTBE. TPHg was only detected in the samples collected from borings SB-9 (14,000 μ g/L) and SB-11 (310 μ g/L). TPHd was detected in the samples collected from borings SB-9 (83,000 μ g/L), SB-10 (97 μ g/L), and SB-11 (270 μ g/L). Benzene and MTBE (using EPA Method 8020) were only detected in the sample collected from boring SB-9 (1,400 and 260 μ g/L, respectively); the sample was re-analyzed for MTBE using EPA Method 8260, and MTBE was not detected. Toluene, ethylbenzene, and xylenes (up to 630 μ g/L) were detected in the samples collected from borings SB-9 and SB-11. As with the soil samples, a silica-gel cleanup reduced the detected TPHd concentrations. Based on the depth to water in the borings, and the elevation of the borings, the groundwater flow direction was calculated to be northerly. Based on natural biodegradation indicator parameters in groundwater (dissolved oxygen, oxidation-reduction potential, nitrate, and sulfate), it appeared that petroleum hydrocarbons were being degraded both aerobically and anaerobically; although it appeared that anaerobic processes dominated.

Three grab-water samples (CS-1 through CS-3) were collected from Alameda Canal (Figure 2) and analyzed for TPHg, TPHd, BTEX, and MTBE; which were not detected. Water level measurements were collected from the Alameda Canal and the four temporary wells placed in borings SB-9 through SB-12 to evaluate potential tidal influence on groundwater beneath the site. The fluctuations in borings SB-10 through SB-12 were minimal indicating that groundwater was tidally influenced to a limited degree in these areas. A more significant fluctuation was observed in SB-9; suggesting that groundwater in this area was tidally influenced, and tidal fluctuations would tend to stabilize the petroleum hydrocarbon plume in this area. Two concrete sea walls separated shallow groundwater beneath the site from canal water; likely causing the limited tidal influence. Based on the site data, relevant beneficial uses, and associated water quality parameters, the most applicable beneficial use of groundwater beneath the site was determined to be freshwater replenishment to surface water.

A well survey was performed for a ¹/₂-mile radius around the site. Nine wells were identified within the search radius (one recovery well, one irrigation well, five extraction wells, and two industrial wells). All the wells were either located up-gradient of the site or across the Alameda Canal. Based on the results of the Tier 2 RBCA evaluation, soil and groundwater petroleum hydrocarbon concentrations at the site did not exceed the site-specific target levels (SSTLs). Details of this investigation were presented in the report entitled *Soil and Groundwater Investigation Results, Former Signal Oil Marine Terminal*, prepared by RRM and dated May 7, 1999.

2000 *Monitoring Well Installation:* In December 2000, Gettler-Ryan Inc., under the supervision of Delta Environmental Consultants, Inc. (Delta), installed one groundwater monitoring well (MW-1) along the northeastern portion of the site adjacent to the Alameda Canal. Soil samples were collected at depths of 5, 10, and 15 fbg from the well boring and analyzed for TPHg, TPHd, BTEX, and MTBE. TPHg was only detected in the sample collected at 10 fbg (320 mg/kg). TPHd was only detected in the samples collected at 5 and 10 fbg (30 and 160 mg/kg, respectively). Low concentrations of BTEX were detected in all the samples; MTBE was not detected in any of the samples. The initial groundwater sample collected from the well contained TPHg, TPHd, and benzene at 5,210 μ g/L, 1,100 μ g/L, and 868 μ g/L, respectively. Details of this investigation were presented in the report entitled *Monitoring Well Installation Report*, prepared by Delta and dated April 10, 2001.

2004 *Soil Investigation:* In January 2004, Cambria Environmental Technology, Inc. (Cambria) collected three surface soil samples (S1, S2, and S3) from the bank above the western shore of the Alameda Canal. Sample S2 was collected directly down-slope of well MW-1 near a water seep observed on the slope above the canal. Samples S1 and S3 were collected approximately 70 feet east and 90 feet north of well MW-1, respectively, to evaluate background concentrations. The three samples were analyzed for TPHg, TPHd, BTEX, and MTBE. TPHg, BTEX, and MTBE were not detected in any of the samples. TPHd was detected in samples S1, S2, and S3 at 14 mg/kg, 220 mg/kg, and 220 mg/kg, respectively. The laboratory chromatographs indicated that the hydrocarbon pattern observed in these soil samples was not typical of diesel fuel. Therefore, it was concluded the TPHd detections may have represented either highly-degraded diesel fuel from various historical onsite and nearby operations, or residual organic material of unknown origin present in local fill material. Details of this investigation were presented in the report entitled *Soil Sampling Report*, prepared by Cambria and dated February 18, 2004.

Based on generally decreasing petroleum hydrocarbon concentrations in well MW-1 observed during quarterly monitoring, Cambria submitted a case closure request to ACEH dated January 10, 2006. In response to this request, and in a letter dated October 17, 2007, the ACEH requested the collection of additional data to substantiate the conclusion that petroleum hydrocarbons were not migrating and discharging into Alameda Canal. In addition, the potential for vapor intrusion was to be evaluated. Therefore, CRA prepared and submitted *Soil Boring and Vapor Point Installation Work Plan*, dated January 10, 2008. In a letter dated January 30, 2008, the ACEH approved the work plan, with several provisions.

2008 *Site Investigation:* In July 2008, CRA advanced six soil borings (SB-13 through SB-15 and SB-17 through SB-19) to a maximum depth of 16 fbg, and installed and sampled six permanent soil vapor wells (VP-1 through VP-6) to depths of 4.5 to 6 fbg. Soil boring SB-16 was cleared to 3 fbg but could not be completed due to refusal encountered at three locations (16A, B, and C). Soil boring SB-16 was cleared to 3 fbg but could not be completed due to refusal encountered at three locations (16A, B, and C).

Soil analytical data indicated that the majority of TPHd and TPHg concentrations in soil are generally located in the area of and downgradient of the former ASTs. The highest

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concentrations were detected in boring VP-4 at 5 fbg. Relatively low concentrations of TPHd and TPHg were detected in the perimeter borings. Low concentrations of petroleum-related VOCs were also detected in the majority of the soil samples. The BTEX and VOC concentrations generally did not exceed the ESLs, with the exception of a few samples. Concentrations generally appeared to attenuate or were significantly reduced at 10 fbg. Generally, concentrations of metals were consistent with background levels and only exceeded the ESLs in a few of the samples. Metals in shallow soil across the northwest portion of the site do not appear to be a result of former bulk plant operations. The metals do not appear to have impacted groundwater as only barium was detected in well MW-1.

The highest concentrations of hydrocarbons in groundwater were generally located downgradient of the former ASTs. TPHd, TPHg, and benzene were detected in downgradient boring SB-18 at 19,000 μ g/L, 3,800 μ g/L, and 590 μ g/L, respectively; but only at 1,600 μ g/L, 650 μ g/L, and 3 μ g/L, respectively, in boring SB-19 adjacent to the former large AST. Only relatively low concentrations of TPHd (up to 750 μ g/L) were detected in perimeter borings SB-13, SB-14, and SB-15; and as evidenced by the work performed by RRM, some or most of the detected TPHd may be due to natural organic matter. The extent of the impacted groundwater is well-defined by borings GWS-7, GWS-12 through GWS-15, SB-10 (following silica gel cleanup), and SB-12. Chlorinated solvents were not detected in any of the soil samples collected, and generally were not detected in the groundwater samples with the exception of low concentrations of TCE, cis-1,2-DCE, and vinyl chloride in the sample collected from boring SB-15 in the northeast corner of the site.

The highest hydrocarbon concentrations in soil gas were detected in vapor wells VP-4, VP-5, and VP-6 located in the area of the former ASTs. Significantly lower concentrations were detected in vapor wells VP-1 and VP-2 located downgradient of VP-4. Chlorinated solvents were not detected in the soil vapor samples. Additional details of this investigation are presented in CRA's report entitled *Site Investigation Report*, dated October 2008.

2009 *Monitoring Well Installation and Sub-Slab Vapor Sampling:* In June 2009, CRA installed monitoring wells MW-2 through MW-5 to total depths of 16 to 20.5 fbg in order to further evaluate groundwater quality beneath the site. The new monitoring wells were installed within the former ASTs (MW-3), and north (MW-5), south (MW-2), and east (MW-4) of the former ASTs. Soil analytical data indicated that the majority of TPHd and TPHg concentrations in soil are located north to south through the former ASTs and generally decreases with depth. The highest TPHd concentration detected was from well boring MW-3 at 4 fbg at a concentration of 610 mg/kg. The highest TPHg concentration detected was from well boring MW-2 at 4.5 fbg at 1,100 mg/kg. No petroleum hydrocarbons were detected in perimeter well boring MW-4. No grab-groundwater samples were collected.

CRA also installed sub-slab vapor points beneath the two western buildings at the site in order to further evaluate potential vapor intrusion beneath the buildings. Two sub-slab vapor points (VP-7 and VP-8) were installed inside 2317 Blanding Avenue and five sub-slab vapor points (VP-9 through VP-13) were installed inside 2307 Blanding Avenue. The highest hydrocarbon concentrations in soil gas were detected in vapor points VP-9 and VP-13, located

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west-southwest of the former ASTs. Lower concentrations were detected in vapor points VP-8, and VP-10 through VP-12. All detected concentrations were below the shallow soil gas ESL of 29,000 micrograms per cubic meter ($\mu g/m^3$). Target chlorinated solvents were not detected in the soil vapor samples. Additional details of this investigation are presented in CRA's *Well Installation and Sub-Slab Vapor Sampling Report*, dated September 8, 2009.

ATTACHMENT B

G-R GROUNDWATER MONITORING AND SAMPLING REPORT



TRANSMITTAL

August 27, 2009 G-R #386498

CC: Mr. Mike Bauer

Room 4089

(VIA PDF)

RE:

Chevron EMC

145 S. State College Blvd.,

Brea, California 92821

Chevron #206127 (MTI)

Alameda, California

2301-2337 Blanding Avenue

(Former Signal Oil Marine Terminal)

- TO: Mr. Brian Silva Conestoga-Rovers & Associates 10969 Trade Center Drive, Suite 107 Rancho Cordova, California 95670
- FROM: Deanna L. Harding Project Coordinator Gettler-Ryan Inc. 6747 Sierra Court, Suite J Dublin, California 94568

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	August 25, 2009	Groundwater Monitoring and Sampling Report Well Development Event of June 30, 2009 Third Quarter Event of July 3, 2009

COMMENTS:

Pursuant to your request, we are providing you with a copy of the above referenced report for <u>your</u> use and distribution to the following (via PDF):

Mr. Steven Plunkett, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577 (Distributed by Conestoga-Rovers & Associates via PDF)

Enclosures

trans/206127-SHF

WELL CONDITION STATUS SHEET

Client/Facility #:	Chevron	#206127					Job #	386498			
Site Address:	2301-233	37 Blandir	ng Avenue			•	Event Date:		30-0	9	
City:	Alameda	a, CA				·	Sampler:	5	De	(
WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	BOLTS (M) Missing (R) Replaced	Bott 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.2	0.K	2 K	OK	0.14	oK	D.C	O.K	N	N	12" EMCO/2	No
MW.3					1	ſ	1	A.	1	4	
MW-4										11	
MW-5	V	\vee	\checkmark			\mathbf{V}	$\overline{\mathbf{v}}$	\checkmark	V	1,	
·										2012	
							<u>_</u>				
<u> </u>											· · · · · · · · · · · · · · · · · · ·

Comments

WELL CONDITION STATUS SHEET

Client/Facility #: Site Address: City:		37 Blandir	ng Avenue				Job # Event Date: Sampler:	386498	- 3-0	9	
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_l	0.14	0.16	0.10	O.K	0.K	0.K	0-14	N	N	12" EMCO/2	No
MW.2	1	i	1		A .				•	4	100
mw-3				1						4	
MW-4										4	
mw-5	\checkmark	\checkmark	\checkmark	$\overline{\mathbf{v}}$	$\overline{\mathbf{v}}$	\checkmark	$\overline{\mathbf{v}}$		\mathbf{V}	,1	
		_									
		2									
Comments											

Comments



August 25, 2009 G-R Job #386498

Mr. Mike Bauer Chevron Environmental Management Company 145 S. State College Blvd., Room 4089 Brea, CA 92821

> Well Development of June 30, 2009 Third Quarter Event of July 3, 2009 Groundwater Monitoring & Sampling Report Chevron #206127 (Former Signal Oil Marine Terminal) 2301-2337 Blanding Avenue Alameda, California

Dear Mr. Bauer:

This report documents the most recent groundwater monitoring and sampling events performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater level was measured and the well was checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevation, and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring well and submitted to a state certified laboratory for analyses. The field data sheet for this event is attached. Analytical results are presented in the table(s) listed below. The chain of custody document and the laboratory analytical reports are also attached. All groundwater and decontamination water generated during sampling activities was removed from the site, per the Standard Operating Procedure.

No. 6882

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

Deanna L. Harding Project Coordinator

Douglas JILee Senior Geologist, P.G. No. 6882

Figure 1:	Potentiometric Map
Table 1:	Groundwater Monitoring Data and Analytical Results
Table 2:	Groundwater Analytical Results - Metals
Attachments:	Standard Operating Procedure - Groundwater Sampling
	Field Data Sheets
	Chain of Custody Document and Laboratory Analytical Reports

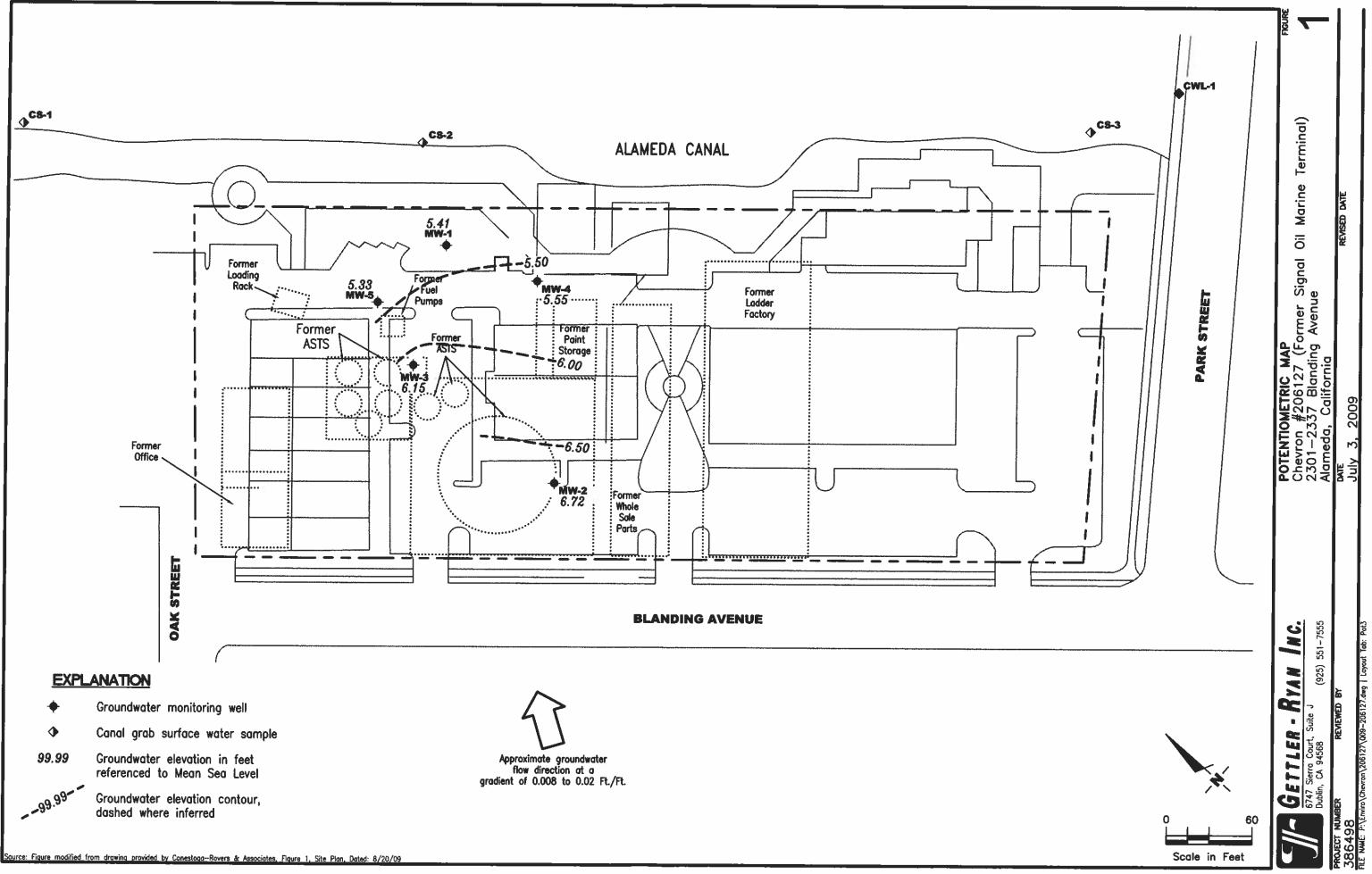


Table 1Groundwater Monitoring Data and Analytical ResultsChevron #206127 (Former Signal Oil Marine Terminal)2301-2337 Blanding Avenue

WELL ID/	TOC*	DTW	GWE	TPH-DRO	TPH-GRO	B	T	E	X	MTBE
DATE	(fL)	(fi.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1										
01/23/01		7.16		1,100 ^{2,3}	5,210 ⁴	868	<50.0	<50.0	<50.0	<250
04/09/01	10.62	8.12	2.50	1,200 ⁶	3,000 ⁵	920	<20	<20	<20	<100
07/30/01	10.62	9.15	1.47	550 ^{3,8}	2,000 ⁷	730	13	<5.0	<5.0	<25
10/08/01	10.62	7.86	2.76	2,200 ⁹	1,200	120	2.4	5.9	6.4	<2.5
01/13/02	10.62	7.02	3.60	3,300 ³	930	320	0.78	0.87	3.8	<2.5
04/08/02	10.62	9.60	1.02	1,200 ³	960	50	1.4	2.6	9.0	<2.5
07/31/02	10.62	9.27	1.35	2,800 ³	930	64	1.4	1.9	11	<5.0
10/15/02	10.62	8.00	2.62	1,000 ³	620	25	0.78	1.4	4.3	<2.5
01/14/03	10.62	7.05	3.57	960 ³	1,600	20	1.3	1.3	<1.5	<2.5
04/15/03	10.62	8.02	2.60	920 ³	870	56	1	1.4	3.1	<2.5
07/16/0310	10.62	10.08	0.54	1,400 ³	780	85	1	0.8	0.7	<0.5
10/18/0310	10.62	8.51	2.11	1,200 ³	640	42	0.8	<0.5	0.5	<0.5
01/22/0410	10.62	8.95	1.67	1,500 ³	440	18	<0.5	<0.5	<0.5	<0.5
04/23/0410	10.62	8.95	1.67	2,200 ³	410	10	<0.5	<0.5	<0.5	<0.5
07/23/0410	10.62	9.21	1.41	1,800 ³	400	6	<0.5	<0.5	<0.5	<0.5
10/22/04 ¹⁰	10.62	8.36	2.26	2,200 ³	150	2	<0.5	<0.5	<0.5	<0.5
01/28/0510	10.62	7.09	3.53	1,200 ³	55	8	<0.5	<0.5	<0.5	<0.5
04/26/0510	10.62	7.84	2.78	480 ³	<50	5	<0.5	<0.5	<0.5	<0.5
07/15/0510	10.62	8.12	2.50	610 ^{3,11}	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/14/05 ¹⁰	10.62	8.07	2.55	920 ^{3,12}	<50	10	<0.5	<0.5	<0.5	<0.5
01/12/06 ¹⁰	10.62	6.98	3.64	960 ^{3,12}	<50	6	<0.5	<0.5	<0.5	<0.5
04/13/06 ¹⁰	10.62	7.04	3.58	1,200 ³	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/13/0610	10.62	7.13	3.49	1,200 ³	92	14	<0.5	<0.5	<0.5	<0.5
10/17/06 ¹⁰	10.62	7.64	2.98	990 ³	<50	3	<0.5	<0.5	<0.5	<0.5
01/16/07 ¹⁰	10.62	7.09	3.53	840 ³	83	4	<0.5	<0.5	<0.5	<0.5
04/17/07 ¹⁰	10.62	7.11	3.51	1,200 ³	57	<0.5	<0.5	<0.5	<0.5	<0.5
07/17/07 ¹⁰	10.62	7.41	3.21	1,100 ³	120	8	<0.5	<0.5	<0.5	<0.5
10/16/07 ¹⁰	10.62	7.55	3.07	750 ³	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/0810	10.62	6.98	3.64	1,700 ³	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/16/08 ¹⁰	10.62	7.36	3.26	1,100 ³	62	<0.5	<0.5	<0.5	<0.5	<0.5
07/16/08 ¹⁰	10.62	7.89	2.73	580 ³	93	3	<0.5	<0.5	<0.5	<0.5

Table 1 Groundwater Monitoring Data and Analytical Results Chevron #206127 (Former Signal Oil Marine Terminal) 2301-2337 Blanding Avenue

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WELL ID/	TOC*	DTW	GWE	TPH-DRO	TPH-GRO	В	T	E	x	MTBE
DATE	(ft.)	(ft.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1 (cont)										
10/15/0810	10.62	7.46	3,16	740 ³	56	0.7	<0.5	<0.5	0.8	<0.5
01/21/0910	10.62	7.19	3,43	3903	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/15/0910	10.62	6.93	3.69	1,4003	80	0.7	<0.5	<0.5	<0.5	<0.5
07/03/09 ¹⁰	13.49	8.08	5.41	1,3003	51	<0.5	<0.5	<0.5	<0.5	<0,5
MW-2										
06/30/09 ¹	10.63	3.80	6.83	-	-		-	-	-	
07/03/09 ¹⁴	10.63	3.91	6.72	<503	<50	<0.5	<0.5	<0.5	<0.5	-
MW-3										
06/30/09 ¹	10.72	4.61	6.11			4	-	2	2	-
07/03/09 ¹⁴	10.72	4.57	6.15	1703	310	3	<0.5	2	<0.5	1
MW-4										
06/30/09 ¹	11.40	6.02	5.38	-		-	-	-	-	-
07/03/09 ¹⁴	11.40	5.85	5.55	< 50³	<50	<0.5	<0.5	<0.5	<0.5	-
MW-5										
)6/30/09 ¹	10.50	5.20	5.30	-		-	-	-	-	1.2
)7/03/09 ¹⁴	10.50	5.17	5.33	1103	930	33	2	0.6	3	
CS-2										
07/30/01	-	-	-	140 ^{3,5}	<50	<0.50	<0.50	<0.50	<0.50	<2.5
0/08/01	-	÷.	4	53 ⁹	<50	<0.50	<0.50	<0.50	<1.5	<2.5
)1/13/02	-	14		<50 ³	<50	<0.50	<0.50	<0.50	<1.5	<2.5
4/08/02	-	Q.	-	77 ³	<50	<0.50	<0.50	<0.50	<1.5	<2.5
7/31/02	-	-	-	<50 ³	<50	<0.50	<0.50	<0.50	<1.5	<2.5

Table 1 Groundwater Monitoring Data and Analytical Results Chevron #206127 (Former Signal Oil Marine Terminal) 2301-2337 Blanding Avenue

WELL ID/	TOC*	DTW	GWE	TPH-DRO	TPH-GRO	В	T	E	x	MTBE
DATE	(fl.)	(ft.)	(msl)	(µg/L)	(pg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
CS-2 (cont)							1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		
10/15/02	+	-	-	<503	<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/14/03	-	-	-	<503	<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/15/03		- H	-	<503	<50	<0.5	<0.5	<0.5	<1.5	<2.5
07/16/0310	-		-	<503	<50	<0.5	0.7	<0.5	0.6	<0.5
10/18/0310	-		-	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/22/0410		-	-	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/23/0410	. 	-	-	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/23/0410	-	-		<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/22/0410	-	-	**	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/28/0510	-		-	<50 ³	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/26/0510	-	-		<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
7/15/0510	-			<501	<50	<0.5	<0.5	<0.5	<0.5	<0.5
0/14/0510		-	=	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/12/0610	-	**	-	<501	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/13/0610	-		-	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/13/0610	-		-	140'	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/17/0610	-		-	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/0710	-		-	<503	<50	<0.5	<0.5	<0.5	<0,5	<0.5
04/17/07 ¹⁰	-			<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/17/0710				<507	<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/16/0710	-	-		<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/0810	-	-		85 ³	<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/16/08 ¹⁰	-			<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
7/16/0810	-	-	-	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
0/15/0810	-	-	-	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5
1/21/0910	-	-	-	<501	<50	<0.5	<0.5	<0.5	<0.5	<0.5
4/15/0910	-		-	86'	<50	<0.5	<0.5	<0.5	<0.5	<0.5
7/03/0910	-	-	-	<503	<50	<0.5	<0.5	<0.5	<0.5	<0.5

Table 1 Groundwater Monitoring Data and Analytical Results Chevron #206127 (Former Signal Oil Marine Terminal) 2301-2337 Blanding Avenue

WELL HD/	TOC*	DTW	GWE	TPH-DRO	TPH-GRO	В	T	E	X	MTBE
DATE	(fl.)	(fl.)	(msl)	(µg/L)	(µg/L)	(#8/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
TRIP BLANK										
TB-LB										
01/23/01					<50.0	<0.500	<0.500	<0.500	<0.500	<2.50
04/09/01					<50	<0.50	<0.50	<0.50	<0.50	<2.5
07/30/01					<50	<0.50	<0.50	<0.50	<0.50	<2.5
QA								0.50	-0.00	-2.5
10/08/01					<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/13/02					<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/08/02					<50	<0.50	<0.50	<0.50	<1.5	<2.5
07/31/02					<50	<0.50	<0.50	<0.50	<1.5	<2.5
10/15/02					<50	<0.50	<0.50	<0.50	<1.5	<2.5
01/14/03					<50	<0.50	<0.50	<0.50	<1.5	<2.5
04/15/03					<50	<0.5	<0.5	<0.5	<1.5	<2.5
07/16/03 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/18/03 ¹⁰					<50	< 0.5	<0.5	<0.5	<0.5	<0.5
01/22/04 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/23/04 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/23/04 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/22/04 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/28/0510					<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/26/05 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/15/05 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/14/05 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/12/06 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/13/06 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/13/06 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/17/06 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/07 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
04/17/07 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/17/07 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/16/07 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/16/08 ¹⁰					<50	<0.5	<0.5	<0.5	<0.5	<0.5

Table 1 Groundwater Monitoring Data and Analytical Results Chevron #206127 (Former Signal Oil Marine Terminal)

2301-2337 Blanding Avenue Alameda, California

WELL ID/	TOC*	DTW	GWE	TPH-DRO	TPH-GRO	B	Т	E	X	MTBE
DATE	<i>(f</i> 1)	(fi.)	(msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(pg/L)	(ng/L)	(µg/L)
QA (cont)										
04/16/0810	-	0401	-		<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/16/0810	-	-			<50	<0.5	<0.5	<0.5	<0.5	<0.5
10/15/0810	-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5
01/21/0910		- 40	-	-	<5013	<0.5	<0.5	<0.5	<0.5	<0.5
04/15/0910		+	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5
07/03/0910		-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<0.5

EXPLANATIONS:

TOC = Top of Casing (ft.) = Feet DTW = Depth to Water GWE = Groundwater Elevation (msl) = Mean sea level TPH = Total Petroleum Hydrocarbons DRO = Diesel Range Organics GRO = 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 CS-2 = Creek Sample QA = Quality Assurance/Trip Blank

* TOC elevations for all wells were surveyed on July 30, 2009, by Morrow Surveying. Vertical Datum is NAVD 88 by GPS observations. TOC elevations were surveyed on January 25, 2001, by Virgil Chavez Land Surveying. The benchmark used for the survey was a City of Alameda benchmark being a cut square at the centerline return, south corner of Oak and Blanding, (Benchmark Elevation = 8.236 feet, NGVD 29).

¹ Well development performed.

- ² Laboratory report indicates unidentified hydrocarbons <C16.
- ³ Analyzed with silica gel cleanup.
- ⁴ Laboratory report indicates weathered gasoline C6-C12.
- ⁵ Laboratory report indicates discrete peaks.
- ⁶ Laboratory report indicates diesel C9-C24 + unidentified hydrocarbons <C16.
- ⁷ Laboratory report indicates gasoline C6-C12.
- ⁸ Laboratory report indicates unidentified hydrocarbons C9-C24.
- ⁹ Analysis performed without silica gel cleanup although was requested on the Chain of Custody.
- ¹⁰ BTEX and MTBE by EPA Method 8260.
- ¹¹ Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range later than #2 fuel.
- ¹² Laboratory report indicates the observed sample pattern includes #2 fuel/diesel and an additional pattern which elutes later in the DRO range.
- ¹³ Laboratory report indicates the original analysis was performed on an instrument where the ending calibration standard failed the method criteria. The sample was originally analyzed approximately 60 minutes after the LCS/LCSD. The LCS/LCSD showed good GRO recovery and the surrogate recovery for this sample was 85%. The sample was reanalyzed from a vial with headspace since only 1 vial was submitted. The results for the original and the reanalysis were similar. The reanalysis was reported.
- ¹⁴ BTEX by EPA Method 8260.

				-			#206127 2301	Tab ter Analy (Former 1 1-2337 Bla Alameda,	Signal Oil anding Av	Marine T enue							
WELL ID/ DATE	(J, Antimony	(1/8H)	Barrag (#g/L)	(Jygu)	(ug/L)	(Line (Toronian) (Line (Line ((L) (L)	Copper	З (µg/L)	(hg/L)	(µg/L)	(J/ga)	2011ver (119/15)	Шру (<i>ну/</i> 2.)	uniperse (48/L)	(1/84) Zinc	(1) Mercury
MW-2 07/03/09	<9.7	<7.2	28.1	<1.4	<2.0	14.6	⊲.1	4. 7	<6.9	<4.9	10.6	<8.9	43	<14.0	12.6	11.6	<0.056
WW-3 07/03/09	<9.7	<7.2	143	<1.4	<2.0	8.5	<2.1	3.3	<6.9	<4.9	7.8	<8.9	<2.3	<14.0	13.8	18.8	<0.056
MW-4)7/03/09	<9.7	<7.2	83.5	<1.4	<2.0	10.0	<2.1	<2.7	<6.9	<4.9	4.5	<8.9	<2.3	<14.0	6.3	15.8	<0.056
MW-5)7/03/09	<9.7	32.7	148	<1.4	<2.0	<3.4	<2.1	3.1	<6.9	<4.9	3.6	<8.9	<2.3	<14.0	<2.5	19.2	<0.056

EXPLANATIONS

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

ANALYTICAL METHODS:

Metals analyzed by EPA Method SW-846 6010B Mercury analyzed by Method SW-7470A

STANDARD OPERATING PROCEDURE -GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to well development, each well is monitored for the presence of free-phase hydrocarbons and the depth to water is recorded. Wells are then developed by alternately surging the well with the bailer, then purging the well with a pump to remove accumulated sediments and draw groundwater into the well. Development continues until the groundwater parameters (temperature, pH, and conductivity) have stabilized.

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, suction, Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. 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 possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. 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. For sampling sets greater than 20 samples, 5% trip blanks are included. 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 IWM to Chemical Waste Management located in Kettleman Hill, California.

Chevron #206127 (Former Signal Oil Marine Terminal) Alameda, CA

WELL DEVELOPMENT EVENT OF June 30, 2009



WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#:	Chevron #206127 2301-2337 Blanding Avenue Alameda, CA			Job Number: Event Date:	<u>386498</u> <u>6-30-09</u> 50 2		
Site Address:							(inclusive)
City:				Sampler:			_
Well ID	MW-2_		[Date Monitored:	6-30	-09	
Well Diameter	2 in	- I.					
Initial Total Dept	th (15.08)ft.	-		Volume	3/4"= 0.02 1"= (.04 2"= 0.17	3"= 0.38
Final Total Dept				Factor (VF)	4"= 0.66 5"= 1		12"= 5.80
Depth to Water	3.80 ft. 11.28		Check if water colum			20 Volume:	gal.
Depth to Water	w/ 80% Recharge	((Height of V	Vater Column x 0.20)	+ DTW]:			
					Time Started Time Comple		(2400 hrs)
Purge Equipment:			ampling Equipment:		Depth to Proc		(2400 hrs) ft
Disposable Bailer			isposable Bailer		Depth to Wat		n ft
Stainless Steel Baile	r <u> </u>		ressure Bailer	<u> </u>	Hydrocarbon		ft
Stack Pump Suction Pump			iscrete Bailer		Visual Confin	nation/Description	1:
Grundfos			eristaltic Pump	<u> </u>	Skimmer (Ab	sorbant Sock (cire	
Peristaltic Pump			ED Bladder Pump ther:		Amt Remove	from Skimmer:_	cie one) gal
QED Bladder Pump		0			Amt Remove	from Well:	gai
Other:					Water Remove Product Trans	ed:	
Start Time (purge Sample Time/Da Approx. Flow Rat	te:/ te:	gpm.	Weather Cor Water Color: Sediment De	s.//y	Odor: 0/ N	faint	
Did well de-water	· II	yes, Time:	Volur	ne:	gal. DTW @ S	ampling:	<u> </u>
Time (2400 hr.)	Volume (gal.)	рН	Conductivity (µmhos/cm - µ€)	Temperature	D.O. (mg/L)	ORP (mV)	
wild 1130	2	6.72	2516	18.7			
1142	_4	1.75	7.522	18.8			_
had 1144		1.1	2518	18.5			
rila 1155		6.86	497	19.0		·	_
erd 1208	_/3	6.82	2512	18.3			_
lend 1215		6.39	2506	<u>18 ·6</u>			
1225	17	6.76	- 2487	-18:1-		<u></u>	
1229	10	<u>(0 · 8 5</u>	<u> </u>	-18.5			-
<u> </u>		<u> 0.01</u>		18:4			
						<u> </u>	_
			ABORATORY IN	FORMATION			
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY		ANALYSES	·]
<u> </u>							
J							
┝━────┤						<u> </u>	
1 1							1

COMMENTS: DEVE

DEVELOP ONLY

Add/Replaced Lock: ____

レ

Add/Replaced Bolt:



WELL MONITORING/DEVELOPMENT **FIELD DATA SHEET**

	Chevron #20	012/	Job Number:	386498	
Site Address: 2301-2337 Bland		landing Avenue	Event Date:	6-30-09	(inclusive
City:	Alameda, CA	\	Sampler:	Jac	·
Well ID	MW-3		Date Monitored:	6-30-09	
Well Diameter	2 in.	.			
Initial Total Depti			Volume	3/4"= 0.02 1"= 0.04 2"=	= 0.17 3"= 0.38
Final Total Depth			Factor (VF)		t.50 t2"= 5.80
Depth to Water	$\frac{1}{4} \cdot 6 = 1$ ft.		umn is less then 0.50		
Deptil to Water	12.64	Check if water coll 	umn is less then 0.50	λη. 	9 7
Dopth to Mater		XVF =	2 x10 case volume =	= Estimated Purge Volume:	<u>2</u> <u>C</u> gal.
Depth to water w	W 80% Recharge	[(Height of Waler Column x 0.2)	0) + DTW]:	Time Started:	(2400 hrs)
Purge Equipment:		Sampling Equipmen		Time Completed:	(2400 hrs)
Disposable Bailer		Disposable Bailer	82.	Depth to Product:	
Stain/ess Steel Bailer		Pressure Bailer		Depth to Water:	
Stack Pump		Discrete Bailer		Hydrocarbon Thickness: Visual Confirmation/Desc	
Suction Pump		Peristattic Pump		Visual Coniirmation/Dest	cription:
Grundfos		QED Bladder Pump		Skimmer / Absorbant So	ck (circle one)
Peristaltic Pump	<u>_</u>	Other:		Arnt Removed from Skirr	mer:gal
QED Bladder Pump	<u> </u>			Amt Removed from Well Water Removed:	: gal
Other:				Product Transferred to:	
Sample Time/Dat		Water Col	onditions;//c_ <u>C</u>	Odor: Y / W	
Sample Time/Dat Approx. Flow Rate Did well de-water Time	e:	gpm. Sediment yes, Time: Vo	or: <u>Gilecia f</u> Description: lume:	gal. DTW @ Sampling:	
Approx. Flow Rate	e:	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	or: <u>Gilena f</u> Description: lume: (Temperature	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP IV)
Approx. Flow Rate Did well de-water Time (2400 hr.)	e: ? If	gpm. Sediment yes, Time: Vo	or: <u>Gilena f</u> Description: lume: (Temperature	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP
Approx. Flow Rate Did well de-water Time	e: ? If	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	or: <u>Gilena f</u> Description: lume: (Temperature	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP
Approx. Flow Rate Did well de-water (2400 hr.) 2 (030 1030 1032	e: ? Volume (gal.) 2 	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	or: <u><u>Gillon</u> Description: <u></u> lume: <u></u> (</u>	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP
Approx. Flow Rate Did well de-water Time (2400 hr.) A C 10 A C 30	e: ? If	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	or:	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP
Approx. Flow Rate Did well de-water (2400 hr.) (2400 hr	e: ? Volume (gal.) 2 	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	or:	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP
Approx. Flow Rate Did well de-water (2400 hr.) (2400 hr	e: ? Volume (gal.) 2 	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	or:	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP
Approx. Flow Rate Did well de-water (2400 hr.) 2 (030 1030 1032	e: ? Volume (gal.) 2 	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	or:	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP
Approx. Flow Rate Did well de-water (2400 hr.) (2400 hr	e: ? Volume (gal.) 2 	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	or:	Odor: Y / W gal. DTW @ Sampling: D.O. 0	R P
Approx. Flow Rate Did well de-water (2400 hr.) (2400 hr	e: ? Volume (gal.) 2 	Water Cold gpm. Sediment yes, Time: Vo pH Conductivity (μ mhos/cm μ S) 6.95 2.612 2.528 6.92 2.534 2.576 6.97 2.534 2.576 6.78 2.576 2.536 6.75 2.541 2.536 6.75 2.541 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536	or: <u><u>Gillenia</u> Description: lume: <u> </u></u>	Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP
Approx. Flow Rate Did well de-water (2400 hr.) (2400 hr	e: ? Volume (gal.) 2 	gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS)	Description: Lume: Temperature (Odor: Y / USP	RP ₩)
Approx. Flow Rate Did well de-water (2400 hr.) $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{10}{20}$	e: ? Volume (gal.) ?	Water Cold gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS) Conductivity (µmhos/cm (µS) 6.95 2.612 2.534 6.92 2.534 2.516 6.91 2.536 2.54/ 6.93 2.534 2.536 6.95 2.536 2.54/ 6.83 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536	Description: Lume: Temperature (Odor: Y / W gal. DTW @ Sampling: D.O. 0	RP ₩)
Approx. Flow Rate Did well de-water (2400 hr.) $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{10}{20}$	e: ? Volume (gal.) ?	Water Cold gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS) Conductivity (µmhos/cm (µS) 6.95 2.612 2.534 6.92 2.534 2.516 6.91 2.536 2.54/ 6.93 2.534 2.536 6.95 2.536 2.54/ 6.83 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536	Description: Lume: Temperature (Odor: Y / USP	RP ₩)
Approx. Flow Rate Did well de-water (2400 hr.) $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{10}{20}$	e: ? Volume (gal.) ?	Water Cold gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS) Conductivity (µmhos/cm (µS) 6.95 2.612 2.534 6.92 2.534 2.516 6.91 2.536 2.54/ 6.93 2.534 2.536 6.95 2.536 2.54/ 6.83 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536	Description: Lume: Temperature (Odor: Y / USP	RP ₩)
Approx. Flow Rate Did well de-water (2400 hr.) $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{10}{20}$	e: ? Volume (gal.) ?	Water Cold gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS) Conductivity (µmhos/cm (µS) 6.95 2.612 2.534 6.92 2.534 2.516 6.91 2.536 2.54/ 6.93 2.534 2.536 6.95 2.536 2.54/ 6.83 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536	Description: Lume: Temperature (Odor: Y / USP	RP ₩)
Approx. Flow Rate Did well de-water (2400 hr.) $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{0}{20}$ $\frac{10}{20}$ \frac	e: ? Volume (gal.) ?	Water Cold gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm (µS) Conductivity (µmhos/cm (µS) 6.95 2.612 2.534 6.92 2.534 2.516 6.91 2.536 2.54/ 6.93 2.534 2.536 6.95 2.536 2.54/ 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.75 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 7.536 2.536 2.536 6.82 2.536 2.536 6.82 2.536 2.536 <td>Description: Lume: Temperature (</td> <td>Odor: Y / USP</td> <td>RP ₩)</td>	Description: Lume: Temperature (Odor: Y / USP	RP ₩)
Approx. Flow Rate Did well de-water (2400 hr.) 2 (010 1030 1032 1032 1032 1032 1045 1045 1056 1059 (1059 (1059 (1059 (1059 (1059 (1059) (10	e:	Water Cold gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm ·µS) Conductivity (µmhos/cm ·µS) 6.95 2.612 6.95 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.92 2.534 6.93 2.534 6.94 2.534 6.95	Description: Lume: Temperature (Odor: Y / USP	RP ₩)
Approx. Flow Rate Did well de-water (2400 hr.) 2 (010 1030 1032 1032 1032 1032 1045 1045 1056 1059 (1059 (1059 (1059 (1059 (1059 (1059) (10	e: ? Volume (gal.) ?	Water Cold gpm. Sediment yes, Time: Vo pH Conductivity (µmhos/cm ·µS) Conductivity (µmhos/cm ·µS) 6.95 2.612 6.95 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.97 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.82 2.534 6.92 2.534 6.93 2.534 6.94 2.534 6.95	Description: Lume: Temperature (Odor: Y / USP	RP ₩)



WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

	Chevron #206127		Job Number:	386498		
Site Address:	2301-2337 Blandi	ng Avenue	- Event Date:	6 - 30 - 09 (inclusive)		
City:	City: Alameda, CA		Sampler:	Joe	(
Well ID	mw- 4		Date Monitored:	6-30-09		
Well Diameter	2 in.			<u>`</u>		
Initial Total Dept	h (19.83)ft.		Volume :	3/4"= 0.02 1"= 0.04 2"	= 0.17 3"= 0.38	
Final Total Depth			Factor (VF)		= 1.50 12"= 5.80	
Depth to Water						
Depth to water	<u>6.02ft</u>	Check if water colu	mn is less then 0.50) n.	D 4	
				= Estimated Purge Volume:	gal.	
Depth to Water v	v/ 80% Recharge ((Heigh	t of Water Column x 0.20) + DTW]:	Time Started:	(2400 h++)	
Durme Equipments				Time Completed:	(2400 hrs) (2400 hrs)	
Purge Equipment:		Sampling Equipment	^L /	Depth to Product:		
Disposable Bailer Stainless Steel Bailer		Disposable Bailer		Depth to Water:	ft ft	
Stack Pump		Pressure Bailer		Hydrocarbon Thickness		
Suction Pump		Discrete Bailer Peristaltic Pump	- /	Visual Confirmation/Des	cription:	
Grundfos	<u> </u>	QED Bladder Pump	<i>+</i>	Skimmer / Absorbant So	ock (circle one)	
Peristaltic Pump		Other:	<i></i>	Amt Removed from Skin	nmer:gal	
QED Bladder Pump	<u></u>			Amt Removed from Wel		
Other:		Č.		Water Removed: Product Transferred to:	<u> </u>	
Sample Time/Dat Approx. Flow Rat			r. trdid	Odor: Y / 🔊	····	
Did well de-water Time (2400 hr.) ad < (2850) ad < (2850) ag = 25 ag = 28 ag = 28 ag = 28 ag = 28 ag = 28			Description: Jime: (\bigcirc / F) $\underline{) Q. 2}$ $\underline{1 Q. 2}$ $\underline{1 Q. 4}$ $\underline{1 Q. 4}$		DRP nV)	
Time (2400 hr.) (2400 hr.) (2400 hr.) af = (0.850) ag = 0.5 ag = 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c} \text{Conductivity} \\ (\mu \text{mhos/cm} - \mu\text{s}) \\ \hline 2315 \\ \hline 2321 \\ \hline 346 \\ \hline 2352 \\ \hline 2352 \\ \hline \end{array}$	Jme: (\bigcirc / F) $1 \bigcirc / F)$ $1 \bigcirc / F)$ $1 \bigcirc / 2$ $1 \bigcirc / 4$ $1 \bigcirc / 7$ $1 \bigcirc / 7$ 1	D.O. C	DRP	
Time (2400 hr.) 44.(0850 09.05 -09.05	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Ime: Volu Conductivity (µmhos/cm - 105) 2 3 1 5 2 3 2 1 2 3 5 1	Jme: (\bigcirc / F) $1 @ - 0 \\ / F)$	D.O. C	DRP nV)	
Time (2400 hr.) (2400 hr.) (2400 hr.) af = (0.850) ag = 0.5 ag = 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Ime: Volu Conductivity (µmhos/cm - 105) 2 3 1 5 2 3 2 1 2 3 5 2 2 3 5 1 2 3 5 1	Jme: (\bigcirc / F) (\bigcirc / F) $1 \bigcirc $	D.O. C (mg/L) (r	DRP nV)	
Time (2400 hr.) (2400 hr.) (2400 hr.) af = (0.850) ag = 0.5 ag = 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Ime: Volu Conductivity (µmhos/cm - 105) 2 3 1 5 2 3 2 1 2 3 5 2 2 3 5 1 2 3 5 1	Jme: (\bigcirc / F) (\bigcirc / F) $1 \bigcirc $	D.O. C (mg/L) (r	DRP nV)	
Time (2400 hr.) (2400 hr.) (2400 hr.) af = (0.850) ag = 0.5 ag = 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Ime: Volu Conductivity (µmhos/cm - 105) 2 3 1 5 2 3 2 1 2 3 5 2 2 3 5 1 2 3 5 1	Jme: (\bigcirc / F) (\bigcirc / F) $1 \bigcirc $	D.O. C (mg/L) (r	DRP nV)	
Time (2400 hr.) (2400 hr.) (2400 hr.) af = (0.850) ag = 0.5 ag = 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Ime: Volu Conductivity (µmhos/cm - 105) 2 3 1 5 2 3 2 1 2 3 5 2 2 3 5 1 2 3 5 1	Jme: (\bigcirc / F) (\bigcirc / F) $1 \bigcirc $	D.O. C (mg/L) (r	DRP nV)	
Time (2400 hr.) (2400 hr.) (2400 hr.) af = (0.850) ag = 0.5 ag = 0	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Ime: Volu Conductivity (µmhos/cm - 105) 2 3 1 5 2 3 2 1 2 3 5 2 2 3 5 1 2 3 5 1	Jme: (\bigcirc / F) (\bigcirc / F) $1 \bigcirc $	D.O. C (mg/L) (r	DRP nV)	

Add/Replaced Lock:

Add/Replaced Bolt: _



WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#: Site Address: City:	2301-2337 Blan Alameda, CA	ding Avenue	Job Number: Event Date:	<u>386498</u> 6,30-09	(inclusive
City:	Alameda, CA		- Somelar	/	
	Alameda, CA		Sampler:	Jec	
Well ID	MW-5		Date Monitored:	6-30-04	
Well Diameter	2 in.				
Initial Total Depth	1 (17.50)A.		Volume 3/	4"= 0.02 1"= 0.04 2"= 0.t	7 3*= 0.38
Final Total Depth	17.90 ft.		Factor (VF)	4"= 0.66 5"= 1.02 6"= 1.5	0 12"= 5.80
Depth to Water	5.20 ft	Check if water col	umn is less then 0.50 t	t.	
Depth to Water w	12.36 xVF	= <u>0.17</u> = <u>2.0</u> eight of Water Column x 0.2	x10 case volume =	Estimated Purge Volume: 2	gal.
	/ oo // Necharge [[ne	signi of water column x 0.2		Time Started:	(2400 hrs)
Purge Equipment:		Sampiing Equipme	nt: 🥑	Time Completed:	(2400 hrs
Disposable Bailer		Disposable Bailer	····· /	Depth to Product:	
Stainless Steel Bailer		Pressure Bailer	/	Depth to Water:	ft
Stack Pump		Discrete Bailer	/	Hydrocarbon Thickness:	ft
Suction Pump		Peristaltic Pump	<u> </u>	Visual Confirmation/Descript	ion:
Grundfos		QED Bladder Pump		Skimmer / Absorbant Sock (circle one)
Peristaltic Pump		Other:	<u> </u>	Amt Removed from Skimmer	rgal
QED Bladder Pump				Amt Removed from Well:	gal
Other:				Water Removed:	<u>.</u>
				Product Transferred to:	
Start Time (purge):	. /	Weather (Conditions:		
Sample Time/Date				2099 9 Ddor: Y / N	
-					
Approx. Flow Rate			Description: /		
Did well de-water?	? If yes	, Time: Vo	lume: ga	al. DTW @ Sampling:	
Time	Volume	One deside the	-	5.0	
(2400 hr.)	(gai.) p	oH Conductivity (µmhos/cm - 49)	Temperature	D.O. ORP	
(1900 111.)	(gai.)			(mg/L) (mV)	
2 0122	2 6.	10 2346	<u> </u>		
0730	- <u>5</u> 6.	<u>81 2353</u>	18.6		
0732	<u> </u>	26 7.350	18.2		
k 0748	11 6.	81 2344	18.4		
0800	14 6.	84 2344	181 -		
0804	110 6	011 3240	18.0		
10 08 16	177 6	21 5214	101		
18 0830	21 6	07 0354	·		
0835	27 6	12 22(1)		·	
	<u></u>	<u> </u>	· - (& · / - -		
		LABORATORY			
SAMPLE ID	(#) CONTAINER RE	FRIG. PRESERV. TYP		ANALYSES	
—	<u> </u>				
		i		·····	
	EVELOP ONLY		/		
W	red Prair 1	ike costs	from well	bunna derala	1.0.
Kernov	and the second second	·/*		- A CALLAND IN CONTRACTOR	

CHEVRON #206127 (Former Signal Oil Marine Terminal) Alameda, CA

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QUARTETLY MONITORING AND SAMPLING EVENT July 3, 2009



Client/Facility#:	Chevron #206127	Job Number:	386498	
Site Address:	2301-2337 Blanding Avenue	Event Date:	7-3-09	- (inclusive)
City:	Alameda, CA	Sampler:	Trac	
Well ID Well Diameter Total Depth Depth to Water Depth to Water Purge Equipment: Disposable Bailer Stainless Steel Baile Stack Pump Suction Pump Grundfos Peristatic Pump QED Bladder Pump Other:	$\frac{M W - 1}{2}$ in. $\frac{17 \cdot 16}{5}$ ft. $\frac{9 \cdot 08}{10}$ ft. W/ 80% Recharge [(Height of Water Column x) Sampling Equip Disposable Bailer Pressure Bailer Discrete Bailer Peristaltic Pump QED Bladder Pum Other:	Date Monitored: Volume 3/4"= 0.02 Factor (VF) 4"= 0.66 column is less then 0.50 ft 5 4 x3 case volume = Es (0.20) + DTW]: 7 < 8 4	Z-Z-O9 1"= 0.04 2"= 0.17 3"= 0.36 5"= 1.02 6"= 1.50 12"= 5.80 stimated Purge Volume:	gal. (2400 hrs) (2400 hrs) ft ft ft ft ft ft ft
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-water (2400 hr.)	te:gpm.	Color: <u>Clear</u> C ent Description: Volume: <u>g</u> al	eac Ddor: (1) / N I. DTW @ Sampling: D.O. ORP (mg/L) (mV)	6.3

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-T	x voa viai	YES	HCL	LANCASTER -	TPH-CRO(8015)/BTEX(8260)
	7_ x500ml ambers	YES	NP	LANCASTER	TPH-DRO-w/sg (8015)
	* x 500ml Poly	YES	HNO3	LANCASTER	CAM 17 METALS
	🔓 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
		_			
	╉╌─────┤				

Add/Replaced Lock: _____

Add/Replaced Bolt: ____



	Chevron #206127 2301-2337 Blanding Avenue	Job Number: Event Date:	<u>386498</u> <u>7-3-09</u>	_ (inclusive)
City:	Alameda, CA	Sampler:	Joe	_
Well ID	mw_2	Date Monitored:	7-3-09	
Well Diameter Total Depth	<u>2</u> in. 15.60 ft.	Volume 3/4"= 0.02 Factor (VF) 4"= 0.66		-
Depth to Water	3,9/ ft. Check if water	column is less then 0.50 x3 case volume = E	ft.	oat.
Depth to Water w	/ 80% Recharge [(Height of Water Column x	0.20) + DTWJ: 6.24	- Time Started:	
Purge Equipment: Disposable Bailer Stainless Steel Bailer Stack Pump Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	Sampling Equip Disposable Baile Pressure Bailer Discrete Bailer Peristaltic Pump QED Bladder Pun Other:	mp	Time Completed: Depth to Product: Depth to Water: Hydrocarbon Thickness: Visual Confirmation/Description Skimmer / Absorbant Sock (circ Amt Removed from Skimmer: Amt Removed from Well: Water Removed: Product Transferred to:	ft ft ft ft ft gal gal
Start Time (purge): Sample Time/Date Approx. Flow Rate Did well de-water? Time (2400 hr.) <u>07 15</u> <u>07 24</u> <u>07 30</u>	e: <u>0740 17-3-0</u> 4 Water (gpm. Sedime	Color: <u>Clen</u> ent Description: Volume: <u> </u>	Ddor IN Madei al. DTW @ Sampling: <u>9.1</u> D.O. ORP (mg/L) (mV)	

	LABORATORY INFORMATION					
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES	
MW-2	🖌 🖌 x voa vial		HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	
	2x500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sg (8015)	
	x 500ml Poly	YES	HNO3	LANCASTER	CAM 17 METALS	
	<u>, x voa vial</u>	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTRF(8260)	
	L					

COMMENTS:

Add/Replaced Lock: _____

Add/Replaced Bolt:



Client/Facility#:	Chevron #206127	Job Number: 3	86498	
Site Address:	2301-2337 Blanding Avenue	Event Date:	7-3-09	- (inclusive)
-	Alameda, CA	Sampler:	Joe	_("""""""""""""""""""""""""""""""""""""
Well ID	mw-3	Date Monitored:	7-2-09	
Well Diameter	2 in.	Volume 3/4"= 0.02	1"= 0.04 2"= 0.17 3"= 0.38	T
Total Depth	17.88 ft.	Factor (VF) 4"= 0.66	5"= 1.02 6"= 1.50 12"= 5.80	
Depth to Water	4.57 ft. Check if water	column is less then 0.50 ft.	F 7	
- Dopth to Water w	13.31 xVF $0.17 = 2.$	26 x3 case volume = Esti	mated Purge Volume:	_ gal.
Depth to water w	/ 80% Recharge [(Height of Water Column x	: 0.20) + DTW]: <u>····</u>	Time Started:	(2400 hrs)
Purge Equipment:	Sampling Equip	mant	Time Completed:	
Disposable Bailer	Disposable Baile		Depth to Product:	
Stainless Steel Bailer	Pressure Bailer		Depth to Water:	ft
Stack Pump	Discrete Bailer		Hydrocarbon Thickness:	ft
Suction Pump	Peristaltic Pump		Visual Confirmation/Description:	
Grundfos	QED Bladder Pur		Skimmer / Absorbant Sock (circl	e one)
Peristaltic Pump	Other:		Amt Removed from Skimmer:	gal
QED Bladder Pump			Amt Removed from Well:	gal
Other:			Water Removed:	
			Product Transferred to:	
Start Time (purge): Sample Time/Date Approx. Flow Rate	: <u>0845 17-2-09</u> Water		Per	······································
Did well de-water?	If yes, Time:	Volume: gal.	DTW @ Sampling: 5.1	3
Time (2400 hr.) 	Volume (gal.) pH Conductivit (µmhos/cm (2.5 7.19 2.46 7.25 2.37 7.16 2.37	y Temperature	D.O. ORP (mg/L) (mV)	

	LABORATORY INFORMATION					
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES	
MW3	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	
	x500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sg (8015)	
	x 500ml Poly	YES	HNO3	LANCASTER	CAM 17 METALS	
<u> </u>	x voa vial	<u>YES</u>	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)	
<u> </u>	·			_		
			·			
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L.						

COMMENTS:

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Add/Replaced Lock: _____

Add/Replaced Bolt:



Client/Facility#: Site Address:	Chevron #206127 2301-2337 Blanding Avenue	Job Number: Event Date:	<u>386498</u> 	_ (inclusive)
City:	Alameda, CA	Sampler:	Joe	-
	mw-ct	Date Monitored:	7-3-09	
Well Diameter Total Depth	2 in. 20,20 ft.	Volume 3/4"≃ 0.02 Factor (VF) 4"= 0.66		
Depth to Water	S . g S ft. Check if wa	ter column is less then 0.50 t	ft.	-
Depth to Water v	<u>14.35</u> xVF <u>●.17</u> = <u>2</u> # 80% Recharge [(Height of Water Colum			_ gal.
Purge Equipment: Disposable Bailer	Sampling Eq		Time Started: Time Completed: Depth to Product:	ft
Stainless Steel Bailer Stack Pump		er	Depth to Water: Hydrocarbon Thickness:	ft
Suction Pump Grundfos Peristaltic Pump QED Bladder Pump Other:	Peristaltic Pur QED Bladder Other:	np Pump	Visual Confirmation/Description: Skimmer / Absorbant Sock (circl Amt Removed from Skimmer: Amt Removed from Well: Water Removed: Product Transferred to:	e one) gal gal
Approx. Flow Rate	e: <u>094017-3-9</u> Wate e:gpm. Sedi	er Color:(ear) ment Description:	Der YIN	
Did well de-water	? If yes, Time:	Volume: ga	al. DTW @ Sampling: <u>6-5</u>	<u>×</u>
Time (2400 hr.) 0915 0422 0430	Volume (gal.) pH Conduc (μ mhos/cr 2.5 7.4/ 22 7.36 2.3 7.28 23		D.O. ORP (mg/L) (mV)	
0915 0422 0430	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	80 <u>19.7</u> 06 <u>19.6</u> 11 <u>19.4</u>		

	LABORATORY INFORMATION					
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES	
Mw-4	🖉 🗴 voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	
	ピンx500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sg (8015)	
	x 500ml Poly	YES	HNO3	LANCASTER	CAM 17 METALS	
	x vea vial	YES	HGL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)	
L						

COMMENTS:

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Add/Replaced Lock: _____

Add/Replaced Bolt:



Client/Facility#:	Chevron #206127		Job Number:	386498	
Site Address:	2301-2337 Blanding	Avenue	Event Date:	7-3-09	(inclusive)
City:	Alameda, CA		Sampler:	Tra	(moldsite)
Well ID	MW-5	Ε	Date Monitored:	7-3-09	
Well Diameter	2 in.	Volum	ne 3/4"= 0.02	2 1"= 0.04 2"= 0.17 3"	·= 0.38
Total Depth	17.90 ft.	Factor			= 5.80
Depth to Water		Check if water colum			
Densk As 141 ()	12.73 XVF 0.	17 = 2.16	x3 case volume =	Estimated Purge Volume:	gal.
Depth to Water	w/ 80% Recharge [(Height of	Water Column x 0.20) +	+ DTW]: 7-69		(2400 hrs)
Purge Equipment:		Sampling Equipment:		Time Completed:	(2400 hrs)
Disposable Bailer		Disposable Bailer	\checkmark		ft
Stainless Steel Baile	r	Pressure Bailer		Depth to Water:	ft
Stack Pump		Discrete Bailer		Visual Confirmation/Descr	
Suction Pump Grundfos		Peristaltic Pump		Skimmer / Absorbant Sock	
Peristaltic Pump		QED Bladder Pump		Amt Removed from Skimn	ner: gal
QED Bladder Pump		Other:		Amt Removed from Well:	gal
Other:				Water Removed: Product Transferred to:	
Start Time (purge): 095	Weather Cor	nditions:	leer	
	te: 103017-3-0		,	Odor: Y / R	
Approx. Flow Rat	te: gpm.	Sediment De			
Did well de-water	r? If yes, Time			gal. DTW @ Sampling: _(6.43
Time	Volume (gal.) pH	Conductivity	Temperature	D.O. ORP	-
(2400 hr.)	volume (gal.) pri	(µmhos/cm - 🕼	(O' F)	(mg/L) (mV)	
1005	2 7.21	2431	18.8		
1012	- t- 6.95	2382	9.0		
1020	6.5 6.87	-2375	<u>ja.4</u> .		
<u>`</u>		<u> </u>			
		LABORATORY IN	FORMATION		
SAMPLE ID	(#) CONTAINER REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES	
MUS	🖉 🖉 🖉 🖉 🖉	HCL	LANCASTER	TPH-GRO(8015)/BTEX(8260)	

-	Z x500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sg (8015)
	x 500ml Poly	YES	HNO3	LANCASTER	CAM 17 METALS
	x yoa vial	YES	HOL	LANCAGTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	· · · · · · · · · · · · · · · · · · ·				
	- 	-			
	╉─────┤		·		
	<u>_</u>			L	<u> </u>
COMMENTS:	Removed	Some	hair line	costs f	com mall.
				0	

Add/Replaced Lock: _____

Add/Replaced Bolt: __



Client/Facility#:	Chevron #20	6127			Job Number:	386498	;	
Site Address:	2301-2337 B	landing	Avenue		Event Date:		3-04	— (inclusive)
City:	Alameda, CA				Sampler:		2	
Well ID	CS-2	-		Da	ate Monitored:		/	-
Well Diameter	<u>2</u> in.	-		Volume		02 1*= 0.04	2"= 0.17 3"= 0.3	38
Total Depth	ft.		[Factor (6"= 1.50 12"= 5.8	80
Depth to Water	ft.	. 🔲 (Check if water	column	is less then 0.5	0 ft.		
		XVF	=		x3 case volume =	Estimated Pu	irge Volume:	gai.
Depth to Water	w/ 80% Recharge	[(Height of \	Water Column x	0.20) +	DTWJ:			
						Time S	Started:	(2400 hrs)
Purge Equipment:			ampiing Equip			Depth	Completed:to Product:	(2400 firs) ft
Disposable Bailer			isposable Bailer			Depth	to Water:	ft
Stainless Steel Baile	er		ressure Bailer			Hydrod	arbon Thickness:	ft
Stack Pump Suction Pump		-	iscrete Bailer			Visual	Confirmation/Description	n:
Grundfos			eristaltic Pump			Skimm	er / Absorbant Sock (cir	
Peristaltic Pump		_	ED Bladder Pun her:			Arnt Re	emoved from Skimmer:_	gal
QED Bladder Pump	<u> </u>	0				Amt Re	ernoved from Well:	gal
Other:							Removed:	
Start Time (purge Sample Time/Da Approx. Flow Ra Did well de-wate	ite: <u>// 2 5 / 7</u> ite:	gpm.	Sedime	Color: nt Des	cription:		@ Sampling:	
Time (2400 hr.)	Volume (gal.)	рН	Conductivity (µmbes/cm - µ		Temperature (C/F)	D.O. (mg/L)	ORP (mV)	
	·							
	·							
			LABORATOF	RY INF	ORMATION			
SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. T	YPE	LABORATORY		ANALYSES	
CS-2		YES	HCL				115)/BTEX(8260)	
	2 x500ml ambers	YES	NP		-LANCASTER_		sg (8015)	
	x voa vial	YES	HCL		LANGASTER	GAM 17 MET	ALS 15)/BTEX+MTBE(8260)	
<u>├</u> ~~	- 6							
<u> </u>			· · · ·					
COMMENTS:	Creek		mple.		<u> </u>			

Add/Replaced Lock: _____

Add/Replaced Bolt: ___

	Chevi ØF i					1					_							8 only		of C		
Facility #: SS#206127-OML G-R#38649 Site Address: 201-2337 BLANDING AVENU Chevron PMMB Lead Consultant/Office: G-R, Inc., 6747 Sierra Cou Consultant/Office: Dearna L. Harding (dear Consultant Prj. Mgr.:	E, ALAME Consultant: It, Suite J, I	DA, CA RASB Dublin, CA c.com)			Matr	rix	mber of Containers			A	naly	885	Req	Co	sted			H = H N = I S = H J w Pos 8021 I Cor	Preser HCI HNO3 H2SO4 alue repuist meet selble for MTBE C nfirm hig	vative C T = Th B = Na O = O forting need lowest det 8250 con confirmation thest hit by	codes niosult aOH ther ded tection mpound on y B260	late limit ds
Semple Identification QA MW-1 MW-2 MW-3 MW-4 MW-5 CS-2	Date Collected	Time Callected 1110 0740 0845 0940 1030 1125		Compositi			CO-B-B-D-B-DA N Total Nun		XXXXX TPH B015 M	8260 MI sos	000	Total Lead			CAM			C Rur	no na	hits by 82 xy's on hi xy's on all Remark	ghest f I hits	nit
Turneround Time Requested (TAT) (please circlest from the second state) STD. LAT 72 hour STD. LAT 72 hour 24 hour 4 day 5 day Data Package Options (please circle if required) DC Summary Type I - Full Fype VI (Raw Data) □ Coelt Deliverable not need WIP (RWQCB) 0		Relinqui Relinqui Relinqui UPS	ished by	h				GI			Tin 140 Tin	18	Rec Rec		ad by ad by:	E.	ref	Re	da	Date Date Date		ne 25

Lancaster Laboratories, Inc., 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 (717) 656-2300 Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

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2425 New Holland Pike, PO Box 12425, Lancesler, PA 17605-2425 - 717-856-2300 Fex: 717-656-2681 - www.lancesterlabs.com

ANALYTICAL RESULTS

Prepared for:

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

RECEIVED

JUL 1 5 2009 GETTLER-RYAN INC. GENERAL CONTRACTORS

925-842-8582 Prepared by:

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

July 16, 2009

SAMPLE GROUP

The sample group for this submittal is 1152276. Samples arrived at the laboratory on Tuesday, July 07, 2009. The PO# for this group is 0015039883 and the release number is BAUER.

Client Description QA-T-090703 NA Water MW-1-W-090703 Grab Water MW-2-W-090703 Grab Water MW-3-W-090703 Grab Water MW-4-W-090703 Grab Water MW-5-W-090703 Grab Water CS-2-W-090703 Grab Water

METHODOLOGY

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

ELECTRONIC CRA c/o Gettler-Ryan COPY TO

Attn: Cheryl Hansen

Lancaster Labs Number 5717041 5717042 5717043 5717044 5717045 5717046 5717047





2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 +717-666-2300 Fex: 717-656-2661+ www.lancesterlabs.com

Questions? Contact your Client Services Representative Jill M Parker at (717) 656-2300

Respectfully Submitted,

Aus And

Marla S. Lord Senior Specialist





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

Page 1 of 1

Lancaster Laboratories Sample No. WW 5717041

QA-T-090703 NA Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 QA

Collected: 07/03/2009

Submitted: 07/07/2009 09:10 Reported: 07/16/2009 at 09:20 Discard: 08/16/2009

Group No. 1152276 CA

Account Number: 10904

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

6127Q

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
	5 8260B GC/MS Vo	latiles	ug/l	ug/1	
06054 06054 06054 06054 06054	Benzene Ethylbenzene Methyl Tertiary Butyl Ether Toluene Xylene (Total)	71-43-2 100-41-4 1634-04-4 108-88-3 1330-20-7	N.D. N.D. N.D. N.D. N.D.	0.5 0.5 0.5 0.5 0.5	1 1 1
SW-846 01728	8015B GC Volat: TPH-GRO N. CA water C6-C12	lles n.a.	ug/l N.D.	ug/1 50	1

General Sample Comments

State of California Lab Certification No. 2116

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysie Date and Time	Analyst	Dilution
01163 01728	BTEX+MTBE by 8260B GC/MS VOA Water Prep TPH-GRO N. CA water C6-C12 GC VOA Water Prep	SW-846 8260B SW-846 5030B SW-846 8015B SW-846 5030B	1 1 1 1	P091901AA P091901AA 09189D20A 09189D20A	07/09/2009 15:35 07/09/2009 15:35 07/09/2009 12:59	Daniel H Heller Daniel H Heller Tyler O Griffin Tyler O Griffin	Factor 1 1 1 1





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

Page 1 of 1

Lancaster Laboratories Sample No. WW 5717042

MW-1-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 MW-1

Collected: 07/03/2009 11:10 by JA

Submitted: 07/07/2009 09:10 Reported: 07/16/2009 at 09:20 Discard: 08/16/2009 Group No. 1152276 CA

Account Number: 10904

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

61271

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Nethod Datection <u>Limit</u>	Dilution Factor
SW-84	68260B GC/MS V	olatiles	ug/l	ug/1	
06054	Benzene	71-43-2	N.D.	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	ī
SW-84	6 8015B GC Vola	tiles	ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	51	50	1
SW-84	5 8015B GC Extra w/Si Ge	actable TPH 1	ug/1	ug/1	
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	1,300	50	1

General Sample Comments

State of California Lab Certification No. 2116

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P091901AA	07/09/2009 16:0	2 Daniel H Heller	1
		SW-846 5030B	1	P091901AA	07/09/2009 16:0		1
	THE PROPERTY OF GIVE	SW-846 8015B	1	09189D20A	07/09/2009 13:4		1
	GC VOA Water Prep	SW-846 5030B	1	09189D20A	07/09/2009 13:4		1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	091880021A	07/08/2009 18:14		1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091880021A	07/08/2009 03:00	Tracy L Schickel	1





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Lancaster Laboratories Sample No. WW 5717043

MW-2-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 MW-2

Collected: 07/03/2009 07:40 by JA

Submitted: 07/07/2009 09:10 Reported: 07/16/2009 at 09:20 Discard: 08/16/2009 Group No. 1152276 CA

Account Number: 10904

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

61272

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Datection Limit	Dilution Factor
	6 8260B	GC/MS Vo	latiles	ug/1	ug/l	
06053	Benzene		71-43-2	N.D.	0.5	_
06053	Ethylbenzene		100-41-4	N.D.	0.5	1
06053	Toluene		108-88-3	N.D.	0.5	1
06053	Xylene (Total)		1330-20-7	N.D.	0.5	1 1
5W-84	6 8015B	GC Volat	ilee	ug/1		-
01728	TPH-GRO N. CA water		n.a.	-	ug/l	
	THE ONO IN. CA WALES	CB-C12	n.a.	N.D.	50	1
3W-84	6 8015B	GC Extrac w/Si Gel	table TPH	ug/1	ug/l	
06610	TPH-DRO CA C10-C28		n.a.	N.D.	50	1
	6 6010B	Metals		ug/1	ug/l	
07044	Antimony		7440-36-0	N.D.	9.7	_
07035	Arsenic		7440-38-2	N.D.	7.2	1
07046	Barium		7440-39-3	28.1	0.60	1
07047	Beryllium		7440-41-7	N.D.	1.4	1
07049	Cadmium		7440-43-9	N.D.	2.0	1
07051	Chromium		7440-47-3	14.6	3.4	1
07052	Cobalt		7440-48-4	N.D.	2.1	1
07053	Copper		7440-50-8	N.D.	2.7	1
7055	Lead		7439-92-1	N.D.	6.9	1
7060	Molybdenum		7439-98-7	N.D.	4.9	1
7061	Nickel		7440-02-0	10.6	1.8	1
07036	Selenium		7782-49-2	N.D.	8,9	1
7066	Silver		7440-22-4	N.D.	2.3	1
7022	Thallium		7440-28-0	N.D.	14.0	1 1
7071	Vanadium		7440-62-2	12.6	2.5	
7072	Zinc		7440-66-6	11.6	8.1	1 1
W-846	7470A	Metals		ug/l	No. (1	
0259	Mercury		7439-97-6	N.D.	ug/l 0,056	1

General Sample Comments

State of California Lab Certification No. 2116

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution	
06053	BTEX by 8260B	SW-846 8260B	1	P091893AA	Date and Time 07/08/2009 23:24	Kelly E Brickley	Factor 1	





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Lancaster Laboratories Sample No. WW 5717043

MW-2-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 MW-2

Collected: 07/03/2009 07:40 by JA

Submitted: 07/07/2009 09:10 Reported: 07/16/2009 at 09:20 Discard: 08/16/2009 Group No. 1152276 CA

Account Number: 10904

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

61272

			Laborator	y S	ample Analysi	s Record			
CAT No.	Analysis Name	Method	Tr	ial#	Batch#	Analysis Date and Ti	lme	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846	5030B	1	P091893AA	07/08/2009		Kelly E Brickley	1
01728	TPH-GRO N. CA water C6-C12	SW-846	8015B	1	09189D20A	07/09/2009	14:04	Tyler O Griffin	ī
01146	GC VOA Water Prep	SW-846	5030B	1	09189D20A	07/09/2009	14:04	Tyler O Griffin	î
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846	8015B	1	091880021A	07/08/2009	18:35	Diane V Do	1
02376	Extraction - Fuel/TPH (Waters)	SW-846	3510C	1	091880021A	07/08/2009	03:00	Tracy L Schickel	1
07044	Antimony	SW-846	6010B	1	091901648001	07/12/2009	23:48	Tara L Snyder	
07035	Arsenic	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07046	Barium	SW-846		1	091901848001	07/12/2009	23:40	Tara L Snyder	1
07047	Beryllium	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07049	Cadmium	SW-846	6010B	ī	091901848001	07/12/2009	23:48	Tara L Snyder	1
07051	Chromium	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07052	Cobalt	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07053	Copper	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07055	Lead	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07060	Molybdenum	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07061	Nickel	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07036	Selenium	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07066		SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07022	Thallium	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07071	Vanadium	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
07072	Zinc	SW-846	6010B	1	091901848001	07/12/2009	23:48	Tara L Snyder	1
00259	Mercury	SW-846	7470A	1	091905713002	07/14/2009	07:24	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846	3005A	1	091901848001	07/10/2009	14:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846	7470A	1	091905713002	07/10/2009	14:49	James L Mertz	1





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Lancaster Laboratories Sample No. WW 5717044

MW-3-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 MW-3

Collected: 07/03/2009 08:45 by JA

Submitted: 07/07/2009 09:10 Reported: 07/16/2009 at 09:20 Discard: 08/16/2009 Group No. 1152276 CA

Account Number: 10904

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

61273

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Nathod Detection Limit	Dilution Fector
	6 8260B	GC/MS Vo	latiles	u g/1	ug/1	
06053	Benzene		71-43-2	1	0.5	
06053	Ethylbenzene		100-41-4	2	0.5	1
06053	Toluene		108-88-3	N.D.	0.5	1
06053	Xylene (Total)		1330-20-7	N.D.	0.5	1
5W-84(5 8015B	GC Volat	iles	ug/1	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	310	50	1
3W-846	5 8015B	GC Extra w/Si Gel	ctable TPH	ug/1	ug/1	
06610	TPH-DRO CA C10-C28		n.a.	170	50	1
5W-846	5 6010 b	Metals		ug/1	ug/1	
07044	Antimony		7440-36-0	N.D.	9,7	
07035	Arsenic		7440-38-2	N.D.	7.2	1
07046	Barium		7440-39-3	143	0.60	1 1
07047	Beryllium		7440-41-7	N.D.	1.4	1
07049	Cadmium		7440-43-9	N.D.	2.0	1
07051	Chromium		7440-47-3	8.5	3.4	1
07052	Cobalt		7440-48-4	N.D.	2.1	1
07053	Copper		7440-50-8	3.3	2.7	1 1
07055	Lead		7439-92-1	N.D.	6.9	1
07060	Molybdenum		7439-98-7	N.D.	4.9	1
07061	Nickel		7440-02-0	7.8	1.8	ī
07036	Selenium		7782-49-2	N.D.	8.9	1
	Silver		7440-22-4	N.D.	2.3	1
07022	Thallium		7440-28-0	N.D.	14.0	ī
	Vanadium		7440-62-2	13.8	2.5	1
07072	Zinc		7440-66-6	18.8	8.1	ī
	7470A	Metals		ug/l	ug/l	
0259	Mercury		7439-97-6	N.D.	0.056	1

General Sample Comments

State of California Lab Certification No. 2116

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	Analyst	Dilution		
06053	BTEX by 8260B	SW-846 8260B	1	P091893AA	Date and Time 07/08/2009 23:50	Kelly E Brickley	Factor 1		





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Lancaster Laboratories Sample No. WW 5717044

MW-3-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 MW-3

Collected: 07/03/2009 08:45 by JA

Submitted: 07/07/2009 09:10 Reported: 07/16/2009 at 09:20 Discard: 08/16/2009 Group No. 1152276 CA

Account Number: 10904

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

61273

Laboratory Sample Analysis Record CAT Analysis Name Method Trial# Batch# Analysis Analyst Dilution No. Date and Tima Factor 01163 GC/MS VOA Water Prep SW-846 5030B 1 P091893AA 07/08/2009 23:50 Kelly E Brickley 1 01728 TPH-GRO N. CA water C6-C12 SW-846 8015B 1 09189D20A 07/09/2009 14:26 Tyler O Griffin 1 01146 GC VOA Water Prep SW-846 5030B 1 09189D20A 07/09/2009 14:26 Tyler O Griffin 1 06610 TPH-DRO CA C10-C28 w/ Si SW-846 8015B 1 091880021A 07/08/2009 17:53 Diane V Do 1 Gel 02376 Extraction - Fuel/TPH SW-846 3510C 1 091880021A 07/08/2009 03:00 Tracy L Schickel 1 (Waters) 07044 Antimony SW-846 6010B 1 091901848001 Tara L Snyder 07/12/2009 23:52 1 07035 Arsenic SW-846 6010B 1 091901848001 07/12/2009 23:52 Tara L Snyder 1 07046 Barium SW-846 6010B 1 091901848001 07/12/2009 23:52 Tara L Snyder 1 07047 Beryllium SW-846 6010B 07/12/2009 23:52 1 091901848001 Tara L Snyder 1 07049 Cadmium SW-846 6010B 1 091901848001 07/12/2009 23:52 Tara L Snyder 1 07051 Chromium SW-846 6010B 1 091901848001 07/12/2009 Tara L Snyder 23:52 1 07052 Cobalt SW-846 6010B 1 091901848001 07/12/2009 Tara L Snyder 23:52 1 07053 Copper SW-846 6010B 1 091901848001 07/12/2009 23:52 Tara L Snyder 1 07055 Lead SW-846 6010B 1 091901848001 07/12/2009 23:52 Tara L Snyder 1 07060 Molvbdenum SW-846 6010B 1 091901848001 07/12/2009 23:52 Tara L Snyder 1 07061 Nickel SW-846 6010B 1 091901848001 Tara L Snyder 07/12/2009 23:52 1 07036 Selenium SW-846 6010B 1 091901848001 Tara L Snyder 07/12/2009 23:52 1 07066 Silver SW-846 6010B 1 091901848001 07/12/2009 23:52 Tara L Snyder 1 07022 Thallium SW-846 6010B 1 091901848001 07/12/2009 23:52 Tara L Snyder 1 07071 Vanadium SW-846 6010B 091901848001 1 07/12/2009 23:52 Tara L Snyder 1 07072 Zinc SW-846 6010B 091901848001 1 07/12/2009 23:52 Tara L Snyder 1 00259 Mercury SW-846 7470A 091905713002 1 07/14/2009 Damary Valentin 07:29 1 01848 WW SW846 ICP Digest (tot SW-846 3005A 1 091901848001 07/10/2009 14:43 James L Mertz 1 rec) 05713 WW SW846 Hg Digest SW-846 7470A 1 091905713002 07/10/2009 14:49 James L Mertz 1





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Lancaster Laboratories Sample No. WW 5717045 MW-4-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 MW-4 Collected: 07/03/2009 09:40 by JA Submitted: 07/07/2009 09:10 Reported: 07/16/2009 09:10 Discard: 08/16/2009 Content of the second sec

61274

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-84	6 8260B	GC/MS Vo	latiles	ug/1	ug/l	
06053	Benzene	•	71-43-2	N.D.	-	
06053	Ethylbenzene		100-41-4	N.D.	0.5	1
06053	Toluene		108-88-3	N.D.	0.5	1
06053	Xylene (Total)		1330-20-7	N.D.	0.5	1
	• • • • • • • • • • • • • • • • • • • •		1330-20-7	N.D.	0.5	1
SW-84(6 8015B	GC Volat	iles	ug/l	ug/1	
01728	TPH-GRO N. CA water	C6-C12	n.a.	N.D.	•	
			11.61.	N.D.	50	1
3W-84(6 8015B	GC Extra	ctable TPH	ug/l	ug/1	
		w/Si Gel		-	-3/ -	
06610	TPH-DRO CA C10-C28		n.a.	N.D.	50	
				N.D.	50	1
	5 6010B	Metals		ug/1	ug/l	
07044	Antimony		7440-36-0	N.D.	9.7	
07035	Arsenic		7440-38-2	N.D.	7.2	1
07046	Barium		7440-39-3	83.5	0.60	1
07047	Beryllium		7440-41-7	N.D.	1.4	1
07049	Cadmium		7440-43-9	N.D.	2.0	1
07051	Chromium		7440-47-3	10.0		1
07052	Cobalt		7440-48-4	N.D.	3.4 2.1	1
07053	Copper		7440-50-8	N.D.		1
07055	Lead		7439-92-1	N.D.	2.7 6.9	1
	Molybdenum		7439-98-7	N.D.	6.9 4.9	1
	Nickel		7440-02-0	4.5	4.9	1
	Selenium		7782-49-2	N.D.		1
	Silver		7440-22-4	N.D.	8.9	1
	Thallium		7440-28-0	N.D.	2.3	1
	Vanadium		7440-62-2	6.3	14.0	1
07072	Zinc		7440-66-6	15.8	2.5 8.1	1
					0.1	1
		Metals		ug/l	ug/1	
0259	Mercury		7439-97-6	N.D.	0,056	

General Sample Comments

State of California Lab Certification No. 2116

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

		Laborat	ory Sa	ample Analysi	s Record		
CAT No.	Analysis Name	Nethod	Trial#	Batch#	Analysis	Analyst	Dilution
06053	BTEX by 8260B	SW-846 8260B	1	P091893AA	Date and Time 07/09/2009 00:44	Kelly E Brickley	Pactor



Facility# 206127 Job# 386498 GRD

MW-4-W-090703 Grab Water

Collected: 07/03/2009 09:40

Submitted: 07/07/2009 09:10

Reported: 07/16/2009 at 09:20

Discard: 08/16/2009



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by JA

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Lancaster Laboratories Sample No. WW 5717045

2301-2337 Blanding-Alameda T06019744728 NW-4

Group No. 1152276 CA

Account Number: 10904

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

61274

Laboratory Sample Analysis Record CAT Analysis Name Mathod Trial# Batch# Analysis Analyst Dilution No. Date and Time Factor 01163 GC/MS VOA Water Prep SW-846 5030B 1 P091893AA 07/09/2009 00-44 Kelly E Brickley 1 01728 TPH-GRO N. CA water C6-C12 SW-846 8015B 09189D20A 1 07/09/2009 14:48 Tyler O Griffin 1 GC VOA Water Prep 01146 SW-846 5030B 09189D20A 1 07/09/2009 14:48 Tyler O Griffin 1 06610 TPH-DRO CA C10-C28 w/ Si SW-846 8015B 1 091880021A 07/08/2009 18:56 Diane V Do 1 Gel 02376 Extraction - Fuel/TPH SW-846 3510C 1 091880021A 07/08/2009 03:00 Tracy L Schickel 1 (Waters) 07044 Antimony SW-846 6010B 1 091901848001 07/12/2009 23:57 Tara L Snyder 1 07035 Arsenic SW-846 6010B 091901848001 1 07/12/2009 23:57 Tara L Snyder 1 07046 Barium SW-846 6010B 091901848001 1 07/12/2009 23:57 Tara L Snyder 1 07047 Bervllium SW-846 6010B 1 091901848001 07/12/2009 23:57 Tara L Snyder 1 07049 Cadmium SW-846 6010B 1 091901848001 07/12/2009 23:57 Tara L Snyder 1 07051 Chromium SW-846 6010B 1 091901848001 07/12/2009 23:57 Tara L Snyder 1 07052 Cobalt SW-846 6010B 091901848001 1 07/12/2009 23:57 Tara L Snyder 1 07053 Copper SW-846 6010B 1 091901848001 07/12/2009 23:57 Tara L Snyder 1 07055 Lead SW-846 6010B 1 091901848001 07/12/2009 23:57 Tara L Snyder 1 07060 Molybdenum SW-846 6010B 091901848001 1 07/12/2009 23:57 Tara L Snyder 1 07061 Nickel SW-846 6010B 091901848001 1 07/12/2009 Tara L Snyder 23:57 1 07036 Selenium SW-846 6010B 1 091901848001 Tara L Snyder 07/12/2009 23:57 1 07066 Silver SW-846 6010B 091901848001 1 07/12/2009 23:57 Tara L Snyder 1 07022 Thallium SW-846 6010B 091901848001 1 07/12/2009 23:57 Tara L Snyder 1 07071 Vanadium SW-846 6010B 091901848001 1 07/12/2009 23:57 Tara L Snyder 1 07072 Zinc SW-846 6010B 1 091901848001 07/12/2009 23:57 Tara L Snyder 1 00259 Mercury SW-846 7470A 1 091905713002 07/14/2009 07:30 Damary Valentin 1 01848 WW SW846 ICP Digest (tot SW-846 3005A 07/10/2009 14:43 1 091901848001 James L Mertz 1 rec) 05713 WW SW046 Hg Digest SW-846 7470A 1 091905713002 07/10/2009 14:49 James L Mertz 1





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Lancaster Laboratories Sample No. WW 5717046 Group No. 1152276 CA MW-5-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 MW-5 Collected: 07/03/2009 10:30 by JA Submitted: 07/07/2009 09:10 Chevron

Reported: 07/16/2009 at 09:20 Discard: 08/16/2009

Account Number: 10904

6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

61275

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Nethod Detaction <u>Limit</u>	Dilution Factor
	5 8260B	GC/MS Vol	latiles	ug/l	ug/l	
06053	Benzene		71-43-2	33	0.5	1
06053	Ethylbenzene		100-41-4	0.6	0.5	1
06053	Toluene		108-88-3	2	0.5	1
06053	Xylene (Total)		1330-20-7	3	0.5	1
3W-846	5 8015B	GC Volati	les	ug/1	ug/l	
01728	TPH-GRO N. CA water		n.a.	930	50	1
W-846	8015B		table TPH	ug/l		
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	w/Si Gel	cable TPA	ug/1	ug/l	
06610	TPH-DRO CA C10-C28	w/ Si Gel	n.a.	110	50	1
W-846	6010B	Metals		ug/l	ug/l	
07044	Antimony		7440-36-0	N.D.	9.7	1
	Arsenic		7440-38-2	32.7	7.2	1
07046	Barium		7440-39-3	148	0,60	1
	Beryllium		7440-41-7	N.D.	1.4	1
	Cadmium		7440-43-9	N.D.	2.0	1
	Chromium		7440-47-3	N.D.	3.4	1
	Cobalt		7440-48-4	N.D.	2.1	1
	Copper		7440-50-8	3.1	2.7	1
	Lead		7439-92-1	N.D.	6.9	1
	Molybdenum		7439-98-7	N.D.	4.9	1
	Nickel		7440-02-0	3.6	1.8	1
	Selenium		7782-49-2	N.D.	8.9	1
	Silver		7440-22-4	N.D.	2.3	1
	Thallium		7440-28-0	N.D.	14.0	1
	Vanadium		7440-62-2	N.D.	2.5	1
7072	Zinc		7440-66-6	19.2	8.1	1
W-846	7470A	Metals		ug/l	ug/l	
0259	Mercury		7439-97-6	N.D.	0.056	1

General Sample Comments

State of California Lab Certification No. 2116

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

		Laborat	ory Sa	mple Analysi	s Record		
CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis	Analyst	Dilution
06053	BTEX by 8260B	SW-846 8260B	1	P091893AA	Date and Time 07/09/2009 01:11	Kelly E Brickley	Factor 1





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Lancaster Laboratories Sample No. WW 5717046

MW-5-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 MW-5

Collected: 07/03/2009 10:30 by JA

Submitted: 07/07/2009 09:10 Reported: 07/16/2009 at 09:20 Discard: 08/16/2009 Group No. 1152276 CA

Account Number: 10904

Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

61275

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis	2	Analyst	Dilution
01163	OC/MC VON Materia Prov				Date and T:			Factor
	GC/MS VOA Water Prep	SW-846 5030B	1	P091893AA	07/09/2009	01:11	Kelly E Brickley	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169D20A	07/09/2009	15:09	Tyler O Griffin	1
01146	······································	SW-846 5030B	1	09189D20A	07/09/2009	15:09	Tyler O Griffin	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	091880021A	07/08/2009	19:16	Diane V Do	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	l	091880021A	07/08/2009	03:00	Tracy L Schickel	1
07044	Antimony	SW-846 6010B	г	091901848001	07/13/2009	00;01	Tara L Snyder	-
07035	Arsenic	SW-846 6010B	1	091901848001	07/13/2009	00:01	Tara L Snyder	1
07046	Barium	SW-846 6010B	-	091901848001	07/13/2009	00:01	Tara L Snyder	1
07047	Beryllium	SW-846 6010B	,	091901848001	07/13/2009	00:01		T
07049	Cadmium	SW-846 6010B	1	091901848001	07/13/2009		Tara L Snyder	1
07051	Chromium	SW-846 6010B	1	091901848001	07/13/2009	00:01	Tara L Snyder	1
07052	Cobalt	SW-846 6010B	1	091901848001	07/13/2009	00:01	Tara L Snyder	1
07053	Copper	SW-846 6010B	1	091901848001		00:01	Tara L Snyder	1
07055	Lead	SW-846 6010B	1	091901848001	07/13/2009	00:01	Tara L Snyder	1
07060	Molybdenum	SW-846 6010B	1	091901848001	07/13/2009	00:01	Tara L Snyder	1
07061	· · · .	SW-846 6010B	-	091901848001	07/13/2009	00:01	Tara L Snyder	1
07036	Selenium	SW-846 6010B	1		07/13/2009	00:01	Tara L Snyder	1
07066	Silver	SW-846 6010B	1	091901848001	07/13/2009	00:01	Tara L Snyder	1
07022	Thallium		1	091901848001	07/13/2009	00:01	Tara L Snyder	1
07071	Vanadium	SW-846 6010B	1	091901846001	07/13/2009	00:01	Tara L Snyder	1
07072	Zinc	SW-846 6010B	1	091901848001	07/13/2009	00:01	Tara L Snyder	1
00259		SW-846 6010B	1	091901848001	07/13/2009	00:01	Tara L Snyder	1
	Mercury	SW-846 7470A	1	091905713002	07/14/2009	07:31	Damary Valentin	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	091901848001	07/10/2009	14:43	James L Mertz	1
05713	WW SW846 Hg Digest	SW-846 7470A	1	091905713002	07/10/2009	14:49	James L Mertz	1





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Lancaster Laboratories Sample No. WW 5717047	Group No. 1152276 CA
CS-2-W-090703 Grab Water Facility# 206127 Job# 386498 GRD 2301-2337 Blanding-Alameda T06019744728 CS-2	
Collected: 07/03/2009 11:25 by JA	Account Number: 10904
Submitted: 07/07/2009 09:10 Reported: 07/16/2009 at 09:20 Discard: 08/16/2009	Chevron 6001 Bollinger Canyon Rd L4310 San Ramon CA 94583

127C2

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-840	5 8260B	GC/MS Vola	tiles	ug/l	ug/l	
06054	Benzene		71-43-2	N.D.	0,5	1
06054	Ethylbenzene		100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Buty	1 Ether	1634-04-4	N.D.	0.5	1
06054	Toluene		108-88-3	N.D.	0,5	1
06054	Xylene (Total)		1330-20-7	N.D.	0.5	1
SW-846	5 8015B	GC Volatil	.es	ug/l	ug/l	
01728	TPH-GRO N. CA water	C6-C12	n.a.	N.D.	50	1
SW-846		GC Extract w/Si Gel	able TPH	ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w	/ Si Gel	n.a.	N.D.	50	1

State of California Lab Certification No. 2116

General Sample Comments

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

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P091901AA		00 D	FACLOI
01162	GC/MS VOA Water Prep		÷.			28 Daniel H Heller	1
		SW-846 5030B	1	P091901AA	07/09/2009 16:	28 Daniel H Heller	1
01728	The set of an and the off	SW-846 8015B	1	09190A20A	07/09/2009 23:		1
01146	GC VOA Water Prep	SW-846 5030B	1	09190A20A	07/09/2009 23:		1
06610	TPH-DRO CA C10-C28 w/ Si	SW-846 8015B	1	091880021A			+
	Gel	01 040 00105	-	091080021A	07/08/2009 19:	37 Diane V Do	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091880021A	07/08/2009 03:	00 Tracy L Schickel	1





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Quality Control Summary

Client Name: Chevron Reported: 07/16/09 at 09:20 AM

Group Number: 1152276

Matrix QC may not be reported if 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.

Laboratory Compliance Quality Control

Analysis Name	Blank <u>Result</u>	Blank <u>MDL</u>	Report <u>Units</u>	LCS <u>%RBC</u>	LCSD <u>%REC</u>	LCS/LCSD Limits	RPD	RPD Max
Batch number: P091893AA	Sample	number(s): 5	717043-571	7046				
Benzene	N.D.	0.5	ug/l	95	97	80-116	1	30
Ethylbenzene	N.D.	0.5	ug/l	94	95	80-113	i	30
Toluene	N.D.	0.5	uq/l	92	93	80-115	1	30
Xylene (Total)	N.D.	0.5	ug/l	93	94	81-114	ō	30
-			37		24	01 114	v	30
Batch number: P091901AA	Sample	number(s): 51	717041-5717	042,5717	047			
Benzene	N.D.	0.5	ug/l	99	98	80-116	1	30
Ethylbenzene	N.D.	0.5	ug/l	97	97	80-113	0	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	105	106	78-117	ŏ	30
Toluene	N.D.	0.5	ug/l	95	94	80-115	1	30
Xylene (Total)	N.D.	0.5	ug/l	96	97	81-114	ī	30
	_						-	
Batch number: 09189D20A		number(s): 57						
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	127	118	75-135	7	30
Batch number: 09190A20A	0							
TPH-GRO N. CA water C6-C12		number(s): 57						
IPR-GRO N. CA Water C6-C12	N.D.	50.	ug/l	118	118	75-135	0	30
Batch number: 091880021A	Sample	number(s): 57	17047 5717	047				
TPH-DRO CA C10-C28 w/ Si Gel	N.D.	32.	uq/l	101	96	60. 104	-	
	R . D .	J2.	ug/1	101	20	60-124	5	20
Batch number: 091901848001	Sample	number(s): 57	17043-5717	046				
Antimony	N.D.	9.7	ug/l	102		88-111		
Arsenic	N.D.	7.2	ug/l	102		80-120		
Barium	N.D.	0.60	uq/l	99		90-110		
Beryllium	N.D.	1.4	ug/l	97		90-112		
Cadmium	N.D.	2.0	ug/l	98		90-112		
Chromium	N.D.	3.4	ug/l	99		90-110		
Cobalt	N.D.	2.1	ug/l	101		90-110		
Copper	N.D.	2.7	ug/l	101		90-112		
Lead	N.D.	6.9	ug/l	98		80-120		
Molybdenum	N.D.	4.9	ug/1	102		90-110		
Nickel	N.D.	1.8	uq/l	99		90-111		
Selenium	N.D.	8.9	ug/l	100		80-120		
Silver	N.D.	2.3	uq/l	104		83-120		
Thallium	N.D.	14.0	ug/l	98		85-113		
Vanadium	N.D.	2.5	ug/l	103		90-110		
Zinc	N.D.	8.1	ug/1	98		90-111		
			2.					
Batch number: 091905713002		number(s): 57	17043-57170	046				
Mercury	N.D.	0.056	ug/l	98		80-120		

*- Outside of specification

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





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Quality Control Summary

Client Name: Chevron Reported: 07/16/09 at 09:20 AM

Group Number: 1152276

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

Analysis Name	MS <u>\rec</u>	nsd <u>¥rec</u>	MS/MSD Limits	<u>RPD</u>	RPD <u>MAX</u>	BKG <u>Conc</u>	DUP <u>Conc</u>	DUP <u>RPD</u>	Dup RPD <u>Max</u>
Batch number: P091893AA	Sample	number(s)	: 5717043	-571704	6 UNSP	K: 5717044			
Benzene	100		80-126						
Ethylbenzene	98		77-125						
Toluene	97		80-125						
Xylene (Total)	99		79-125						
Batch number: P091901AA	Sample	number(s)	: 5717041	-571704	2.5717	047 UNSPK:	P717128		
Benzene	106		80-126			Jev onder.	£/1/170		
Ethylbenzene	104		77-125						
Methyl Tertiary Butyl Ether	108		72-126						
Toluene	102		80-125						
Xylene (Total)	103		79-125						
Batch number: 09189D20A	Sample	number(s)	: 5717041	-571704	6 UNSPI	C: P717103			
TPH-GRO N. CA water C6-C12	52*		63-154						
Batch number: 09190A20A	Sample	number(s)	: 5717047	UNSPK:	571704	7			
TPH-GRO N. CA water C6-C12	118		63-154	_					
Batch number: 091901848001	Sample	number(s)	: 5717043	-571704	6 UNSPR	C: P716114	BKG: P716114	1	
Antimony	105	106	87-122	1	20	N.D.	N.D.	0 (1)	20
Arsenic	106	108	75-125	3	20	N.D.	N.D.	0 (1)	20
Barium	98	101	78-118	2	20	38.8	37.7	3	20
Beryllium	98	102	87-114	4	20	N.D.	N.D.	0 (1)	20
Cadmium	96	99	83-116	3	20	N.D.	N.D.	0 (1)	20
Chromium	100	103	81-120	4	20	8.8	7.9	12 (1)	20
Cobalt	97	100	87-112	2	20	N.D.	N.D.	0 (1)	20
Copper	102	105	86-122	4	20	3.2	2.9	9 (1)	20
Lead	98	100	75-125	1	20	N.D.	N.D.	0 (1)	20
Molybdenum	104	106	89-112	2	20	N.D.	N.D.	0 (1)	20
Nickel	96	97	86-115	2	20	7.1	6.2	12 (1)	20
Selenium	100	102	75-125	2	20	N.D.	N.D.	0 (1)	20
Silver	105	109	75-125	3		N.D.	N.D.	0 (1)	20
Thallium	95	98	83-116	3		N.D.	N.D.	0 (1)	20
Vanadium	104	108	90-111	4	20	7.8	6.9	13 (1)	20
Zinc	100	102	85-117	2		N.D.	N.D.	0 (1)	20
Batch number: 091905713002	Sample	number(s):	5717043-	5717046	5 UNSPK	: 5717043 1	BKG: 5717043		
Mercury	114	101	80-120	12		N.D.	N.D.	0 (1)	20

Surrogate Quality Control

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

Analysis Name: BTEX by 8260B Batch number: P091893AA Dibromofluorometha

Dibromofluoromethane 1,2-Dichloroethane-d4 Toluene-d8 4-Bromofluorobenzene

*- Outside of specification

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





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Quality Control Summary

		Surrogate O	uality Control	
5717043	90	91	90	89
5717044	90	90	91	91
5717045	90	91	91	90
5717046	90	92	91	90
Blank	90	92	91	90
LCS	92	95	90	90
LCSD	91	94	91	90
MS	91	93	91	90
Limits:	80-116	77-113	80-113	78-113
Analysis : Batch num	Name: BTEX+MTBE by 8260B ber: P091901AA			
Button India	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzer
5717041	94	88	90	91
5717042	94	92	91	93
5717047	94	92	90	92
Blank	94	91	90	90
LCS	93	94	91	93
LCSD	93	92	91	93
1S	95	94	90	92
	00 110	77-113	80-113	78-113
Limits: Analysis M Batch numb	80-116 Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F			/0-113
Analysis M Batch numb 5717041 5717042	Name: TPH-GRO N. CA water (ber: 09189D20A Trifluorotoluene-F 106 104			
Analysis M Batch numb 5717041 5717042 5717043	Name: TPH-GRO N. CA water (ber: 09189D20A Trifluorotoluene-F 106 104 103			
Analysis 1 Batch numb 5717041 5717042 5717043 5717043	Name: TPH-GRO N. CA water (ber: 09189D20A Trifluorotoluene-F 106 104 103 106			
Analysis M Batch numb 5717041 5717042 5717043 5717044 5717045	Name: TPH-GRO N. CA water (ber: 09189D20A Trifluorotoluene-F 106 104 103 106 103			
Analysis 1 Batch numb 5717041 5717042 5717043 5717045 5717045 5717045	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121			
Analysis 1 Batch numb 5717041 5717042 5717043 5717043 5717044 5717045 5717046 11ank	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103			
Analysis M Batch numb 5717041 5717042 5717043 5717043 5717044 5717045 5717046 81 ank 4CS	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103 121 103 131			
Analysis) Batch numb 5717041 5717042 5717043 5717044 5717045 5717046 Blank LCS LCSD	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103			
Analysis M Batch numb	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103 131 130			
Analysis M Batch numb 5717041 5717042 5717043 5717044 5717044 5717044 5717046 5717046 5717046 5717046 5717046 5717046 5717046 5717046 5717046 5717045 5717049 5717044 5717044 5717044 5717044 5717044 5717044 5717044 5717044 5717044 5717044 5717044 5717044 5717044 5717044 5717045 571705 5705 5	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103 131 130 123	26-C12		/0-113
Analysis M Batch numb 5717041 5717042 5717043 5717044 5717045 5717046 Blank 4CS 4CSD IS 4CSD IS 4CSD IS 400000000000000000000000000000000000	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 121 103 121 130 123 63-135 Name: TPH-GRO N. CA water Cover: 09190A20A Trifluorotoluene-F	26-C12		
Analysis M Batch numb 5717041 5717042 5717043 5717044 5717045 5717046 Blank CCS CCS CCS CCS Mis minits: nalysis N atch numb 717047	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103 131 130 123 63-135 Name: TPH-GRO N. CA water C per: 09190A20A	26-C12		/0-113
Analysis M Batch numb 5717041 5717042 5717043 5717044 5717045 5717046 Hank CS CSD IS cimits: nalysis N atch numb 717047 lank	Name: TPH-GRO N. CA water (Der: 09189D20A Trifluorotoluene-F 106 104 103 121 103 131 130 123 63-135 Name: TPH-GRO N. CA water C Der: 09190A20A Trifluorotoluene-F 103	26-C12		
Analysis M Batch numb 5717041 5717042 5717043 5717043 5717044 5717045 5717045 5717045 5717045 5717045 50 Slank CSD IS imits: nalysis N Batch numb 717047 lank CS	Name: TPH-GRO N. CA water (Der: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103 131 130 123 63-135 Name: TPH-GRO N. CA water C Der: 09190A20A Trifluorotoluene-F 103 103	26-C12		
Analysis M Batch numb 5717041 5717042 5717043 5717044 5717045 5717044 5717045 5717045 5717045 5717045 5717045 5717045 5717045 5717047 1ank CS CSD	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103 131 130 123 63-135 Name: TPH-GRO N. CA water C per: 09190A20A Trifluorotoluene-F 103 103 103 132	26-C12		/0-113
Analysis M Batch numb 5717041 5717042 5717043 5717044 5717044 5717045 5717046 Blank CCS CCSD 4S 	Name: TPH-GRO N. CA water (per: 09189D20A Trifluorotoluene-F 106 104 103 106 103 121 103 123 63-135 Name: TPH-GRO N. CA water Cover: 09190A20A Trifluorotoluene-F 103 103 132 134	26-C12		/0-113

*- Outside of specification

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



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Quality Control Summary

Client Name: Chevron Reported: 07/16/09 at 09:20 AM		Group Number: 1152276		
-		Surrogate Quality Control		
5717042	114			
5717043	102			
5717044	108			
5717045	101			
5717046	112			
5717047	101			
Blank	100			
LCS	116			
LCSD	109			
Limits:	59-131			

*- Outside of specification

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

Lancaster Laboratories Explanation of Symbols and Abbreviations

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

N.D. TNTC IU umhos/cm C Cai meq g ug ug	none detected Too Numerous To Count International Units micromhos/cm degrees Celsius (diet) calories milliequivalents gram(s) microgram(s) milliliter(s)	BMQL MPN CP Units NTU F Ib. kg mg i	Below Minimum Quantitation Level Most Probable Number cobalt-chloroplatinate units nephelometric turbidity units degrees Fahrenheit pound(s) kilogram(s) milligram(s) liter(s)
m!	milliliter(s)	ui	microliter(s)
m3	cubic meter(s)	fib >5 um/mi	fibers greater than 5 microns in length per ml

< less than – The number following the slgn is the <u>limit of quantitation</u>, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

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

ppb parts per billion

Dry weight
basisResults 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.

U.S. EPA 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 quatitated on a diluted sample
- E Concentration exceeds the calibration range of the instrument
- J Estimated value
- 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 amount 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 for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

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.

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