REPORT

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FIRST SEMI-ANNUAL 2013 GROUNDWATER MONITORING REPORT

SLIC CASE #RO0002892
CHEVRON PIPELINE COMPANY
SUNOL SPILL
2793 CALAVERAS RD.
SUNOL, CA

Prepared for
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, CA 94502

April 2013

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May 2, 2013

Mr. Jerry Wickham
Department of Environmental Health
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Dear Mr. Wickham:

I declare, under penalty of perjury, that the information and/or recommendations contained in URS' report titled "**SLIC Case No. RO0002892, Chevron Sunol Pipeline, 2793 Calaveras Road, Sunol, CA – First Semi-Annual 2013 Groundwater Monitoring Report**" are true and correct to the best of my knowledge at the present time.

Submitted by:

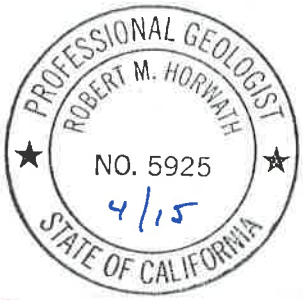
Stephen Gwin
Chevron Pipe Line Company

URS

This letter report ("**First Semi-Annual 2013 Groundwater Monitoring Report**") was prepared under my direct supervision. The information presented in this report is based on our review of available data obtained during our quarterly sampling activities and our previous subsurface investigation efforts. To the best of our knowledge, we have incorporated into our recommendations all relevant data pertaining to the Chevron Pipeline Company's Sunol Spill Site in Sunol, California.

The First Semi-Annual 2013 Groundwater Monitoring Report discussed herein was developed in accordance with the standard of care used to develop this type of report. The assumptions that were made and the recommendations for continued field activities were based on our professional experience and protocols reported in the literature for similar investigations.

Approved by:
URS CORPORATION



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May 2, 2013

Mr. Jerry Wickham
Department of Environmental Health
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Subject: SLIC Case No. RO0002892, Chevron Pipeline Company, Sunol Spill, 2793 Calaveras Rd, Sunol, CA, First Semi-Annual 2013 Groundwater Monitoring Report

Dear Mr. Wickham:

A December 30, 2005 letter provided by the Alameda County Environmental Health Department staff requested the initiation of a quarterly groundwater monitoring program for the Chevron Pipeline Company Sunol Spill Site. In a letter dated December 10, 2010, the ACEHD agreed to change the quarterly groundwater monitoring program to semi-annual. In response to this request and on behalf of CPL, URS Corporation (URS) has prepared this First Semi-Annual 2013 Site Groundwater Monitoring Report.

If you have any questions on this report, please call Mr. Joe Morgan of URS at 510-874-3201.

Sincerely,
URS CORPORATION

Robert Horwath, P.G.
Senior Geologist

Joe Morgan III
Project Manager

cc: Mr. Stephen Gwin, Chevron Pipeline Company
Ms. Rachel Naccarati, URS Oakland
Ms. Christine Pilachowski, URS Oakland
Mr. Jeremy Quick, URS Oakland

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On March 25 and 26, 2013, URS Corporation (URS) conducted field activities to assess the groundwater conditions at the Chevron Pipeline Company (CPL) Sunol Spill Site (Site). A Site vicinity map is included as Figure 1. Groundwater monitoring wells and surface water sampling locations are provided on Figure 2.

URS gauged the depth to groundwater and collected groundwater samples for laboratory analysis from groundwater monitoring wells MW-1 through 4 and MW-8 through MW-11. URS also collected a surface water sample from the very small stream, located northwest of the release location. Monitoring wells MW-5 through MW-7 were abandoned on June 23, 2008, and are no longer part of the groundwater monitoring program.

In December 2012, URS installed monitoring wells MW-12 through MW-15. Due to insufficient water at the time of installation and during subsequent gauging events, these wells have not yet been developed and are not considered part of the current monitoring well network. To assist in supporting documents for Site closure, URS gauged wells MW-12 through MW-15 during the March monitoring event, and collected grab groundwater samples from MW-12 and MW-15. Monitoring wells MW-13 and MW-14 were not sampled due to insufficient water in the wells.

2.1 FIRST SEMI-ANNUAL 2013 MONITORING ACTIVITIES

Prior to collecting groundwater samples, depth to groundwater measurements were recorded monthly from wells MW-1 through MW-4 and MW-8 through MW-15 from the top of casing using an electronic oil/water interface probe. Light non-aqueous phase liquid (LNAPL) was not measured in any of the wells during January, February or March 2013 gauging events. The monthly depth to groundwater measurements are presented in Table 1 and calculated groundwater elevations above mean sea level are presented in Table 2. The March 2013 semi-annual monitoring event groundwater elevations are shown on Figure 3.

After measuring the depth to groundwater at each well for this first semi-annual 2013 event, URS collected groundwater samples on March 25 and 26, 2013. The rationale for the method used at each monitoring well is described below:

- Monitoring wells MW-1 through MW-4 and MW-8 through MW-11 were sampled using low-flow methods.
- A grab surface water sample was collected using a clean disposable cup from the very small stream northwest of the release location.
- Grab groundwater samples were collected from MW-12 and MW-15 by clean disposable bailer.

2.2 GROUNDWATER MONITORING EVENT

The groundwater surface elevation slightly increased in all wells (MW-1 through MW-4 and MW-8 through MW-11) relative to the last sampling event in September 2012. During this March 2013 event, the groundwater elevations from the monitoring well network ranged from 290.96 feet above mean sea level (msl) (MW-10) to 293.57 feet above msl (MW-3). Groundwater elevations at the Site are typical of seasonal fluctuations with high groundwater levels in the wet season and lower groundwater levels in the dry season.

The groundwater elevation for MW-8 was 315.05 feet above msl, which is considerably higher than the groundwater elevations in MW-1 through MW-4 and MW-9 though MW-11. This is because MW-8 is screened along the base of the hill in colluvial and fractured bedrock while MW-1 through MW-4 and MW-9 and MW-11 are screened in the colluvial/alluvial system in the adjacent Alameda Creek valley. In addition, splays of Calaveras Fault which runs along the base of the hill likely inhibit the hydraulic connection between the hillside water bearing zone and that of the valley fringe and floor colluvial/alluvial system. As such, there are at least two different water bearing zones at the site; the hillside water bearing zone and the valley floor water bearing zone with the hillside water bearing zone acting as a partial recharge source to the valley floor.

Since installation in December 2012, monitoring wells MW-12 through MW-15 (screened in the hillside water bearing zone) have been gauged on a monthly basis. These wells have been very slow to equilibrate due to lack of local groundwater and the low permeability materials in which they were screened. As such there has not been sufficient water in the wells yet to allow development without adding waters from outside sources. For this reason the water levels in these wells are not considered to be representative of local groundwater conditions and are not included in groundwater elevation contour maps at this time. Nevertheless, the water levels in

MW-12 through MW-15 were measured. On March 25, 2013, after the groundwater elevation was initially recorded, each well was purged using a new bailer until three well casing volumes were removed or a well was purged dry. On March 26, 2013, after a 24-hour recharge period, the water levels were measured again. As footnoted, the groundwater elevation data for both dates are included for MW-12 through MW-15 in Tables 1 and 2.

Based on water level data from MW-1 through MW-4 and MW-9 through MW-11, the local groundwater flow direction in the valley floor water bearing zone was interpreted to the northeast at a gradient of 0.04 ft/ft (Figure 3). The seasonal groundwater recharge from the hillside water bearing zone appears to flow into the Site's unconfined valley floor water-bearing zone on a limited basis. As stated above, MW-8 water level elevation data was not included in groundwater contour map because it is screened in a different water bearing zone.

2.2.1 MW-1 through MW-4 and MW-8 through MW-11

Prior to sampling, monitoring wells were purged using low-flow methods. An electrical submersible pump was decontaminated prior to sampling each monitoring well. The pump and new tubing were then lowered into the well until the pump intake was within the appropriate screen interval, and the tubing was attached to a flow cell. A discharge line of clean tubing was then connected to the upper end of the flow cell and into a holding cell on the sampling truck used to collect all purge water. The pump was then set at a rate of 200 milliliters per minute (mL/min) to limit draw-down in the well. The low-flow groundwater sampling forms are included in Appendix A.

In addition to monitoring the water level at each monitoring well during low-flow sampling, the following geochemical parameters: temperature, pH, conductivity, oxidation reduction potential (ORP), and dissolved oxygen (DO) of the purged groundwater were measured using an in-line flow-through cell and multi-parameter Horiba U-22 meter. The Horiba U-22 meter was calibrated every morning before the start of low-flow sampling. During purging, the parameter readings described above were recorded every 3 minutes until the parameters stabilized.

Parameters were considered to be stable when three consecutive readings were within the following guidelines: pH +/- 0.2 pH units, conductivity +/- 3% of reading, ORP +/- 20 millivolts (mV), DO +/- 0.2 milligrams per liter (mg/L).

After monitoring all field parameters, the flow-through cell was detached and groundwater samples were collected directly from the pump tubing.

2.2.2 MW-12 through MW-15

Due to insufficient recharge MW-12 through MW-15 have yet to be developed. During this first semi-annual 2013 groundwater monitoring event, monitoring wells MW-12 through MW-15 were gauged and after the groundwater elevation was initially recorded, each well was purged using a new, clean disposable single-check-valve equipped weighted polyethylene bailer until three well volumes were removed or the well was purged dry.. All water generated during purging of the monitoring wells was placed directly into DOT-approved 55-gallon drums for off-Site disposal.

On March 26, 2013, after a 24-hour recharge period, the groundwater elevation of each monitoring well was gauged. If sufficient recharge had occurred (approximately 1-ft case

volume), then a grab groundwater sample was collected. If there was no recharge, then the monitoring well was a grab groundwater sample was not collected and the well was recorded as dry on the log.

Monitoring wells MW-12 and MW-15 had sufficient recharge of approximately 2 feet case-volume and 1.5 feet case-volume, respectively. Wells MW-13 and MW-14 were dry when depth to water was measured on the second day. Results of this gauging event are shown on Tables 1 and 2.

After the wells were gauged on the second day, grab groundwater samples were collected using new, clean disposable single check-valve equipped weighted polyethylene bailers lowered into each borehole with a disposable cord. Once full, the bailers were removed and the water was transferred into laboratory provided sample containers.

2.2.3 Surface Water Sampling Event

The sampling location along the very small stream is located at the base of the alluvial terrace within the Alameda Creek floodplain and is shown on Figure 2. The former sampling point (SW-Creek, sampled prior to the first quarter of 2007) is also provided on Figure 2 for reference. To the west, beyond the current sampling location, the very small stream fans out into the floodplain and surface flow terminates within floodplain grasses. A stream sample was collected on March 26, 2012 using a clean disposable container.

3.1 ANALYTICAL PROGRAM

The groundwater samples from wells MW-1 through MW-4and MW-8 through MW-11, grab groundwater samples from MW-12 and MW-15, and the stream sample were collected in clean laboratory provided containers. The containers were labeled with project specific identification, packed to prevent breakage, and placed on ice in a cooler with a trip blank immediately after collection. The samples were submitted to Lancaster Analytical Laboratory in Lancaster, Pennsylvania, a California Certified Laboratory, under URS chain-of-custody procedures. The samples were analyzed on a standard turn-around-time.

Groundwater samples collected during semi-annual sampling activities and the grab groundwater samples were analyzed for the following parameters:

Gasoline Compounds

- Total petroleum hydrocarbons – gasoline range organics (TPH-GRO) by N. CA LUFT GRO.
- Benzene, toluene, ethylbenzene, xylenes (BTEX) by USEPA Method 8260B.

In addition to gasoline compounds, groundwater samples were also analyzed for the following field and laboratory parameters:

Geochemical Parameters

- Field measurements included ORP, DO and pH and were collected in monitoring wells MW-1 through MW-4 and MW-8 through MW-11 using an in-line flow-through cell and multi-parameter Horiba U-22 meter.
- Laboratory samples were analyzed for: nitrate and sulfate (EPA method 300.0), manganese, methane and dissolved iron (SW-846 6010B), ferrous iron (SM20 3500 Fe B modified), total dissolved solids (SM 2540 C), and alkalinity (SM20 2320B) and were collected from MW-1 through MW-4, and MW-8 through MW-12. Where required, all samples are filtered by the laboratory.

3.2 GROUNDWATER ANALYTICAL RESULTS DISCUSSION

A tabulated summary of the analytical results for the gasoline compounds are presented in Table 3. Complete laboratory analytical results and chain of custody forms are presented as Appendix B.

3.2.1 Unconfined Water-Bearing Zone Monitoring Wells

The unconfined water bearing zone wells sampled during the first semi-annual 2013 event included MW-1 through MW-4 and MW-8 through MW-11. A summary of maximum and current groundwater results in select wells are as follows:

Table A. Summary of Historical Maximum and Current Gasoline Compound Concentrations

	TPH-GRO (µg /L)		Benzene (µg /L)		Toluene (µg /L)		Ethylbenzene (µg /L)		Total Xylenes (µg /L)	
	Max.	Current	Max.	Current	Max.	Current	Max.	Current	Max.	Current
ESL	**100**		**1**		**40**		**30**		**20**	
MW-1	**57,000** (Feb 2006)	**710**	**38** (Feb 2006)	<0.5	**2,700** (Feb 2006)	<0.5	**3,000** (Feb 2006)	<0.5	**8,700** (Feb 2006)	<0.5
MW-8	**74,000** (Sept 2010)	**41,000**	**1,500** (Mar 2006)	**760**	**16,000** (Sept 2010)	**3,100**	**3,200** (Sept 2010)	**820**	**16,000** (Sept 2010)	**12,000**
MW-9	**74,000** (Nov 2006)	2,100	**480** (Nov 2006)	<0.5	**12,000** (Nov 2006)	43	**2,200** (Nov 2006)	2	**17,000** (Nov 2006)	**71**
MW-10	**540** (Dec 2009)	<50	**1** (Dec 2009)	<0.5	2 (Dec 2009)	<0.5	5 (Dec 2009)	<0.5	**23** (Dec 2009)	<0.5
MW-11	66 (Dec 2009)	<50	<0.5 (2007)	<0.5	2 (Jun 2009)	<0.5	<0.5	<0.5	3 (Dec 2009)	<0.5

Bold values = above ESLs
ESL for groundwater as a current or potential drinking water resource

Analytical results for gasoline compounds collected during the first semi-annual 2013 sampling event are as follows:

- The MW-1 sample contained TPH-GRO at 710 µg/L, which is above the ESL of 100 µg/L. BTEX concentrations were below the laboratory method detection limit of 0.5 µg/L. TPH-GRO sample results decreased since the sampling event in September 2012. Monitoring well MW-1 has not been consistently sampled due to the groundwater in the well being hydraulically disconnected from the aquifer. As shown in Table A, maximum concentrations were detected in in February 2006; TPH-GRO has decreased two orders of magnitude since sampling began in 2006. BTEX is below respective ESLs.
- The MW-2 sample contained total xylenes at 1 µg/L, which is below the ESL of 20 µg /L. TPH-GRO concentration was below the laboratory detection limit of 50 µg /L. Benzene, toluene, and ethylbenzene concentrations were below the laboratory method detection limit of 0.5 µg/L. Monitoring well MW-2 has not been consistently sampled due to the groundwater in the well being hydraulically disconnected from the aquifer. TPH-GRO and BTEX concentrations have been below ESLs since sampling began in 2006.
- The MW-3 sample contained total xylenes at 1 µg/L which is below the ESL of 20 µg /L. TPH-GRO concentration was below the laboratory detection limit of 50 µg /L. Benzene, toluene, and ethylbenzene concentrations were below the laboratory method detection limit of 0.5 µg/L. Monitoring well MW-3 has not been consistently sampled due to the groundwater in the monitoring well being hydraulically disconnected from the aquifer. TPH-GRO and BTEX concentrations have been below ESLs since August 2006.

- The MW-4 sample contained concentrations of ethylbenzene and total xylenes 1 µg/L and 5 µg /L, respectively, both of which are below the ESLs of 30 µg/L (ethylbenzene) and 20 µg/L (total xylenes). TPH-GRO concentration was below the laboratory detection limit of 50 µg /L. Benzene, and toluene concentrations were below the laboratory method detection limit of 0.5 µg/L. Monitoring well MW-4 has not been consistently sampled due to the groundwater in the well being hydraulically disconnected from the aquifer. TPH-GRO and BTEX concentrations have been below ESLs since sampling began in 2006.
- The MW-8 sample contained concentrations of TPH-GRO and BTEX at 41,000 µg/L, 760 µg/L, 3100 µg/L, 820 µg/L, and 12,000 µg/L, respectively. Concentrations of TPH-GRO and BTEX in MW-8 are above ESLs; however the general trends of TPH-GRO and BTEX concentrations in MW-8 have been decreasing since the maximum concentrations were detected in March 2006 and September 2010, as shown in Table A.
- The MW-9 sample contained TPH-GRO concentration at 2,100 µg/L, toluene concentration at 43 µg/L, ethylbenzene concentration at 2 µg/L, and total xylenes concentration at 71 µg/L, all of which are above the respective ESLs. The benzene analytical result was below the laboratory detection limit. TPH-GRO and ethylbenzene concentrations have slightly decreased from 3,900 µg/L and 6 µg/L, respectively, since the September 2012 sampling event. Toluene and total xylenes concentrations have increased from 2 µg/L and 18 µg/L, respectively, since the September 2012 sampling event. As shown in Table A, maximum concentrations were detected in in November 2006; TPH-GRO has decreased one order of magnitude and BTEX has decreased three orders of magnitude since the November 2006 sampling.
- All analytical results from MW-10 were below their respective laboratory reporting method detection limits.
- All analytical results from MW-11 were below their respective laboratory reporting method detection limits.

3.2.2 Grab Groundwater Samples from MW-12 and MW-15

The grab groundwater samples from MW-12 and MW-15 contained the following results:

- The MW-12 grab groundwater sample contained concentrations of TPH-GRO at 520 µg/L and benzene at 2 µg /L which is above their ESLs of 100 µg /L and 1 µg /L, respectively. Monitoring well MW-12 contained a toluene concentration of 5 µg /L which is below the ESL of 40 µg /L.
- All analytical results from the MW-15 grab groundwater sample were below their respective laboratory reporting method detection limits.

3.2.3 Surface Water Sample

A grab surface water sample was collected on March 26, 2013. TPH-GRO and BTEX were below their respective laboratory reporting limits in the sample collected from the stream.

3.2.4 TPH-GRO and BTEX Concentration Trends

TPH-GRO and BTEX concentrations have steadily decreased since the pipeline release in all wells except MW-8. The hydrocarbon plume is horizontally defined to the north by MW-10, to the west by MW-3, MW-4, and MW-11, and to the south by MW-2 and grab groundwater sample from MW-15. The east is delineated by the bedrock hillside.

3.2.5 Geochemical Analytical Results

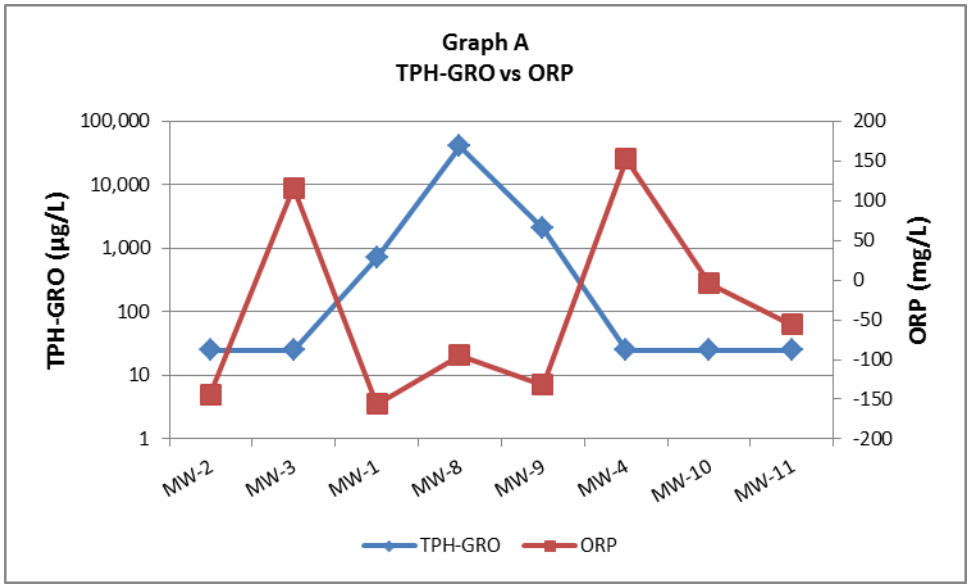
A biodegradation assessment was completed to evaluate whether the gasoline compounds in groundwater are being decreased by aerobic and/or anaerobic biodegradation. Observations from the March 2013 monitoring event are discussed below to provide an overview of the biodegradation. A brief summary of pre-purge ORP measurements is provided below, followed by a discussion of the bioremediation parameters in order of the five stages of biodegradation: aerobic respiration (pre-purge DO); denitrification (nitrate); iron (III) reduction (ferric to ferrous); sulfate reduction (sulfate); and methanogenesis (methane). To illustrate how geochemical parameters change when coming in contact with dissolved hydrocarbons, graphs are presented showing the variation from upgradient of impacted wells to downgradient (MW-2, MW-3, MW-1, MW-8, MW-9, MW-4, MW-10 and MW-11).

The groundwater samples collected from MW-1 through MW-4 and MW-8 through MW-11 were analyzed for a selection of field and laboratory geochemical parameters. URS will continue to collect a complete set of geochemical parameters when possible from all monitoring wells. Current and historical geochemical results are presented in Table 4. Groundwater sampling forms are included in Appendix A.

3.2.5.1 Oxidation Reduction Potential

ORP is measure of electron activity and is an indicator of the relative tendency of a solute species to gain or lose electrons. ORP in groundwater generally ranges from -400 mV (reducing conditions) to +800 mV (oxidizing conditions). Under oxidizing conditions, the ORP of groundwater is positive, while under reducing conditions the ORP is usually negative. Reducing conditions (negative ORP) suggests that anaerobic biodegradation is occurring. As shown in Graph A, ORP concentrations vary inversely with respect to hydrocarbon concentrations at the Site.

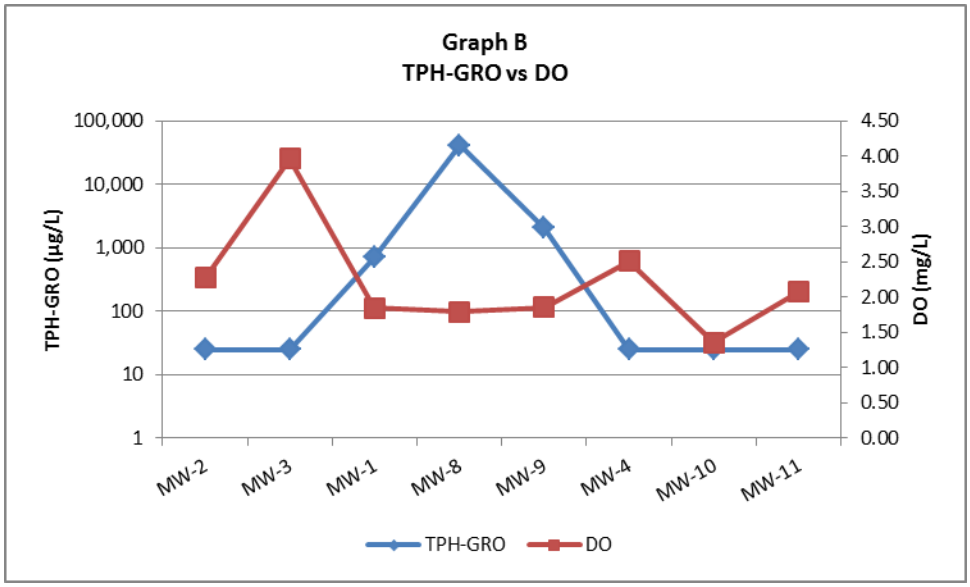
Pre-purge ORP levels during this event ranged from -156 mV (MW-1) to +153 mV (MW-4), indicating that anaerobic biodegradation is occurring at within the residual hydrocarbon plume (monitoring wells MW-1, MW-8 and MW-9).



3.2.5.2 Dissolved Oxygen

DO is the most thermodynamically favored electron acceptor used in the aerobic biodegradation of petroleum hydrocarbons. During aerobic degradation, DO concentrations are reduced as aerobic respiration occurs. As shown in Graph B, DO concentrations vary inversely with respect to residual hydrocarbon concentrations in all wells across the Site, except for MW-10. However, DO concentrations in the residual hydrocarbon plume are low (below 2 mg/L) suggesting that DO is being depleted. Therefore, additional DO is needed to enhance aerobic biodegradation of residual petroleum hydrocarbons.

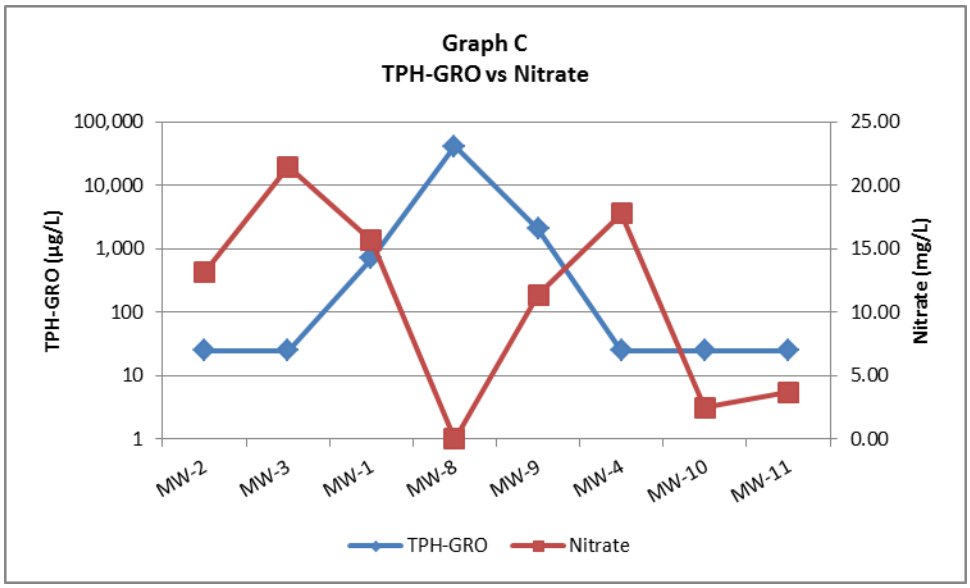
Pre-purge DO concentrations for this sampling event, measured as milligrams per liter (mg/L) in the field ranged in concentrations from 1.79 mg/L in MW-8 to 3.97 mg/L in MW-3 indicating anaerobic conditions is occurring within the residual hydrocarbon plume.



3.2.5.3 Nitrates

After DO has been depleted in the groundwater, nitrate may be consumed during the anaerobic biodegradation of TPH-GRO and BTEX. In this process, called denitrification, nitrate is reduced to nitrite and ultimately to nitrogen gas. Reduced nitrate concentrations in a hydrocarbon-impacted area compared to the areas outside the plume suggest that anaerobic biodegradation is occurring under nitrate-reducing conditions. As shown in Graph C, an inverse relationship is observed at this Site.

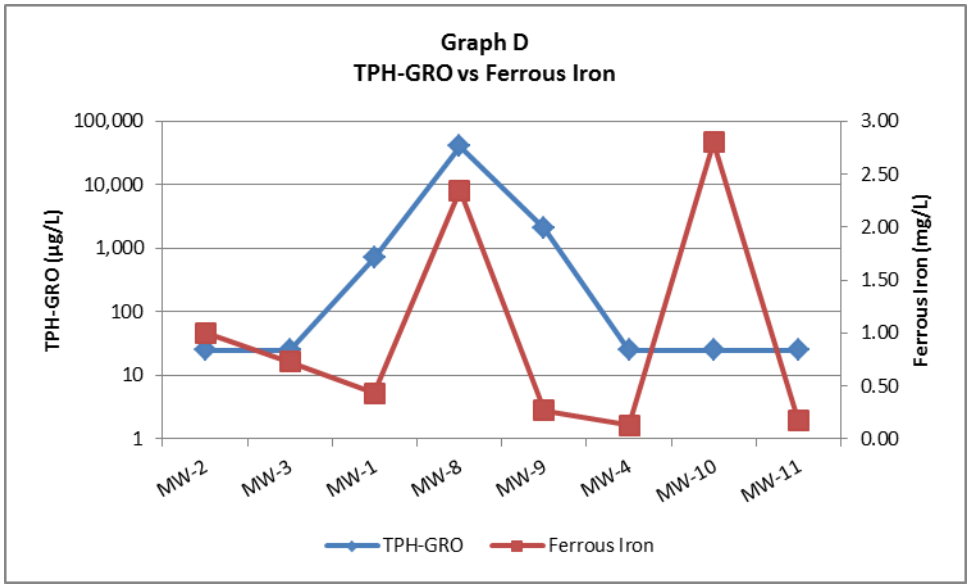
Nitrate concentrations for this sampling event, measured by the analytical laboratory, ranged in concentration from 2.5 mg/L in MW-10 to 21.5 mg/L in MW-3. Nitrate concentration was below the laboratory detection limit in MW-8, the well with the highest TPH-GRO concentration, which suggests that anaerobic biodegradation is occurring at the Site within the residual hydrocarbon plume.



3.2.5.4 Ferrous Iron

After both DO and nitrate are depleted in anaerobic groundwater, ferric iron (Fe^{3+}) in soil may be consumed by anaerobic biodegradation. In this process, ferric iron in soil is reduced to ferrous iron (Fe^{2+}), which is soluble in water. Therefore, if groundwater has relatively high levels of ferrous iron, anaerobic biodegradation may be occurring. As shown in Graph D, ferrous iron concentrations are highest in wells with higher hydrocarbon concentrations, indicating anaerobic hydrocarbon biodegradation within the residual hydrocarbon plume with exception of MW-10.

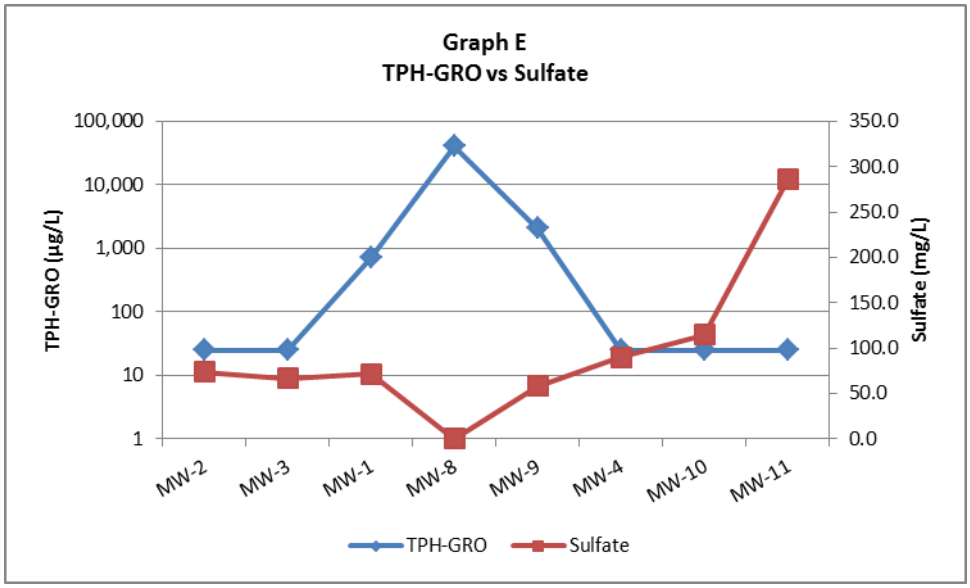
Ferrous iron concentrations for this sampling event, measured by the analytical laboratory ranged in concentrations from 0.13 in MW-4 to 2.8 in MW-10.



3.2.5.5 Sulfate

After DO, nitrate, and ferric iron are depleted in anaerobic groundwater, sulfate may be consumed in the anaerobic biodegradation process. Sulfate is reduced to sulfide, which reacts with ferric iron on soil particles to precipitate out as various sulfides of iron and can also lead to higher ferrous iron concentrations. Iron sulfides are re-oxidized to iron oxides in the presence of oxygen in the vadose zone. Any dissolved sulfides are oxidized at the plume fringes where impacted groundwater mixes with non-impacted groundwater. If reported sulfate concentrations vary inversely with hydrocarbon concentrations, anaerobic biodegradation of fuel hydrocarbons is likely occurring under sulfate-reducing conditions. As shown in Graph E, sulfate concentrations vary inversely with hydrocarbon concentrations indicating that anaerobic biodegradation is occurring within the residual hydrocarbon plume.

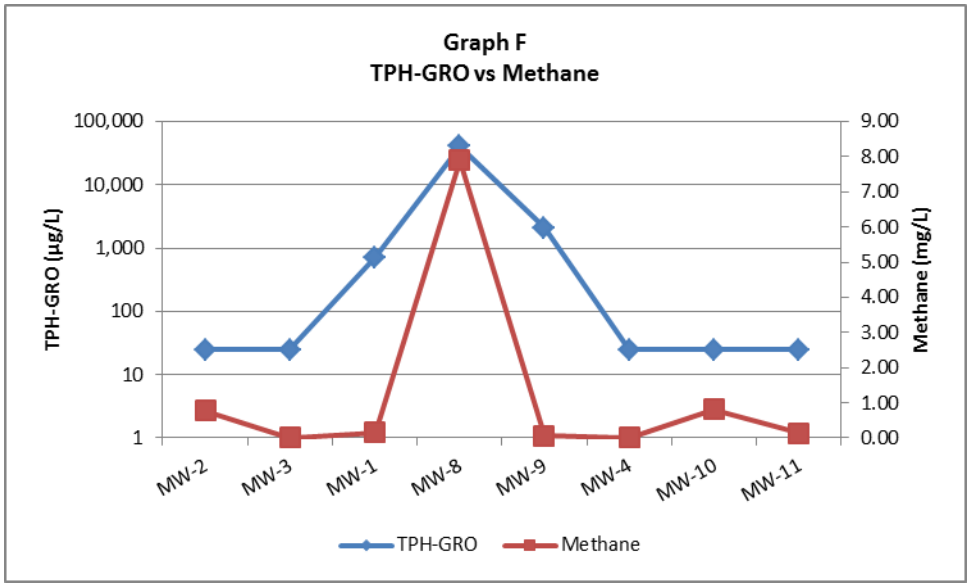
Sulfate results for this sampling event, measured by the analytical laboratory ranged from 58 mg/L in MW-9 to 286 mg/L in MW-11. Sulfate concentration was below the laboratory detection limit in MW-8 which suggests that anaerobic biodegradation is occurring at the Site.



3.2.5.6 Methane

The final step in the anaerobic biodegradation process is methanogenesis. When all soluble electron acceptors such as DO, nitrate, ferric iron, and sulfate are depleted, groundwater conditions become conducive to fermentation, and methane is generated by methanogenesis. The only electron acceptor available for the methanogenesis is carbon from carbon dioxide. This source of carbon dioxide is primarily from the by-products of previous stages of anaerobic biodegradation. Without methanogenesis, a great deal of carbon (in the form of fermentation products) would accumulate in anaerobic environments. As shown on Graph F, there is a direct relationship of methane to TPH-GRO, especially shown in MW-8. These results suggest anaerobic biodegradation is occurring within the residual hydrocarbon plume.

Methane results for this sampling event, measured by the analytical laboratory ranged from 0.057 mg/L in MW-9 to 8.1 mg/L in MW-8.



3.2.5.7 Summary of Geochemical Analytical Results

It is evident that anaerobic hydrocarbon bioremediation is occurring at the Site. Recent collection of bioparameter data suggests that there is insufficient DO in groundwater to support significant aerobic biodegradation within the residual hydrocarbon plume.

3.3 SUMMARY OF QA/QC REVIEW PARAMETERS

The quality assurance/quality control (QA/QC) program includes using standard sample collection procedures in the field and established analytical methodologies in the laboratory. Laboratory and field QC sample results were evaluated to assess the quality of the individual sample results and overall method performance. Analytical performance was evaluated on a "batch QC" basis by evaluating the QC sample results for groups of samples that were prepared and analyzed together. The data evaluation performed included a review of:

- Blanks (laboratory method blanks, trip blanks, and equipment blanks)
- Spikes (laboratory control sample spikes, matrix control spikes, blank spikes and surrogate spikes)
- Duplicates (laboratory control sample duplicates and field duplicates)
- Sample Integrity (chain-of-custody documentation, sample preservation, and holding time compliance)

3.3.1 Method Holding Times

Analytical methods have prescribed holding times. The method holding time is defined as the maximum amount of time after collection that a sample may be held prior to extraction and/or analysis. Sample integrity becomes questionable for samples extracted and/or analyzed outside of the prescribed holding times due to degradation and/or volatilization of the sample.

3.3.2 Method Blanks

Method blanks are prepared in the laboratory using deionized, distilled (Reagent Grade Type II) water. Method blanks are extracted and/or analyzed following the same procedures as an environmental sample. Analysis of the method blank indicates potential sources of contamination from laboratory procedures (e.g. contaminated reagents, improperly cleaned laboratory equipment) or persistent contamination due to the presence of certain compounds in the ambient laboratory environment. The QA/QC review identifies method blanks with detections of target analytes and evaluates the effect of the detections on associated sample results. All reported results for the laboratory method blanks were nondetect (less than the laboratory reporting limit), or were outside laboratory QC limits but did not require qualification, indicating no influence of contamination from laboratory instrumentation.

3.3.3 Trip Blanks

Trip blanks are samples of deionized, distilled (Reagent Grade Type II) water that are prepared in the laboratory, taken to the field, retained on Site throughout sample collection, returned to the laboratory, and analyzed with the environmental samples. The QA/QC review identifies trip

blanks with detections of target analytes and evaluates the effect of the detections on associated sample results. Two trip blanks were analyzed during this sampling event. The trip blanks did not have detections of any target analytes, indicating no evidence of contamination during shipment of the laboratory samples.

3.3.4 Equipment Blanks

Equipment blanks are samples of deionized, distilled (Reagent Grade Type II) water that are prepared in the field by pumping the water through the decontaminated pumps and tubing and into sample containers. The equipment blank is designed to detect contamination introduced to the sample by the decontamination process, sample containers, sample preservatives, and/or the ambient conditions at the collection Site. One equipment blank was submitted with the project samples during the sampling event, and no contamination of the equipment blanks was detected.

3.3.5 Matrix Spikes and Laboratory Control Samples

Matrix spikes (MS), matrix spike duplicates (MSD), laboratory control samples (LCS), and laboratory control sample duplicates (LCSD) are analyzed by the laboratory to evaluate the accuracy and precision of the sample extraction and analysis procedures and to evaluate potential matrix interference. Matrix interference, the effect of the sample matrix on the analysis, may partially or completely mask the response of analytical instrumentation to the target analyte(s). Matrix interference may have a varying impact on the accuracy and precision of the extraction and/or analysis procedures, and may bias the sample results high or low.

The MS or MSD is prepared by adding a known quantity of the target compound(s) to a sample. The sample is then extracted and/or analyzed as a typical environmental sample and the results are reported as percent recovery. The spike percent recovery is defined as:

$$\text{Recovery (\%)} = \frac{\text{spike analysis result - original sample concentration}}{\text{concentration of spike addition}} \text{ x100\%}$$

MS and MSD recoveries are reviewed for compliance with laboratory-established control limits to evaluate the accuracy of the extraction and/or analysis procedures.

LCS and LCSD are prepared exactly like MS and MSD using a clean control matrix rather than an environmental sample. Typical control matrices include Reagent Grade Type II water and clean sand. LCS and LCSD are used to evaluate laboratory accuracy independent of matrix effects.

The QA/QC review identifies spike recoveries outside laboratory control limits and evaluates the effect of these recoveries on the associated sample results. All reported LCS/LCSD and MS/MSD sample recoveries were within laboratory QC limits, or were outside laboratory QC limits but did not require qualification, with the exception of the following:

- Low MS recovery was observed for methane in Batch 13088004A B in Report 1377879. The methane detection in sample MW-10 was qualified as estimated, and flagged with a "J."

3.3.6 Laboratory Duplicate Analyses

Duplicate analyses are performed by the laboratory to evaluate the precision of analytical procedures. The laboratory may perform MSD and/or LSD analyses.

Precision is evaluated by calculating a relative percent difference (RPD) using the following equation:

$$\text{RPD (\%)} = \left| \frac{(\text{Spike Concentration} - \text{Spike Duplicate Concentration})}{\frac{1}{2}(\text{Spike Concentration} + \text{Spike Duplicate Concentration})} \right| \text{ x } 100\%$$

The RPD is compared to laboratory-established control limits to evaluate analytical precision. The QA/QC review identifies RPDs outside laboratory control limits and evaluates the effect of these recoveries on the associated sample results. All laboratory duplicate analyses were within laboratory QC limits.

3.3.7 Field Duplicate Analyses

Field duplicate samples are collected in the field and analyzed to evaluate the heterogeneity of the matrices. One field duplicate sample, MW-X (duplicate of MW-8), was collected during this sampling event. The QA/QC review identifies relative percent (%) difference (RPD) greater than 20% for compounds detected in the field sample and corresponding field duplicate sample. The following field sample/duplicate sample pair had RPDs greater than 20%:

- RPDs of 105%, and 38% were observed for iron and manganese, respectively, in field sample/duplicate sample pair MW-8/MW-X. The iron and manganese results in samples MW-8 and MW-X were qualified with a "J," indicating heterogeneity of the sample matrix.

3.3.8 Surrogate Recoveries

Surrogates are organic compounds that are similar to the target analytes in terms of their chemical structures and response to the analytical instrumentation, but are not usually detected in environmental samples. Surrogates are added to each environmental and laboratory QC sample to monitor the effect of the matrix on the accuracy of the extraction and/or analysis of organic analytes. Results for surrogate analyses are reported in terms of percent recovery (defined above). Reported recoveries are compared to laboratory-established control limits to evaluate sample-specific accuracy. The QA/QC review identifies surrogate recoveries outside laboratory control limits and evaluates the effect of these recoveries on the sample results. All surrogate recoveries were within laboratory QC limits.

3.4 EXPLANATION OF ANALYTICAL DATA QUALIFIERS

The analytical data were reviewed and qualified following USEPA guidelines for organic data review (USEPA, 2008) and inorganic data review (USEPA, 2010). A "J" qualifier indicates that the analyte was positively identified, but that the associated numerical value is an approximate concentration of the analyte in the sample. A "J+" or "J-" indicates that the result is an estimate, but may be biased either high or low, respectively. A "UJ" qualifier indicates that the analyte

was not detected above the reported sample quantitation limit (i.e., the laboratory reporting limit). However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. An "R" qualifier indicates that the sample results were rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria, and therefore, the presence or absence of the analyte could not be verified.

3.5 SUMMARY OF QA/QC REVIEW FINDINGS

The results of the data evaluation are summarized in the following paragraphs.

Low MS recovery was observed for methane in Batch 13088004A B in Report 1377879. The methane detection in sample MW-10 was qualified as estimated, and flagged with a "J."

RPDs of 105%, and 38% were observed for iron and manganese, respectively, in field sample/duplicate sample pair MW-8/MW-X. The iron and manganese results in samples MW-8 and MW-X were qualified with a "J," indicating heterogeneity of the sample matrix.

Chain-of-custody documentation is complete and consistent. Samples were preserved as required per method specifications. All samples were analyzed within method specified holding times, except as noted. Based on the data quality evaluation, no systematic problems were detected and the overall data objectives for sample contamination, precision, accuracy, and sample integrity were met. These analytical data are of acceptable quality and may be used for their intended purposes.

First semi-annual 2013 groundwater monitoring field activities conducted on March 25 and 26, 2013 included measuring the depth to groundwater at monitoring wells MW-1 through MW-4 and MW-8 through MW-15, collecting analytical samples from monitoring wells MW-1 through MW-4 and MW-8 through MW-11, collecting grab groundwater samples from MW-12 and MW-15, and collecting a grab sample from the stream. The findings are as follows:

- The groundwater elevations increased in all wells since the last sampling event in September 2012. The groundwater flow direction within the Site's unconfined water-bearing zone is a northeasterly direction with a calculated hydraulic gradient of 0.04 feet/feet.
- TPH-GRO and BTEX concentrations have steadily decreased since the pipeline release in all wells except MW-8. The highest concentrations of TPH-GRO, benzene, toluene, and ethylbenzene over the duration of the monitoring program were recorded in groundwater at well MW-8 located on the eastern side of Calaveras Road. TPH-GRO was 78,000 µg/L in December 2010, benzene was 2,000 µg/L in December 2010, toluene was 16,000 µg/L in September 2010 and ethylbenzene was 3,200 µg/L in September 2010 and August 2011. The highest concentration of total xylenes over the duration of the monitoring program was 17,000 µg/L in November 2006 in groundwater monitoring well MW-9.
- Only three monitoring wells samples (MW-1, MW-8 and MW-9) had gasoline compound concentrations that exceeded ESLs. TPH-GRO concentrations were detected in monitoring well samples MW-1, MW-8 and MW-9 during the first semi-annual 2013 monitoring event. TPH-GRO was detected at concentrations of 710 µg/L, 41,000 µg /L and 2,100 µg/L in monitoring wells MW-1, MW-8 and MW-9, respectively. The MW-8 samples analyzed for BTEX exceeded ESL values: 760 µg/L (benzene), 3,100 µg/L (toluene), 820 µg/L (ethylbenzene) and 12,000 µg/L (total xylenes). Groundwater sample MW-9 exceeded the ESL for toluene (40 µg/L) at a concentrations of 43 µg/L, and the ESL for total xylenes (20 µg/L) at 71 µg/L.
- Monitoring wells MW-12 through MW-15 were gauged on March 25, 2013 and then purged and allowed to recharge for 24 hours. On March 26, 2013, monitoring wells MW-13 and MW-14 were dry. Grab groundwater samples were collected from MW-12 and MW-15. The grab groundwater sample from MW-12 exceeded ESLs for TPH-GRO at 520 µg/L and benzene at 2 µg/L. TPH-GRO and BTEX concentrations were not detected above laboratory limits in MW-15.
- The hydrocarbon plume is defined by wells MW-10 to the north, MW-3 and MW-11 to the west, MW-2 and MW-15 to the south, and by the bedrock hill side to the east.
- The geochemical parameters that were collected included ORP, DO, nitrates, ferrous iron, sulfate and methane. After reviewing the bioparameter data, it is evident that there is insufficient DO in groundwater to support aerobic biodegradation at the Site. However, the results indicate that anaerobic biodegradation is occurring within the hydrocarbon plume.
- Since the initial release (August 2005), the known petroleum hydrocarbon along the hillside has had limited contact with groundwater which is the transportation mechanism for petroleum hydrocarbons to the Site.

- The analytical data are of acceptable quality and may be used for their intended purposes. The QA/QC review of data found it suitable for its intended use to address the groundwater conditions at the Site.

Based on the March 2013 field observations and analytical results URS makes the following recommendations:

- Continue monthly gauging to further assess the effect of seasonal groundwater fluctuations on groundwater flow direction and contaminant transport within the unconfined water-bearing zone. When monitoring wells MW-12 through MW-15 have sufficient water, the wells will be developed and sampled on a quarterly basis for one year.
- Continue semi-annual groundwater monitoring for all in-network wells (MW-1 through MW-4 and MW-8 through MW-11).
- Based on current groundwater conditions, URS finds the data encouraging for low-threat Site closure. URS plans to develop and submit low-threat case closure petition to ACEH during 2013.

No evaluation is thorough enough to preclude the possibility that materials that are currently considered hazardous or materials that may be considered hazardous in the future may be present at a Site. Since regulatory evaluation criteria are constantly changing, concentrations of contaminants presently considered nonhazardous may, in the future, fall under different regulatory standards and require remediation. Opinions and judgments expressed herein, which are based on understanding and interpretation of current regulatory standards, should not be construed as legal opinions. This document and the information contained herein have been prepared solely for use by CPL, and reliance on this report by third parties will be at such party's sole risk.

Services performed by URS were conducted in a manner consistent with that level of care and skill ordinarily exercised by other professional consultants under similar circumstances. No other representations to CPL, either expressed or implied, and no warranty or guarantee is included or intended for the semiannual groundwater monitoring report. The program described in this report is based upon the information acquired during the various investigations at the Site. It is possible that variations at the Site could exist beyond or between points explored during the course of the investigations. Also, changes in conditions could occur at some time in the future due to possible contamination migration, variations in rainfall, temperature, and/or other factors not apparent at the time of the various field activities.

Opinions relating to the environmental, geologic, and hydrogeologic conditions are based on limited data and actual conditions may vary from those encountered at the times and locations where the data was obtained, despite the use of due professional care.

Any reliance on this report by any other party shall be at such a party's sole risk unless that party has written authorization from URS to use this document. The purpose of this restriction is to attempt to protect the interests for whom the report may be appropriately directed.

TABLE 1
Monitoring Well Groundwater Levels
First Semi-Annual 2013 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-1	29.3-39.3	11/17/2005	37.82	37.62	0.20
		12/13/2005	37.70	37.59	0.11
		1/17/2006	35.69	--	--
		2/21/2006	36.34	--	--
		5/10/2006	33.78	--	--
		6/7/2006	34.28	--	--
		8/22/2006	37.11	37.08	0.03
		11/14/2006	37.05	--	--
		12/8/2006	36.91	--	--
		1/10/2007	36.27	--	--
		2/20/2007	36.14	--	--
		6/5/2007	37.21	--	--
		7/13/2007	37.48	37.46	0.02
		8/17/2007	37.56	37.54	0.02
		9/5/2007	37.62	--	--
		9/12/2007	37.67	37.55	0.12
		10/31/2007	37.63	37.58	0.05
		12/5/2007	38.51	38.50	0.01
		12/11/2007	37.49	37.46	0.03
		3/4/2008	35.56	--	--
		3/19/2008	35.94	--	--
		5/20/2008	35.51	--	--
		6/5/2008	35.69	--	--
		7/18/2008	36.88	--	--
		9/5/2008	37.57	37.56	0.01
		9/18/2008	37.62	37.61	0.01
		10/31/2008	37.67	37.65	0.02
		11/24/2008	37.62	37.59	0.03
		12/15/2008	37.53	37.52	0.01
		1/22/2009	37.44	--	--
		2/25/2009	36.28	--	--
		3/27/2009	35.24	--	--
		4/23/2009	35.59	--	--
		5/28/2009	36.74	--	--
		6/9/2009	37.05	--	--
		8/25/2009	37.60	--	--
		9/28/2009	37.61	--	--
		10/21/2009	37.63	--	--
		11/10/2009	37.62	--	--
		12/9/2009	37.56	--	--
		1/25/2010	35.47	--	--
		2/19/2010	35.15	--	--
		3/9/2010	34.41	--	--
		4/22/2010	35.07	--	--
		5/27/2010	35.41	--	--
		6/23/2010	37.49	--	--
		7/27/2010	37.18	--	--
		8/31/2010	37.40	--	--

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MW-1 cont	29.3-39.3	9/29/2010	37.36	--	--
		10/27/2010	37.21	--	--
		11/23/2010	37.17	--	--
		12/14/2010	37.11	--	--
		1/31/2011	35.42	--	--
		2/28/2011	34.79	--	--
		3/28/2011	32.19	--	--
		4/28/2011	34.34	--	--
		5/26/2011	35.52	--	--
		6/27/2011	36.03	--	--
		8/22/2011	37.04	37.03	0.01
		9/19/2011	37.23	--	--
		10/24/2011	37.18	--	--
		11/21/2011	37.14	--	--
		12/19/2011	36.98	--	--
		1/30/2012	36.92	--	--
		2/20/2012	36.92	--	--
		3/20/2012	36.68	--	--
		4/24/2012	35.60	--	--
		5/30/2012	36.52	--	--
		6/12/2012	36.76	--	--
		7/25/2012	37.02	--	--
		8/28/2012	37.09	--	--
		9/24/2012	37.16	--	--
		10/30/2012	37.16		
		11/20/2012	37.24	--	--
		12/7/2012	36.04	--	--
		1/29/2013	35.53	--	--
		2/28/2013	36.27	--	--
		3/25/2013	36.32		
MW-2	23.3-38.3	11/17/2005	33.74	--	--
		12/13/2005	33.67	--	--
		1/17/2006	31.51	--	--
		2/21/2006	32.19	--	--
		5/10/2006	29.71	--	--
		6/7/2006	30.23	--	--
		8/22/2006	33.11	--	--
		11/14/2006	33.01	--	--
		12/8/2006	32.85	--	--
		1/10/2007	32.09	--	--
		2/20/2007	31.93	--	--
		6/5/2007	33.23	--	--
		7/13/2007	33.49	--	--
		8/17/2007	33.58	--	--
		9/5/2007	33.61	--	--
		9/12/2007	33.62	--	--
		10/31/2007	33.61	--	--

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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-2 cont.	23.3-38.3	12/5/2007	33.52	--	--
		3/4/2008	31.41	--	--
		3/19/2008	31.76	--	--
		5/20/2008	31.41	--	--
		6/5/2008	31.56	--	--
		7/18/2008	32.88	--	--
		9/5/2008	33.60	--	--
		9/18/2008	33.65	--	--
		10/31/2008	33.70	--	--
		11/24/2008	33.62	--	--
		12/15/2008	33.59	--	--
		1/22/2009	33.46	--	--
		2/25/2009	32.11	--	--
		3/27/2009	31.14	--	--
		4/23/2009	31.48	--	--
		5/28/2009	37.74	--	--
		6/9/2009	33.08	--	--
		8/25/2009	33.63	--	--
		9/28/2009	33.62	--	--
		10/21/2009	33.68	--	--
		11/10/2009	33.67	--	--
		12/9/2009	33.61	--	--
		1/25/2010	31.28	--	--
		2/19/2010	31.03	--	--
		3/9/2010	30.36	--	--
		4/22/2010	30.96	--	--
		5/27/2010	31.31	--	--
		6/23/2010	32.66	--	--
		7/27/2010	33.24	--	--
		8/31/2010	33.44	--	--
		9/29/2010	33.41	--	--
		10/27/2010	33.25	--	--
		11/23/2010	33.22	--	--
		12/14/2010	33.12	--	--
		1/31/2011	31.28	--	--
		2/28/2011	30.67	--	--
		3/28/2011	28.10	--	--
		4/28/2011	30.24	--	--
		5/26/2011	31.37	--	--
		6/27/2011	31.87	--	--
		7/25/2011	32.95	--	--
		8/22/2011	33.07	--	--
		9/19/2011	33.27	--	--
		10/24/2011	33.21	--	--
		11/21/2011	33.17	--	--
		12/19/2011	33.03	--	--

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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-2 cont.	23.3-38.3	1/30/2012	32.95	--	--
		2/20/2012	32.92	--	--
		3/20/2012	32.65	--	--
		3/24/2012	31.43	--	--
		5/30/2012	32.47	--	--
		6/12/2012	32.78	--	--
		7/25/2012	33.06	--	--
		8/28/2012	33.13	--	--
		9/24/2012	33.20	--	--
		10/30/2012	33.20		
		11/20/2012	33.29	--	--
		12/7/2012	31.84	--	--
		1/29/2013	31.37	--	--
		2/28/2013	32.09	--	--
		3/25/2013	32.18		
MW-3	21.3-36.3	11/17/2005	35.93	--	--
		12/13/2005	34.80	--	--
		1/17/2006	30.88	--	--
		2/21/2006	31.97	--	--
		5/10/2006	30.38	--	--
		6/7/2006	30.91	--	--
		8/22/2006	34.66	--	--
		11/14/2006	34.71	--	--
		12/8/2006	34.65	--	--
		1/10/2007	31.68	--	--
		2/20/2007	31.66	--	--
		6/5/2007	34.63	--	--
		7/13/2007	34.75	--	--
		8/17/2007	34.78	--	--
		9/5/2007	34.70	--	--
		9/12/2007	34.71	--	--
		10/31/2007	34.63	--	--
		12/5/2007	34.79	--	--
		12/11/2007	34.77	--	--
		3/4/2008	30.97	--	--
		3/19/2008	31.64	--	--
		5/20/2008	31.26	--	--
		6/5/2008	31.45	--	--
		7/18/2008	34.11	--	--
		9/5/2008	34.77	--	--
		9/18/2008	34.81	--	--
		10/31/2008	34.85	--	--
		11/24/2008	34.79	--	--
		12/15/2008	34.79	--	--
		1/22/2009	34.71	--	--
		2/25/2009	31.35	--	--

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MW-3 cont.	21.3-36.3	3/27/2009	30.87	--	--
		4/23/2009	31.39	--	--
		5/28/2009	33.97	--	--
		6/9/2009	34.48	--	--
		8/25/2009	34.83	--	--
		9/28/2009	34.82	--	--
		10/21/2009	34.79	--	--
		11/10/2009	34.85	--	--
		12/9/2009	34.83	--	--
		1/25/2010	30.49	--	--
		2/19/2010	30.92	--	--
		3/9/2010	30.60	--	--
		4/22/2010	31.03	--	--
		5/27/2010	31.29	--	--
		6/23/2010	33.94	--	--
		7/27/2010	34.59	--	--
		8/31/2010	34.70	--	--
		9/29/2010	34.80	--	--
		10/27/2010	34.82	--	--
		11/23/2010	34.79	--	--
		12/14/2010	33.05	--	--
		1/31/2011	30.99	--	--
		2/28/2011	30.69	--	--
		3/28/2011	28.78	--	--
		4/28/2011	30.55	--	--
		5/26/2011	31.35	--	--
		6/27/2011	32.13	--	--
		7/25/2011	34.49	--	--
		8/22/2011	34.70	--	--
		9/19/2011	34.67	--	--
		10/24/2011	34.39	--	--
		11/21/2011	34.75	--	--
		12/19/2011	38.96	--	--
		1/30/2012	34.70	--	--
		2/20/2012	34.76	--	--
		3/20/2012	32.08	--	--
		4/24/2012	31.03	--	--
		5/30/2012	32.99	--	--
		6/12/2012	33.60	--	--
		7/25/2012	34.74	--	--
		8/28/2012	34.79	--	--
		9/24/2012	34.82	--	--
		10/30/2012	34.85		
		11/20/2012	34.88		
		12/7/2012	30.97	30.97	0.00
		1/29/2013	31.14	--	--
		2/28/2013	31.83	--	--
		3/25/2013	32.08		

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Chevron Sunol Pipeline

Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-4	30.7-40.7	2/21/2006	36.72	--	--
		5/10/2006	35.30	--	--
		6/7/2006	35.76	--	--
		8/22/2006	38.79	--	--
		11/14/2006	38.84	--	--
		12/8/2006	38.78	--	--
		1/10/2007	36.54	--	--
		2/20/2007	36.54	--	--
		6/5/2007	38.77	--	--
		7/13/2007	38.94	--	--
		8/17/2007	39.00	--	--
		9/5/2007	38.92	--	--
		9/12/2007	38.93	--	--
		10/31/2007	38.87	--	--
		12/5/2007	38.97	--	--
		12/11/2007	39.00	--	--
		3/4/2008	36.15	--	--
		3/19/2008	36.29	--	--
		5/20/2008	36.27	--	--
		6/5/2008	36.38	--	--
		7/18/2008	38.31	--	--
		9/5/2008	38.95	--	--
		9/18/2008	39.03	--	--
		10/31/2008	39.11	--	--
		11/24/2008	39.03	--	--
		12/11/2008	39.00	--	--
		12/15/2008	39.03	--	--
		1/22/2009	38.91	--	--
		2/25/2009	36.35	--	--
		3/27/2009	36.10	--	--
		4/23/2009	36.36	--	--
		5/28/2009	38.21	--	--
		6/9/2009	38.62	--	--
		8/25/2009	39.05	--	--
		9/28/2009	39.04	--	--
		10/21/2009	39.02	--	--
		11/10/2009	39.09	--	--
		12/9/2009	39.09	--	--
		1/25/2010	35.96	--	--
		2/19/2010	36.09	--	--
		3/9/2010	35.69	--	--
		4/22/2010	36.13	--	--
		5/27/2010	36.27	--	--
		6/23/2010	37.41	--	--
		7/27/2010	38.75	--	--
		8/31/2010	38.89	--	--
		9/29/2010	38.98	--	--
		10/27/2010	39.02	--	--

TABLE 1
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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-4 cont.	30.7-40.7	11/23/2010	38.99	--	--
		12/14/2010	37.61	--	--
		1/31/2011	36.16	--	--
		2/28/2011	35.93	--	--
		3/28/2011	33.63	--	--
		4/28/2011	35.65	--	--
		5/26/2011	36.32	--	--
		6/27/2011	36.84	--	--
		7/25/2011	38.63	--	--
		8/22/2011	38.88	--	--
		9/19/2011	38.89	--	--
		10/24/2011	38.89	--	--
		11/21/2011	38.98	--	--
		12/19/2011	34.75	--	--
		1/30/2012	38.91	--	--
		2/20/2012	38.94	--	--
		3/20/2012	37.07	--	--
		4/24/2012	36.21	--	--
		5/30/2012	37.45	--	--
		6/12/2012	37.94	--	--
		7/25/2012	38.97	--	--
		8/28/2012	39.02	--	--
		9/24/2012	39.06	--	--
		10/30/2012	39.08	--	--
		11/20/2012	39.14	--	--
		12/7/2012	36.21	--	--
		1/29/2013	36.24	--	--
		2/28/2013	36.67	--	--
		3/25/2013	36.84		
MW-5	39.5-49.5	2/21/2006	11.48	--	--
		6/7/2006	10.61	--	--
		8/22/2006	11.93	--	--
		11/14/2006	11.37	--	--
		2/20/2007	11.41	--	--
		6/5/2007	13.59	--	--
		9/12/2007	15.65	--	--
		12/11/2008	NM	--	--
		Q1 2008	NM	--	--
		Q2 2008	Abandoned[3]	--	--
MW-6	34.7-49.7	2/21/2006	18.02	--	--
		6/7/2006	16.83	--	--
		8/22/2006	18.66	--	--
		11/14/2006	17.37	--	--
		2/20/2007	17.51	--	--
		6/5/2007	19.44	--	--
		9/12/2007	23.46	--	--
		12/11/2008	NM	--	--

TABLE 1
Monitoring Well Groundwater Levels
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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-6 cont.	34.7-49.7	Q1 2008	NM	--	--
		Q2 2008	Abandoned[3]	--	--
MW-7	34.7-49.7	2/21/2006	15.43	--	--
		6/7/2006	16.68	--	--
		8/22/2006	16.77	--	--
		11/14/2006	16.99	--	--
		2/20/2007	18.34	--	--
		6/5/2007	19.88	--	--
		9/12/2007	21.76	--	--
		12/11/2008	NM	--	--
		Q1 2008	NM	--	--
		Q2 2008	Abandoned[3]	--	--
MW-8	14.5-24.5	8/22/2006	18.71	--	--
		11/14/2006	18.73	--	--
		12/8/2006	19.15	--	--
		1/10/2007	19.19	--	--
		2/20/2007	19.23	--	--
		6/5/2007	20.48	--	--
		7/13/2007	21.21	--	--
		8/17/2007	21.45	--	--
		9/5/2007	21.55	--	--
		9/12/2007	21.47	--	--
		10/31/2007	20.33	--	--
		12/5/2007	19.55	--	--
		12/11/2007	19.58	--	--
		3/4/2008	NM	--	--
		3/19/2008	NM	--	--
		5/20/2008	NM	--	--
		6/5/2008	NM	--	--
		7/18/2008	22.44	--	--
		9/5/2008	21.76	--	--
		9/18/2008	21.67	--	--
		10/31/2008	21.87	--	--
		11/24/2008	21.26	--	--
		12/15/2008	20.73	--	--
		1/22/2009	20.25	--	--
		2/25/2009	19.50	--	--
		3/27/2009	19.54	--	--
		4/23/2009	20.24	--	--
		5/28/2009	20.96	--	--
		6/9/2009	23.31	--	--
		8/25/2009	22.50	--	--
		9/28/2009	22.58	--	--
		10/21/2009	21.61	--	--
		11/10/2009	21.15	--	--
		12/9/2009	20.66	20.65	0.01

TABLE 1
Monitoring Well Groundwater Levels
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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-8 cont.	14.5-24.5	1/25/2010	19.19	--	--
		2/19/2010	19.13	--	--
		3/9/2010	18.97	--	--
		4/22/2010	19.15	--	--
		5/27/2010	19.29	--	--
		6/23/2010	19.82	--	--
		7/27/2010	21.40	--	--
		8/31/2010	21.65	--	--
		9/29/2010	22.23	22.22	0.01
		10/27/2010	21.81	--	--
		11/23/2010	22.31	--	--
		12/14/2010	20.26	--	--
		1/31/2011	19.43	--	--
		2/28/2011	18.90	--	--
		3/28/2011	18.40	--	--
		4/28/2011	18.46	--	--
		5/26/2011	18.45	--	--
		6/27/2011	18.88	--	--
		7/25/2011	19.42	--	--
		8/22/2011	19.97	--	--
		9/19/2011	20.52	--	--
		10/24/2011	19.78	--	--
		11/21/2011	19.03	--	--
		12/19/2011	18.84	--	--
		1/30/2012	18.88	--	--
		2/20/2012	18.66	--	--
		3/20/2012	18.72	--	--
		4/24/2012	18.69	--	--
		5/30/2012	19.73	--	--
		6/12/2012	20.29	--	--
		7/25/2012	21.67		
		8/28/2012	22.08		
		9/24/2012	22.11		
		10/30/2012	21.80	--	--
		11/20/2012	21.24	--	--
		12/7/2012	20.12	--	--
		1/29/2013	18.91	18.91	0.00
		2/28/2013	18.95	--	--
		3/25/2013	18.88		
MW-9	36.0-46.0	8/22/2006	42.59	42.55	0.04
		11/14/2006	42.62	42.54	0.08
		12/8/2006	42.56	--	--
		1/10/2007	42.01	--	--
		2/20/2007	41.91	41.86	0.05
		3/20/2007	41.76	41.75	0.01
		6/5/2007	42.71	42.69	0.02
		7/13/2007	43.08	--	--
		8/17/2007	43.14	--	--

TABLE 1
Monitoring Well Groundwater Levels
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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-9 cont.	36.0-46.0	9/5/2007	43.16	--	--
		9/12/2007	43.09	43.01	0.08
		10/31/2007	43.17	--	--
		12/5/2007	43.10	--	--
		12/11/2007	42.91	--	--
		3/4/2008	41.31	--	--
		3/19/2008	NM	--	--
		5/20/2008	41.33	--	--
		6/5/2008	41.57	--	--
		7/18/2008	42.52	--	--
		9/5/2008	43.02	--	--
		9/18/2008	43.07	--	--
		10/31/2008	43.09	--	--
		11/24/2008	43.02	--	--
		12/15/2008	43.00	--	--
		1/22/2009	42.90	--	--
		2/25/2009	41.97	--	--
		3/27/2009	41.02	--	--
		4/23/2009	41.42	--	--
		5/28/2009	42.31	--	--
		6/9/2009	42.53	--	--
		8/25/2009	43.03	--	--
		9/28/2009	43.02	--	--
		10/21/2009	43.06	--	--
		11/10/2009	43.06	--	--
		12/9/2009	42.99	--	--
		1/25/2010	41.18	--	--
		2/19/2010	40.79	--	--
		3/9/2010	39.97	--	--
		4/22/2010	40.78	--	--
		5/27/2010	41.21	--	--
		6/23/2010	41.94	--	--
		7/27/2010	42.64	--	--
		8/31/2010	42.84	--	--
		9/29/2010	42.81	--	--
		10/27/2010	42.65	--	--
		11/23/2010	42.63	--	--
		12/14/2010	42.60	--	--
		1/31/2011	41.09	--	--
		2/28/2011	41.09	--	--
		3/28/2011	37.70	--	--
		4/28/2011	39.97	--	--
		5/26/2011	41.28	--	--
		6/27/2011	41.79	--	--
		7/25/2011	42.38	--	--
		8/22/2011	42.52	--	--
		9/19/2011	42.71	--	--
		10/24/2011	42.65	--	--
		11/21/2011	42.65	--	--

TABLE 1
Monitoring Well Groundwater Levels
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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-9 cont.	36.0-46.0	12/19/2011	42.64	--	--
		1/30/2012	42.49	--	--
		2/20/2012	42.46	--	--
		3/20/2012	42.25	--	--
		4/24/2012	41.29	--	--
		5/30/2012	42.09	--	--
		6/12/2012	42.23	--	--
		7/25/2012	42.46	--	--
		8/28/2012	44.53	--	--
		9/24/2012	42.58	--	--
		10/30/2012	42.59	--	--
		11/20/2012	42.68	--	--
		12/7/2012	41.79	--	--
		1/29/2013	41.19	--	--
		2/28/2013	41.98	--	--
		3/25/2013	41.97		
MW-10	40.3-55.3	9/5/2007	54.86	--	--
		10/31/2007	46.34	--	--
		12/5/2007	45.84	--	--
		12/12/2007	46.84	--	--
		3/4/2008	43.31	--	--
		3/20/2008	44.41	--	--
		5/20/2008	44.09	--	--
		6/5/2008	43.67	--	--
		7/18/2008	45.32	--	--
		9/5/2008	45.79	--	--
		9/18/2008	45.89	--	--
		10/31/2008	46.50	--	--
		11/24/2008	46.02	--	--
		12/15/2008	45.91	--	--
		1/22/2009	48.34	--	--
		2/25/2009	45.21	--	--
		3/27/2009	43.82	--	--
		4/23/2009	44.13	--	--
		5/28/2009	44.96	--	--
		6/9/2009	45.19	--	--
		8/25/2009	46.01	--	--
		9/28/2009	45.94	--	--
		10/21/2009	47.09	--	--
		11/10/2009	46.29	--	--
		12/9/2009	46.02	--	--
		1/25/2010	45.74	--	--
		2/19/2010	43.44	--	--
		3/9/2010	42.62	--	--
		4/22/2010	43.51	--	--
		5/27/2010	44.03	--	--
		6/23/2010	44.52	--	--
		7/27/2010	46.11	--	--

TABLE 1
Monitoring Well Groundwater Levels
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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-10 cont.	40.3-55.3	8/31/2010	45.85	--	--
		9/29/2010	45.89	--	--
		10/27/2010	47.09	--	--
		11/23/2010	44.99	--	--
		12/14/2010	45.77	--	--
		1/31/2011	43.92	--	--
		2/28/2011	43.20	--	--
		3/28/2011	40.41	--	--
		4/28/2011	42.68	--	--
		5/26/2011	43.97	--	--
		6/27/2011	44.51	--	--
		7/25/2011	45.18	--	--
		8/22/2011	45.57	--	--
		9/19/2011	47.13	--	--
		10/24/2011	45.97	--	--
		11/21/2011	45.83	--	--
		12/19/2011	45.72	--	--
		1/30/2012	45.66	--	--
		2/20/2012	45.64	--	--
		3/20/2012	45.48	--	--
		4/24/2012	43.94	--	--
		5/30/2012	44.87	--	--
		6/12/2012	45.16	--	--
		7/25/2012	45.71	--	--
		8/28/2012	45.85	--	--
		9/24/2012	45.91	--	--
		10/30/2012	46.65	--	--
		11/20/2012	46.23	--	--
		12/7/2012	45.79	--	--
		1/29/2013	43.78	--	--
		2/28/2013	44.82	--	--
		3/25/2013	44.93		
MW-11	37.0-47.0	9/6/2007	Dry	--	--
		10/31/2007	45.05	--	--
		12/5/2007	43.04	--	--
		12/12/2007	42.73	--	--
		3/4/2008	36.91	--	--
		3/20/2008	37.29	--	--
		5/20/2008	37.06	--	--
		6/4/2008	37.18	--	--
		7/18/2008	37.97	--	--
		9/5/2008	38.86	--	--
		9/18/2008	38.97	--	--
		10/31/2008	41.02	--	--
		11/24/2008	39.85	--	--
		12/15/2008	39.36	--	--
		1/22/2009	41.73	--	--
		2/25/2009	37.12	--	--

TABLE 1
Monitoring Well Groundwater Levels
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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-11 cont.	37.0-47.0	3/27/2009	36.87	--	--
		4/23/2009	37.13	--	--
		5/28/2009	37.99	--	--
		6/9/2009	38.30	--	--
		8/25/2009	39.78	--	--
		9/28/2009	39.21	--	--
		10/21/2009	42.22	--	--
		11/10/2009	40.93	--	--
		12/9/2009	39.73	--	--
		1/25/2010	36.77	--	--
		2/19/2010	36.78	--	--
		3/9/2010	36.28	--	--
		4/22/2010	36.87	--	--
		5/27/2010	37.03	--	--
		6/23/2010	37.72	--	--
		7/27/2010	40.66	--	--
		8/31/2010	39.34	--	--
		9/29/2010	44.84	--	--
		10/27/2010	42.23	--	--
		11/23/2010	40.53	--	--
		12/14/2010	39.56	--	--
		1/31/2011	36.93	--	--
		2/28/2011	36.63	--	--
		3/28/2011	34.25	--	--
		4/28/2011	36.32	--	--
		5/26/2011	37.06	--	--
		6/27/2011	37.46	--	--
		7/25/2011	38.26	--	--
		8/19/2011	39.41	--	--
		8/22/2011	38.73	--	--
		9/19/2011	47.13	--	--
		10/24/2011	39.06	--	--
		11/21/2011	39.02	--	--
		12/19/2011	38.95	--	--
		1/30/2012	38.96	--	--
		2/20/2012	38.94	--	--
		3/20/2012	38.67	--	--
		4/24/2012	36.98	--	--
		5/30/2012	37.97	--	--
		6/12/2012	38.08	--	--
		7/25/2012	38.82	38.82	0.00
		8/28/2012	38.98	--	--
		9/24/2012	39.04	--	--
		10/30/2012	41.70	--	--
		11/20/2012	40.47	--	--
		12/7/2012	37.00	--	--
		1/29/2013	36.99	--	--
		2/28/2013	37.40	--	--
		3/25/2013	37.49		

TABLE 1
Monitoring Well Groundwater Levels
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Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-12	16.7-26.7	1/29/2013	25.53		
		1/29/2013	22.26	22.26	0.00
		2/28/2013	22.14	--	--
		3/25/2013	21.92	--	--
		3/26/2013[4]	23.92	--	--
MW-13	15.7-25.7	1/29/2013	Dry		
		1/29/2013	25.98	25.98	0.00
		2/28/2013	26.00	--	--
		3/25/2013	25.96	--	--
		3/26/2013[4]	Dry	--	--
MW-14	16.0-26.0	1/29/2013	25.76	--	--
		1/29/2013	25.85	--	--
		2/28/2013	25.88	--	--
		3/25/2013	25.83	--	--
		3/26/2013[4]	Dry	--	--
MW-15	14.0-24.0	1/29/2013	Dry	--	--
		1/29/2013	23.57	--	--
		2/28/2013	23.63	--	--
		3/25/2013	23.58	--	--
		3/26/2013[4]	23.61	--	--

Notes:
NM - Not measured
1. Screen intervals measured from feet below ground surface (feet bgs)
2. Groundwater and product levels measured from top of casing - north (TOC-N).
3. MW-5 through MW-7 abandoned 6/23/08.
4. MW-12 through MW-15 results from 24 hour recharge period after purging well on March 25, 2013.

TABLE 2
Monitoring Well Groundwater Elevations
First Semi-Annual 2013 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-1	10/20/2005	328.49	328.04	11/17/2005	290.22	290.42	0.20
				12/13/2005	290.34	290.45	0.11
				1/17/2006	292.35	--	--
				2/21/2006	291.70	--	--
				5/10/2006	294.26	--	--
				6/7/2006	293.76	--	--
				8/22/2006	290.93	290.96	0.03
				11/14/2006	290.99	--	--
				12/8/2006	291.13	--	--
				1/10/2007	291.77	--	--
				2/20/2007	291.90	--	--
				6/5/2007	290.83	--	--
				7/13/2007	290.56	290.58	0.02
				8/17/2007	290.48	290.50	0.02
				9/5/2007	290.42	--	--
				9/12/2007	290.37	290.49	0.12
				10/31/2007	290.41	290.46	0.05
				12/5/2007	289.53	289.54	0.01
				12/11/2007	290.55	290.58	0.03
				3/4/2008	292.48	--	--
				3/19/2008	292.10	--	--
				5/20/2008	292.53	--	--
				6/5/2008	292.35	--	--
				7/18/2008	291.16	--	--
				9/5/2008	290.47	290.48	0.01
				9/18/2008	290.42	290.43	0.01
				10/31/2008	290.37	290.39	0.02
				11/24/2008	290.42	290.45	0.03
				12/15/2008	290.51	290.52	0.01
				1/22/2009	290.60	--	--
				2/25/2009	291.76	--	--
				3/27/2009	292.80	--	--
				4/23/2009	292.45	--	--
				5/28/2009	291.30	--	--
				6/9/2009	290.99	--	--
				8/25/2009	290.44	--	--
				9/28/2009	290.43	--	--
				10/21/2009	290.41	--	--
				11/10/2009	290.42	--	--
				12/9/2009	290.48	--	--
				1/25/2010	292.57	--	--
				2/19/2010	292.89	--	--
				3/9/2010	293.63	--	--
				4/22/2010	292.97	--	--
				5/27/2010	292.63	--	--
				6/23/2010	290.55	--	--
				7/27/2010	290.86	--	--
				8/31/2010	290.64	--	--

TABLE 2
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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-1 cont.	10/20/2005	328.49	328.04	9/29/2010	290.68	--	--
				10/27/2010	290.83	--	--
				11/23/2010	290.87	--	--
				12/14/2010	290.93	--	--
				1/31/2011	292.62	--	--
				2/28/2011	293.25	--	--
				3/28/2011	295.85	--	--
				4/28/2011	293.70	--	--
				5/26/2011	292.52	--	--
				6/27/2011	292.01	--	--
				8/22/2011	291.00	291.01	0.01
				9/19/2011	290.81	--	--
				10/24/2011	290.86	--	--
				11/21/2011	290.90	--	--
				12/19/2011	291.06	--	--
				1/30/2012	291.12	--	--
				2/20/2012	291.12	--	--
				3/20/2012	291.36	--	--
				4/24/2012	292.44	--	--
				5/30/2012	291.52	--	--
				6/12/2012	291.28	--	--
				7/25/2012	291.02	--	--
				8/28/2012	290.95	--	--
				9/24/2012	290.88	--	--
				10/30/2012	290.88	328.04	0.00
				11/20/2012	290.80	--	--
				12/7/2012	292.00	--	--
				1/29/2013	292.51	--	--
				2/28/2013	291.77	--	--
				3/25/2013	291.72	--	0.00
MW-2	10/21/2005	324.85	324.15	11/17/2005	290.41	--	--
				12/13/2005	290.48	--	--
				1/17/2006	292.64	--	--
				2/21/2006	291.96	--	--
				5/10/2006	294.44	--	--
				6/7/2006	293.92	--	--
				8/22/2006	291.04	--	--
				11/14/2006	291.14	--	--
				12/8/2006	291.30	--	--
				1/10/2007	292.06	--	--
				2/20/2007	292.22	--	--
				6/5/2007	290.92	--	--
				7/13/2007	290.66	--	--
				8/17/2007	290.57	--	--
				9/5/2007	290.54	--	--
				9/12/2007	290.53	--	--
				10/31/2007	290.54	--	--
				12/5/2007	290.63	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-2 cont.	10/21/2005	324.85	324.15	3/4/2008	292.74	--	--
				3/19/2008	292.39	--	--
				5/20/2008	292.74	--	--
				6/5/2008	292.59	--	--
				7/18/2008	291.27	--	--
				9/5/2008	290.55	--	--
				9/18/2008	290.50	--	--
				10/31/2008	290.45	--	--
				11/24/2008	290.53	--	--
				12/15/2008	290.56	--	--
				1/22/2009	290.69	--	--
				2/25/2009	292.04	--	--
				3/27/2009	293.01	--	--
				4/23/2009	292.67	--	--
				5/28/2009	286.41	--	--
				6/9/2009	291.07	--	--
				8/25/2009	290.52	--	--
				9/28/2009	290.53	--	--
				10/21/2009	290.47	--	--
				11/10/2009	290.48	--	--
				12/9/2009	290.54	--	--
				1/25/2010	292.87	--	--
				2/19/2010	293.12	--	--
				3/9/2010	293.79	--	--
				4/22/2010	293.19	--	--
				5/27/2010	292.84	--	--
				6/23/2010	291.49	--	--
				7/27/2010	290.91	--	--
				8/31/2010	290.71	--	--
				9/29/2010	290.74	--	--
				10/27/2010	290.90	--	--
				11/23/2010	290.93	--	--
				12/14/2010	291.03	--	--
				1/31/2011	292.87	--	--
				2/28/2011	293.48	--	--
				3/28/2011	296.05	--	--
				4/28/2011	293.91	--	--
				5/26/2011	292.78	--	--
				6/27/2011	292.28	--	--
				7/25/2011	291.20	--	--
				8/22/2011	291.08	--	--
				9/19/2011	290.88	--	--
				10/24/2011	290.94	--	--
				11/21/2011	290.98	--	--
				12/19/2011	291.12	--	--
				1/30/2012	291.20	--	--
				2/20/2012	291.23	--	--
				3/20/2012	291.50	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-2 cont.	10/21/2005	324.85	324.15	3/24/2012	292.72	--	--
				5/30/2012	291.68	--	--
				6/12/2012	291.37	--	--
				7/25/2012	291.09	--	--
				8/28/2012	291.02	--	--
				9/24/2012	290.95	--	--
				10/30/2012	290.95	--	0.00
				11/20/2012	290.86	--	--
				12/7/2012	292.31	--	--
				1/29/2013	292.78	--	--
				2/28/2013	292.06	--	--
				3/25/2013	291.97	--	0.00
MW-3	10/21/2005	326.05	325.65	11/17/2005	289.72	--	--
				12/13/2005	290.85	--	--
				1/17/2006	294.77	--	--
				2/21/2006	293.68	--	--
				5/10/2006	295.27	--	--
				6/7/2006	294.74	--	--
				8/22/2006	290.99	--	--
				11/14/2006	290.94	--	--
				12/8/2006	291.00	--	--
				1/10/2007	293.97	--	--
				2/20/2007	293.99	--	--
				6/5/2007	291.02	--	--
				7/13/2007	290.90	--	--
				8/17/2007	290.87	--	--
				9/5/2007	290.95	--	--
				9/12/2007	290.94	--	--
				10/31/2007	291.02	--	--
				12/5/2007	290.86	--	--
				12/11/2007	290.88	--	--
				3/4/2008	294.68	--	--
				3/19/2008	294.01	--	--
				5/20/2008	294.39	--	--
				6/5/2008	294.20	--	--
				7/18/2008	291.54	--	--
				9/5/2008	290.88	--	--
				9/18/2008	290.84	--	--
				10/31/2008	290.80	--	--
				11/24/2008	290.86	--	--
				12/15/2008	290.86	--	--
				1/22/2009	290.94	--	--
				2/25/2009	294.30	--	--
				3/27/2009	294.78	--	--
				4/23/2009	294.26	--	--
				5/28/2009	291.68	--	--
				6/9/2009	291.17	--	--
				8/25/2009	290.82	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-3 cont.	10/21/2005	326.05	325.65	9/28/2009	290.83	--	--
				10/21/2009	290.86	--	--
				11/10/2009	290.80	--	--
				12/9/2009	290.82	--	--
				1/25/2010	295.16	--	--
				2/19/2010	294.73	--	--
				3/9/2010	295.05	--	--
				4/22/2010	294.62	--	--
				5/27/2010	294.36	--	--
				6/23/2010	291.71	--	--
				7/27/2010	291.06	--	--
				8/31/2010	290.95	--	--
				9/29/2010	290.85	--	--
				10/27/2010	290.83	--	--
				11/23/2010	290.86	--	--
				12/14/2010	292.60	--	--
				1/31/2011	294.66	--	--
				2/28/2011	294.96	--	--
				3/28/2011	296.87	--	--
				4/28/2011	295.10	--	--
				5/26/2011	294.30	--	--
				6/27/2011	293.52	--	--
				7/25/2011	291.16	--	--
				8/22/2011	290.95	--	--
				9/19/2011	290.98	--	--
				10/24/2011	291.26	--	--
				11/21/2011	290.90	--	--
				12/19/2011	286.69	--	--
				1/30/2012	290.95	--	--
				2/20/2012	290.89	--	--
				3/20/2012	293.57	--	--
				4/24/2012	294.62	--	--
				5/30/2012	292.66	--	--
				6/12/2012	292.05	--	--
				7/25/2012	290.91	--	--
				8/28/2012	290.86	--	--
				9/24/2012	290.83	--	--
				10/30/2012	290.80	--	0.00
				11/20/2012	290.77	--	0.00
				12/7/2012	294.68	--	0.00
				1/29/2013	294.51	--	--
				2/28/2013	293.82	--	--
				3/25/2013	293.57	--	0.00
MW-4	1/31/2006	329.97	329.67	2/21/2006	292.95	--	--
				5/10/2006	294.37	--	--
				6/7/2006	293.91	--	--
				8/22/2006	290.88	--	--
				11/14/2006	290.83	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-4 cont.	1/31/2006	329.97	329.67	12/8/2006	290.89	--	--
				1/10/2007	293.13	--	--
				2/20/2007	293.13	--	--
				6/5/2007	290.90	--	--
				7/13/2007	290.73	--	--
				8/17/2007	290.67	--	--
				9/5/2007	290.75	--	--
				9/12/2007	290.74	--	--
				10/31/2007	290.80	--	--
				12/5/2007	290.70	--	--
				12/11/2007	290.67	--	--
				3/4/2008	293.52	--	--
				3/19/2008	293.38	--	--
				5/20/2008	293.40	--	--
				6/5/2008	293.29	--	--
				7/18/2008	291.36	--	--
				9/5/2008	290.72	--	--
				9/18/2008	290.64	--	--
				10/31/2008	290.56	--	--
				11/24/2008	290.64	--	--
				12/11/2008	290.67	--	--
				12/15/2008	290.64	--	--
				1/22/2009	290.76	--	--
				2/25/2009	293.32	--	--
				3/27/2009	293.57	--	--
				4/23/2009	293.31	--	--
				5/28/2009	291.46	--	--
				6/9/2009	291.05	--	--
				8/25/2009	290.62	--	--
				9/28/2009	290.63	--	--
				10/21/2009	290.65	--	--
				11/10/2009	290.58	--	--
				12/9/2009	290.58	--	--
				1/25/2010	293.71	--	--
				2/19/2010	293.58	--	--
				3/9/2010	293.98	--	--
				4/22/2010	293.54	--	--
				5/27/2010	293.40	--	--
				6/23/2010	292.26	--	--
				7/27/2010	290.92	--	--
				8/31/2010	290.78	--	--
				9/29/2010	290.69	--	--
				10/27/2010	290.65	--	--
				11/23/2010	290.68	--	--
				12/14/2010	292.06	--	--
				1/31/2011	293.51	--	--
				2/28/2011	293.74	--	--
				3/28/2011	296.04	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-4 cont.	1/31/2006	329.97	329.67	4/28/2011	294.02	--	--
				5/26/2011	293.35	--	--
				6/27/2011	292.83	--	--
				7/25/2011	291.04	--	--
				8/22/2011	290.79	--	--
				9/19/2011	290.78	--	--
				10/24/2011	290.78	--	--
				11/21/2011	290.69	--	--
				12/19/2011	294.92	--	--
				1/30/2012	290.76	--	--
				2/20/2012	290.73	--	--
				3/20/2012	292.60	--	--
				4/24/2012	293.46	--	--
				5/30/2012	292.22	--	--
				6/12/2012	291.73	--	--
				7/25/2012	290.70	--	--
				8/28/2012	290.65	--	--
				9/24/2012	290.61	--	--
				10/30/2012	290.59	--	--
				11/20/2012	290.53	--	--
				12/7/2012	293.46	--	--
				1/29/2013	293.43	--	--
				2/28/2013	293.00	--	--
				3/25/2013	292.83	--	0.00
MW-5	1/27/2006	335.14	334.81	2/21/2006	318.19	--	--
				6/7/2006	319.06	--	--
				8/22/2006	317.74	--	--
				11/14/2006	318.30	--	--
				2/20/2007	318.26	--	--
				6/5/2007	316.08	--	--
				9/12/2007	314.02	--	--
				12/11/2008	NM	--	--
				Q1 2008	NM	--	--
				Q2 2008	Abandoned[3]	--	--
MW-6	1/27/2006	332.61	332.38	2/21/2006	311.65	--	--
				6/7/2006	312.84	--	--
				8/22/2006	311.01	--	--
				11/14/2006	312.30	--	--
				2/20/2007	312.16	--	--
				6/5/2007	310.23	--	--
				9/12/2007	306.21	--	--
				12/11/2008	NM	--	--
				Q1 2008	NM	--	--
				Q2 2008	Abandoned[3]	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-7	1/27/2006	336.46	336.22	2/21/2006	314.24	--	--
				6/7/2006	312.99	--	--
				8/22/2006	312.90	--	--
				11/14/2006	312.68	--	--
				2/20/2007	311.33	--	--
				6/5/2007	309.79	--	--
				9/12/2007	307.91	--	--
				12/11/2008	NM	--	--
				Q1 2008	NM	--	--
				Q2 2008	Abandoned[3]	--	--
MW-8	8/15/2006	335.23	333.93	8/22/2006	315.22	--	--
				11/14/2006	315.20	--	--
				12/8/2006	314.78	--	--
				1/10/2007	314.74	--	--
				2/20/2007	314.70	--	--
				6/5/2007	313.45	--	--
				7/13/2007	312.72	--	--
				8/17/2007	312.48	--	--
				9/5/2007	312.38	--	--
				9/12/2007	312.46	--	--
				10/31/2007	313.60	--	--
				12/5/2007	314.38	--	--
				12/11/2007	314.35	--	--
				3/4/2008	NM	--	--
				3/19/2008	NM	--	--
				5/20/2008	NM	--	--
				6/5/2008	NM	--	--
				7/18/2008	311.49	--	--
				9/5/2008	312.17	--	--
				9/18/2008	312.26	--	--
				10/31/2008	312.06	--	--
				11/24/2008	312.67	--	--
				12/15/2008	313.20	--	--
				1/22/2009	313.68	--	--
				2/25/2009	314.43	--	--
				3/27/2009	314.39	--	--
				4/23/2009	313.69	--	--
				5/28/2009	312.97	--	--
				6/9/2009	310.62	--	--
				8/25/2009	311.43	--	--
				9/28/2009	311.35	--	--
				10/21/2009	312.32	--	--
				11/10/2009	312.78	--	--
				12/9/2009	313.27	20.65	0.01
				1/25/2010	314.74	--	--
				2/19/2010	314.80	--	--
				3/9/2010	314.96	--	--

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MW-8 cont.	8/15/2006	335.23	333.93	4/22/2010	314.78	--	--
				5/27/2010	314.64	--	--
				6/23/2010	314.11	--	--
				7/27/2010	312.53	--	--
				8/31/2010	312.28	--	--
				9/29/2010	311.70	22.22	0.01
				10/27/2010	312.12	--	--
				11/23/2010	311.62	--	--
				12/14/2010	313.67	--	--
				1/31/2011	314.50	--	--
				2/28/2011	315.03	--	--
				3/28/2011	315.53	--	--
				4/28/2011	315.47	--	--
				5/26/2011	315.48	--	--
				6/27/2011	315.05	--	--
				7/25/2011	314.51	--	--
				8/22/2011	313.96	--	--
				9/19/2011	313.41	--	--
				10/24/2011	314.15	--	--
				11/21/2011	314.90	--	--
				12/19/2011	315.09	--	--
				1/30/2012	315.05	--	--
				2/20/2012	315.27	--	--
				3/20/2012	315.21	--	--
				4/24/2012	315.24	--	--
				5/30/2012	314.20	--	--
				6/12/2012	313.64	--	--
				7/25/2012	312.26	--	0.00
				8/28/2012	311.85	--	0.00
				9/24/2012	311.82	--	0.00
				10/30/2012	312.13	--	--
				11/20/2012	312.69	--	--
				12/7/2012	313.81	--	--
				1/29/2013	315.02	--	0.00
				2/28/2013	314.98	--	--
				3/25/2013	315.05	--	0.00
MW-9	8/16/2006	333.49	333.07	8/22/2006	290.48	42.55	0.04
				11/14/2006	290.45	42.54	0.08
				12/8/2006	290.51	--	--
				1/10/2007	291.06	--	--
				2/20/2007	291.16	41.86	0.05
				3/20/2007	291.31	41.75	0.01
				6/5/2007	290.36	42.69	0.02
				7/13/2007	289.99	--	--
				8/17/2007	289.93	--	--
				9/5/2007	289.91	--	--
				9/12/2007	289.98	43.01	0.08
				10/31/2007	289.90	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-9 cont.	8/16/2006	333.49	333.07	12/5/2007	289.97	--	--
				12/11/2007	290.16	--	--
				3/4/2008	291.76	--	--
				3/19/2008	NM	--	--
				5/20/2008	291.74	--	--
				6/5/2008	291.50	--	--
				7/18/2008	290.55	--	--
				9/5/2008	290.05	--	--
				9/18/2008	290.00	--	--
				10/31/2008	289.98	--	--
				11/24/2008	290.05	--	--
				12/15/2008	290.07	--	--
				1/22/2009	290.17	--	--
				2/25/2009	291.10	--	--
				3/27/2009	292.05	--	--
				4/23/2009	291.65	--	--
				5/28/2009	290.76	--	--
				6/9/2009	290.54	--	--
				8/25/2009	290.04	--	--
				9/28/2009	290.05	--	--
				10/21/2009	290.01	--	--
				11/10/2009	290.01	--	--
				12/9/2009	290.08	--	--
				1/25/2010	291.89	--	--
				2/19/2010	292.28	--	--
				3/9/2010	293.10	--	--
				4/22/2010	292.29	--	--
				5/27/2010	291.86	--	--
				6/23/2010	291.13	--	--
				7/27/2010	290.43	--	--
				8/31/2010	290.23	--	--
				9/29/2010	290.26	--	--
				10/27/2010	290.42	--	--
				11/23/2010	290.44	--	--
				12/14/2010	290.47	--	--
				1/31/2011	291.98	--	--
				2/28/2011	291.98	--	--
				3/28/2011	295.37	--	--
				4/28/2011	293.10	--	--
				5/26/2011	291.79	--	--
				6/27/2011	291.28	--	--
				7/25/2011	290.69	--	--
				8/22/2011	290.55	--	--
				9/19/2011	290.36	--	--
				10/24/2011	290.42	--	--
				11/21/2011	290.42	--	--
				12/19/2011	290.43	--	--
				1/30/2012	290.58	--	--

TABLE 2
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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-9 cont.	8/16/2006	333.49	333.07	2/20/2012	290.61	--	--
				3/20/2012	290.82	--	--
				4/24/2012	291.78	--	--
				5/30/2012	290.98	--	--
				6/12/2012	290.84	--	--
				7/25/2012	290.61	--	--
				8/28/2012	288.54	--	--
				9/24/2012	290.49	--	--
				10/30/2012	290.48	--	--
				11/20/2012	290.39	--	--
				12/7/2012	291.28	--	--
				1/29/2013	291.88	--	--
				2/28/2013	291.09	--	--
				3/25/2013	291.10	--	0.00
MW-10	9/5/2007	336.55	335.89	9/5/2007	281.03	--	--
				10/31/2007	289.55	--	--
				12/5/2007	290.05	--	--
				12/12/2007	289.05	--	--
				3/4/2008	292.58	--	--
				3/20/2008	291.48	--	--
				5/20/2008	291.80	--	--
				6/5/2008	292.22	--	--
				7/18/2008	290.57	--	--
				9/5/2008	290.10	--	--
				9/18/2008	290.00	--	--
				10/31/2008	289.39	--	--
				11/24/2008	289.87	--	--
				12/15/2008	289.98	--	--
				1/22/2009	287.55	--	--
				2/25/2009	290.68	--	--
				3/27/2009	292.07	--	--
				4/23/2009	291.76	--	--
				5/28/2009	290.93	--	--
				6/9/2009	290.70	--	--
				8/25/2009	289.88	--	--
				9/28/2009	289.95	--	--
				10/21/2009	288.80	--	--
				11/10/2009	289.60	--	--
				12/9/2009	289.87	--	--
				1/25/2010	290.15	--	--
				2/19/2010	292.45	--	--
				3/9/2010	293.27	--	--
				4/22/2010	292.38	--	--
				5/27/2010	291.86	--	--
				6/23/2010	291.37	--	--
				7/27/2010	289.78	--	--
				8/31/2010	290.04	--	--
				9/29/2010	290.00	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-10 cont.	9/5/2007	336.55	335.89	10/27/2010	288.80	--	--
				11/23/2010	290.90	--	--
				12/14/2010	290.12	--	--
				1/31/2011	291.97	--	--
				2/28/2011	292.69	--	--
				3/28/2011	295.48	--	--
				4/28/2011	293.21	--	--
				5/26/2011	291.92	--	--
				6/27/2011	291.38	--	--
				7/25/2011	290.71	--	--
				8/22/2011	290.32	--	--
				9/19/2011	288.76	--	--
				10/24/2011	289.92	--	--
				11/21/2011	290.06	--	--
				12/19/2011	290.17	--	--
				1/30/2012	290.23	--	--
				2/20/2012	290.25	--	--
				3/20/2012	290.41	--	--
				4/24/2012	291.95	--	--
				5/30/2012	291.02	--	--
				6/12/2012	290.73	--	--
				7/25/2012	290.18	--	--
				8/28/2012	290.04	--	--
				9/24/2012	289.98	--	--
				10/30/2012	289.24	--	--
				11/20/2012	289.66	--	--
				12/7/2012	290.10	--	--
				1/29/2013	292.11	--	--
				2/28/2013	291.07	--	--
				3/25/2013	290.96	--	0.00
MW-11	9/6/2007	330.29	329.89	9/6/2007	Dry	--	--
				10/31/2007	284.84	--	--
				12/5/2007	286.85	--	--
				12/12/2007	287.16	--	--
				3/4/2008	292.98	--	--
				3/20/2008	292.60	--	--
				5/20/2008	292.83	--	--
				6/4/2008	292.71	--	--
				7/18/2008	291.92	--	--
				9/5/2008	291.03	--	--
				9/18/2008	290.92	--	--
				10/31/2008	288.87	--	--
				11/24/2008	290.04	--	--
				12/15/2008	290.53	--	--
				1/22/2009	288.16	--	--
				2/25/2009	292.77	--	--
				3/27/2009	293.02	--	--
				4/23/2009	292.76	--	--

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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-11 cont.	9/6/2007	330.29	329.89	5/28/2009	291.90	--	--
				6/9/2009	291.59	--	--
				8/25/2009	290.11	--	--
				9/28/2009	290.68	--	--
				10/21/2009	287.67	--	--
				11/10/2009	288.96	--	--
				12/9/2009	290.16	--	--
				1/25/2010	293.12	--	--
				2/19/2010	293.11	--	--
				3/9/2010	293.61	--	--
				4/22/2010	293.02	--	--
				5/27/2010	292.86	--	--
				6/23/2010	292.17	--	--
				7/27/2010	289.23	--	--
				8/31/2010	290.55	--	--
				9/29/2010	285.05	--	--
				10/27/2010	287.66	--	--
				11/23/2010	289.36	--	--
				12/14/2010	290.33	--	--
				1/31/2011	292.96	--	--
				2/28/2011	293.26	--	--
				3/28/2011	295.64	--	--
				4/28/2011	293.57	--	--
				5/26/2011	292.83	--	--
				6/27/2011	292.43	--	--
				7/25/2011	291.63	--	--
				8/19/2011	290.48	--	--
				8/22/2011	291.16	--	--
				9/19/2011	282.76	--	--
				10/24/2011	290.83	--	--
				11/21/2011	290.87	--	--
				12/19/2011	290.94	--	--
				1/30/2012	290.93	--	--
				2/20/2012	290.95	--	--
				3/20/2012	291.22	--	--
				4/24/2012	292.91	--	--
				5/30/2012	291.92	--	--
				6/12/2012	291.81	--	--
				7/25/2012	291.07	--	0.00
				8/28/2012	290.91	--	--
				9/24/2012	290.85	--	--
				10/30/2012	288.19	--	--
				11/20/2012	289.42	--	--
				12/7/2012	292.89	--	--
				1/29/2013	292.90	--	--
				2/28/2013	292.49	--	--
				3/25/2013	292.40	--	0.00

TABLE 2
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Well ID	Date Completed	Surface Elevation (feet msl)[1]	Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-12	12/4/2012	334.90	334.58	1/29/2013	304.36	--	0.00
				1/29/2013	307.63	--	--
				2/28/2013	307.75	--	--
				3/25/2013	307.97	--	--
				3/26/2013[4]	305.97	--	--
MW-13	12/5/2012	336.79	336.79	1/29/2013	Dry	--	0.00
				1/29/2013	303.91	--	--
				2/28/2013	303.89	--	--
				3/25/2013	303.93	--	--
				3/26/2013[4]	Dry	--	--
MW-14	12/3/2012	338.15	337.94	1/29/2013	304.13	--	--
				1/29/2013	304.04	--	--
				2/28/2013	304.01	--	--
				3/25/2013	304.06	--	--
				3/26/2013[4]	Dry	--	--
MW-15	12/4/2012	333.38	333.43	1/29/2013	Dry	--	--
				1/29/2013	306.32	--	--
				2/28/2013	306.26	--	--
				3/25/2013	306.31	--	--
				3/26/2013[4]	306.28	--	--

Notes:
NM - Not measured
-- Not present
1. All elevations displayed in feet above average mean sea level (msl).
2. Groundwater and product elevations calculated from depths as measured from top of casing - north.
3. MW-5 through MW-7 abandoned 6/23/08.
4. MW-12 through MW-15 results from 24 hour recharge period after purging well on March 25, 2013.

MW-1 through MW-3 surveyed on October 31, 2005.
MW-4 through MW-7 surveyed on February 14, 2006.
MW-8 and MW-9 surveyed on November 10, 2006.
MW-10 and MW-11 surveyed on September 13, 2007.
MW-12 through MW-15 surveyed on December 7, 2012

TABLE 3
Summary of Groundwater Analytical Results Gasoline Compounds
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Well ID	Date	TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
ESL [1]		**100**	**1**	**40**	**30**	**20**
MW-1	2/22/2006	**57,000**	**38**	**2,700**	**3,000**	**8,700**
	6/8/2006	**37,000**	**10**	**330**	**120**	**8,200**
	Q3 2006 [2]	NS	NS	NS	NS	NS
	11/15/2006	**38,000**	**14**	**110**	**38**	**5,900**
	2/21/2007	**18,000**	**4**	**7**	**8**	**1,600**
	6/5/2007	**17,000**	**3**	**7**	**4**	**1,100**
	Q3 2007 [2]	NS	NS	NS	NS	NS
	Q4 2007 [2]	NS	NS	NS	NS	NS
	3/19/2008	**12,000**	**0.8**	**1**	**1**	**320**
	6/6/2008	**8,200**	**1**	**2**	**3**	**150**
	Q3 2008 [3]	NS	NS	NS	NS	NS
	Q4 2008 [3]	NS	NS	NS	NS	NS
	3/31/2009	**3,700**	<0.5	**1**	**1**	**44**
	6/10/2009	**5,000**	<0.5	<0.5	**0.7**	**13**
	Q3 2009 [3]	NS	NS	NS	NS	NS
	Q4 2009 [3]	NS	NS	NS	NS	NS
	3/10/2010	**3,800**	<0.5	<0.5	<0.5	**4**
	Q2 2010 [3]	NS	NS	NS	NS	NS
	Q3 2010 [3]	NS	NS	NS	NS	NS
	12/14/2010	**1,900**	**0.8**	**1**	**0.7**	**3**
	3/29/2011	**1,200**	<0.5	<0.5	<0.5	<0.5
	8/23/2011	**960**	<0.5	**1**	<0.5	**2**
	3/21/2012	**880**	<0.5	<0.5	<0.5	**0.7**
	9/25/2012	**1,100 J**	<0.5	**7**	**5**	**29**
	3/26/2013	**710**	<0.5	<0.5	<0.5	<0.5
MW-2	2/21/2006 [1]	<50 / <50	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5
	6/7/2006	<50	<0.5	<0.5	<0.5	<0.5
	8/23/2006	<50	0.5	<0.5	<0.5	<0.5
	11/14/2006	<50	**0.7**	<0.5	<0.5	<0.5
	2/21/2007	<50	<0.5	<0.5	<0.5	<0.5
	6/5/2007	<50	<0.5	<0.5	<0.5	<0.5

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Well ID	Date	TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
ESL[1]		**100**	**1**	**40**	**30**	**20**
MW-2 cont.	Q3 2007 [3]	NS	NS	NS	NS	NS
	Q4 2007 [3]	NS	NS	NS	NS	NS
	3/19/2008	<50	<0.5	<0.5	<0.5	<0.5
	6/5/2008 [1]	<50 / <50	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5
	Q3 2008 [3]	NS	NS	NS	NS	NS
	Q4 2008 [3]	NS	NS	NS	NS	NS
	3/27/2009	<50	<0.5	<0.5	<0.5	<0.5
	Q2 2009 [3]	NS	NS	NS	NS	NS
	Q3 2009 [3]	NS	NS	NS	NS	NS
	Q4 2009 [3]	NS	NS	NS	NS	NS
	3/10/2010	<50	<0.5	<0.5	<0.5	**2**
	6/23/2010	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2010 [3]	NS	NS	NS	NS	NS
	Q4 2010 [3]	NS	NS	NS	NS	NS
	3/28/2011	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2011 [3]	NS	NS	NS	NS	NS
	3/21/2012	<50	<0.5	<0.5	<0.5	**0.6**
	Q3 2012 [3]	NS	NS	NS	NS	NS
	3/26/2013	<50	<0.5	<0.5	<0.5	**1**
MW-3	2/21/2006	<50	<0.5	<0.5	<0.5	<0.5
	6/7/2006	<50	<0.5	<0.5	<0.5	<0.5
	8/23/2006	**170**	<0.5	<0.5	<0.5	<0.5
	11/14/2006	**86**	<0.5	**1**	<0.5	<0.5
	2/21/2007	<50	<0.5	<0.5	<0.5	<0.5
	Q2 2007 [3]	NS	NS	NS	NS	NS
	Q3 2007 [3]	NS	NS	NS	NS	NS
	Q4 2007 [3]	NS	NS	NS	NS	NS
	3/19/2008	<50	<0.5	<0.5	<0.5	<0.5
	6/5/2008	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2008 [3]	NS	NS	NS	NS	NS
	Q4 2008 [3]	NS	NS	NS	NS	NS
	3/31/2009	<50	<0.5	<0.5	<0.5	<0.5
	Q2 2009 [3]	NS	NS	NS	NS	NS

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ESL[1]		**100**	**1**	**40**	**30**	**20**
MW-3 cont.	Q3 2009 [3]	NS	NS	NS	NS	NS
	Q4 2009 [3]	NS	NS	NS	NS	NS
	3/9/2010	<50	<0.5	<0.5	<0.5	<0.5
	Q2 2010 [3]	NS	NS	NS	NS	NS
	Q3 2010 [3]	NS	NS	NS	NS	NS
	Q4 2010 [3]	NS	NS	NS	NS	NS
	3/28/2011	<50	<0.5	<0.5	<0.5	<0.5
	8/23/2011	<50	<0.5	**2**	**1**	**5**
	3/20/2012	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2012 [3]	NS	NS	NS	NS	NS
	3/26/2013	<50	<0.5	<0.5	<0.5	**1**
MW-4	2/21/2006	<50	<0.5	<0.5	<0.5	<0.5
	6/7/2006	<50	<0.5	<0.5	<0.5	<0.5
	8/23/2006	**70**	**0.6**	<0.5	<0.5	**1**
	11/15/2006	<50	<0.5	<0.5	<0.5	0.5
	2/21/2007	<50	<0.5	<0.5	<0.5	<0.5
	Q2 2007 [3]	NS	NS	NS	NS	NS
	Q3 2007 [3]	NS	NS	NS	NS	NS
	Q4 2007 [3]	NS	NS	NS	NS	NS
	3/19/2008	<50	<0.5	<0.5	<0.5	<0.5
	6/6/2008	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2008 [3]	NS	NS	NS	NS	NS
	Q4 2008 [3]	NS	NS	NS	NS	NS
	3/31/2009	<50	<0.5	<0.5	<0.5	<0.5
	Q2 2009 [3]	NS	NS	NS	NS	NS
	Q3 2009 [3]	NS	NS	NS	NS	NS
	Q4 2009 [3]	NS	NS	NS	NS	NS
	3/9/2010	<50	<0.5	<0.5	<0.5	<0.5
	6/23/2010	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2010 [3]	NS	NS	NS	NS	NS
	12/14/2010	<50	<0.5	<0.5	<0.5	**0.8**
	3/29/2011	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2011 [3]	NS	NS	NS	NS	NS
	3/21/2012	<50	<0.5	<0.5	<0.5	**1**

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Well ID	Date	TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
ESL[1]		**100**	**1**	**40**	**30**	**20**
MW-4 cont.	Q3 2012 [3]	NS	NS	NS	NS	NS
	3/26/2013	<50	<0.5	<0.5	**1**	**5**
MW-5	2/22/2006	<50	<0.5	**0.6**	<0.5	**1**
	6/8/2006	<50	<0.5	<0.5	<0.5	<0.5
	8/24/2006	<50	<0.5	<0.5	<0.5	<0.5
	11/16/2006	<50	<0.5	**2**	<0.5	<0.5
	2/20/2007	<50	<0.5	<0.5	<0.5	<0.5
	6/6/2007	<50	<0.5	<0.5	<0.5	<0.5
	9/12/2007	<50	<0.5	<0.5	<0.5	<0.5
	Q4 2007	NS	NS	NS	NS	NS
	Q1 2008	NS	NS	NS	NS	NS
	Q2 2008	Well Abandoned				
MW-6	2/22/2006	<50	<0.5	<0.5	<0.5	<0.5
	6/7/2006	<50	<0.5	<0.5	<0.5	<0.5
	8/22/2006	<50	<0.5	<0.5	<0.5	<0.5
	11/16/2006	<50	<0.5	<0.5	<0.5	<0.5
	2/20/2007	<50	<0.5	<0.5	<0.5	<0.5
	6/6/2007	<50	<0.5	<0.5	<0.5	<0.5
	9/12/2007	<50	<0.5	<0.5	<0.5	<0.5
	Q4 2007	NS	NS	NS	NS	NS
	Q1 2008	NS	NS	NS	NS	NS
	Q2 2008	Well Abandoned				
MW-7/MW-X	2/22/2006	<50	**0.7**	**2**	**0.9**	**5**
	6/8/2006	<50	**0.7**	<0.5	**1**	**4**
	8/22/2006	<50 / <50	**2 / 2**	<0.5 / <0.5	**1 / 0.6 J**	**3 / 2 J**
	11/16/2006	<50	**0.7**	**2**	**0.6**	**2**
	2/20/2007	<50 / <50	**0.7 / 0.6**	**1 / 0.9**	**0.9 / 0.6 J**	**3 / 2 J**
	6/6/2007	<50	**0.7**	**0.8**	**0.8**	**2**
	9/12/2007	<50 / <50	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5
	Q4 2007	NS	NS	NS	NS	NS
	Q1 2008	NS	NS	NS	NS	NS
	Q2 2008	Well Abandoned				
MW-8/MW-X	8/24/2006	**18,000**	**190**	**2,600**	**590**	**2,800**
	11/16/2006	**990**	**76**	**80**	**69**	**190**
	2/20/2007	**2,000**	**180**	**57**	**170**	**74**

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Summary of Groundwater Analytical Results Gasoline Compounds
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Chevron Sunol Pipeline

Well ID	Date	TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
ESL[1]		**100**	**1**	**40**	**30**	**20**
MW-8/MW-X cont.	6/6/2007	**3,600**	**340**	**92**	**370**	**210**
	9/12/2007	**4,200**	**470**	**230**	**630**	**320**
	12/11/2007	**4,900**	**350**	**300**	**490**	**650**
	Q1 2008 [4]	NS	NS	NS	NS	NS
	Q2 2008 [4]	NS	NS	NS	NS	NS
	9/18/2008 [1]	**11,000 / 9,200**	**740 / 690**	**320 / 290**	**790 / 720**	**2,600 / 2,100**
	12/15/2008	**12,000**	**810**	**920**	**880**	**3,300**
	3/27/2009	**29,000/29,000J**	**1,500/1,200**	**7,200/4,500**	**1,200/1,100**	**4,700/4,100**
	Q2 2009 [3]	NS	NS	NS	NS	NS
	Q3 2009 [3]	NS	NS	NS	NS	NS
	12/10/2009	**19,000**	**930**	**1,600**	**1,200**	**3,800**
	3/10/2010	**10,000 / 10,000**	**570 / 580**	**500 / 500**	**730 / 730**	**1,800 / 1,800**
	6/24/2010	**14,000**	**630**	**680**	**870**	**2,500**
	9/29/2010	**74,000 / 170,000 J**	**1,400 / 1,500 J**	**16,000 / 23,000 J**	**3,200 / 4,300 J**	**16,000 / 25,000 J**
	12/15/2010	**78,000**	**2,000**	**15,000**	**2,800**	**15,000**
	3/29/2011	**49,000**	**1,600**	**7,500**	**2,000**	**11,000**
	8/23/2011	**72,000**	**1,200**	**15,000**	**3,200**	**15,000**
	3/21/2012	**52,000/55,000**	**1,000/1,000**	**2,300 J/2,900 J**	**2,600/2,600**	**8,500/9,700**
	Q3 2012 [3]	NS	NS	NS	NS	NS
	3/25/2013	**41,000/42,000**	**760/770**	**3,100/3,100**	**820/820**	**12,000/12,000**
MW-9/ MW-X[7]	Q3 2006 [2]	NS	NS	NS	NS	NS
	11/15/2006	**74,000**	**480**	**12,000**	**2,200**	**17,000**
	Q1 2007 [2]	NS	NS	NS	NS	NS
	Q2 2007 [2]	NS	NS	NS	NS	NS
	Q3 2007 [2]	NS	NS	NS	NS	NS
	12/11/2007	**48,000**	**62**	**5,400**	**1,700**	**12,000**
	Q1 2008 [2]	NS	NS	NS	NS	NS
	6/6/2008	**31,000**	**5**	**1,000**	**1,300**	**9,000**
	9/18/2008	**25,000**	**6**	**610**	**800**	**4,800**
	12/16/2008	**34,000**	**6**	**750**	**930**	**6,000**
	3/31/2009	**20,000**	**3**	**100**	**460**	**3,200**
	6/10/2009	**27,000**	<3	**66**	**610**	**4,100**
	Q3 2009 [2]	NS	NS	NS	NS	NS
	12/10/2009	**20,000**	**3**	**85**	**460**	**2,800**

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ESL[1]		**100**	**1**	**40**	**30**	**20**
MW-9/ MW-X[7] cont.	3/10/2010	**18,000**	<3	**17**	**250**	**1,700**
	6/24/2010	**16,000**	**0.9**	**7**	**210**	**1,300**
	9/29/2010	**24,000**	<10	<10	**440**	**2,100**
	12/14/2010	**9,100**	**6**	**2**	**80**	**340**
	3/29/2011	**7,100**	**0.8**	**0.9**	**44**	**190**
	8/23/2011	**7900/ 8,300**	<0.5/<1.0	**2/ 2**	**46/ 47**	**200/ 220**
	3/21/2012	**2,500**	<0.5	<0.5	**3**	**4**
	9/25/2012	**3,900/ 4,100 J**	<1/ <1	**2/ 2**	**6/ 7**	**18/ 19**
	3/26/2013	**2,100**	<0.5	**43**	**2**	**71**
MW-10/ MW-X[6]	Q3 2007 [3]	NS	NS	NS	NS	NS
	12/14/2007	<50	<0.5	<0.5	<0.5	<0.5
	3/20/2008	<50	**0.9**	<0.5	<0.5	<0.5
	6/6/2008	<50	<0.5	<0.5	<0.5	<0.5
	9/18/2008	<50	<0.5	<0.5	<0.5	<0.5
	12/15/2008	<50	<0.5	<0.5	<0.5	<0.5
	3/27/2009	**52**	<0.5	**0.7**	<0.5	<0.5
	6/10/2009	<50	<0.5	**1**	<0.5	<0.5
	9/28/2009	<50/<50	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5
	12/10/2009	**540**	**1**	**2**	**5**	**23**
	3/9/2010	<50	<0.5	<0.5	<0.5	<0.5
	6/23/2010	<50	<0.5	<0.5	<0.5	<0.5
	9/29/2010	<50	<0.5	<0.5	<0.5	<0.5
	12/15/2010	<50	<0.5	**1**	<0.5	<0.5
	3/28/2011	<50	<0.5	<0.5	<0.5	<0.5
	8/23/2011	<50	<0.5	<0.5	<0.5	0.6
	3/20/2012	<50	<0.5	<0.5	<0.5	<0.5
	9/24/2012	<50	<0.5	<0.5	<0.5	<0.5
	3/25/2013	<50	<0.5	<0.5	<0.5	<0.5
MW-11	Q3 2007 [3]	NS	NS	NS	NS	NS
	12/14/2007	<50	<0.5	<0.5	<0.5	<0.5
	3/20/2008 [1]	<50 / <50	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5
	6/6/2008	<50	<0.5	<0.5	<0.5	<0.5
	9/24/2008	<50	<0.5	<0.5	<0.5	<0.5
	12/15/2008	<50	<0.5	<0.5	<0.5	<0.5
	3/27/2009	<50	<0.5	<0.5	<0.5	<0.5

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Well ID	Date	TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
ESL[1]		**100**	**1**	**40**	**30**	**20**
MW-11 cont.	6/10/2009	**59**	<0.5	**2**	<0.5	**3**
	9/29/2009	<50	<0.5	<0.5	<0.5	<0.5
	12/10/2009	**66**	<0.5	<0.5	<0.5	**3**
	3/9/2010	<50	<0.5	<0.5	<0.5	<0.5
	6/23/2010	<50	<0.5	<0.5	<0.5	<0.5
	9/29/2010	<50	<0.5	<0.5	<0.5	<0.5
	12/15/2010	<50	<0.5	<0.5	<0.5	<0.5
	3/28/2011	<50	<0.5	<0.5	<0.5	<0.5
	8/23/2011	<50	<0.5	<0.5	<0.5	<0.5
	3/20/2012	<50	<0.5	<0.5	<0.5	<0.5
	9/24/2012	<50	<0.5	<0.5	<0.5	<0.5
	3/25/2013	<50	<0.5	<0.5	<0.5	<0.5
MW-12	3/26/2013	**520**	**2**	**1**	<0.5	<0.5
MW-13	3/26/2013	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]
MW-14	3/26/2013	NS[8]	NS[8]	NS[8]	NS[8]	NS[8]
MW-15	3/26/2013	<50	<0.5	<0.5	<0.5	<0.5
SW-Creek	6/7/2006	<50	<0.5	<0.5	<0.5	<0.5
	8/22/2006	<50	<0.5	<0.5	<0.5	<0.5
	11/15/2006	<50	<0.5	<0.5	<0.5	<0.5
	11/15/2006	<50	<0.5	<0.5	<0.5	<0.5
Stream	2/21/2007	<50	<0.5	<0.5	<0.5	<0.5
	6/5/2007	<50	<0.5	<0.5	<0.5	<0.5
	9/12/2007	<50	<0.5	<0.5	<0.5	<0.5
	1/25/2008	<50	<0.5	<0.5	<0.5	<0.5
	3/20/2008	<50	<0.5	<0.5	<0.5	<0.5
	6/5/2008	<50	<0.5	<0.5	<0.5	<0.5
	9/18/2008	<50	<0.5	<0.5	<0.5	<0.5
	12/15/2008	<50	<0.5	<0.5	<0.5	<0.5
	3/31/2009	<50	<0.5	<0.5	<0.5	<0.5
	6/9/2009	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2009 [5]	NS	NS	NS	NS	NS
	Q4 2009 [5]	NS	NS	NS	NS	NS
	3/9/2010	<50	<0.5	<0.5	<0.5	<0.5
	6/24/2010	<50	<0.5	<0.5	<0.5	<0.5
	9/28/2010	<50	<0.5	<0.5	<0.5	<0.5

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Well ID	Date	TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
ESL[(1)]		**100**	**1**	**40**	**30**	**20**
Stream cont.	12/15/2010	<50	<0.5	<0.5	<0.5	<0.5
	3/29/2011	<50	<0.5	<0.5	<0.5	<0.5
	8/23/2011	<50	<0.5	<0.5	<0.5	<0.5
	3/20/2012	<50	<0.5	<0.5	<0.5	<0.5
	9/24/2012	<50	<0.5	<0.5	<0.5	<0.5
	3/26/2013	<50	<0.5	<0.5	<0.5	<0.5

Notes:

TPH-GRO - Total Petroleum Hydrocarbons as Gasoline Range Organics
µg/L - micrograms per liter
ESL - Environmental Screening Level
Bold values exceed laboratory reporting limits.
J - The reported value is the approximate concentration of the analyte in the sample due to sample heterogeneity.
NS - Not Sampled

(1) Final Groundwater ESL, Groundwater is a Current or Potential Drinking Water Resource (Regional Water Quality Control Board, Final Interim February 2013)
(2) Sample not collected during quarterly monitoring due to the presence of measurable free product.
(3) Sample not collected during quarterly monitoring because well is not hydraulically connected to unconfined water-bearing zone.
(4) Sample not collected due to extreme overhead hazards posed by dead trees on the 80-90% grade directly uphill from the sampling location.
(5) Sample not collected during quarterly monitoring due to the stream sample location being dry.
(6) Duplicate sampled collected from MW-10 during the third quarter 2009 sampling event because MW-8 was not hydraulically connected to the water bearing zone.
(7) Duplicate sample collected from MW-9 during the third quarter 2011 and 2012 sampling event.
(8) Sample not collected due to insufficient water measured in the monitoring well.

TABLE 4
Summary of Groundwater Analytical Results Geochemical Indicators and Other Parameters
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Well ID	Date	DO[1] (mg/L)	ORP[1] (mV)	Nitrate (mg/L)	Manganese (mg/L)	Ferrous Iron (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	pH[1]	TDS (mg/L)	Alkalinity to pH 4.5 (mg/L) as CaCO3	Alkalinity to pH 8.3 (mg/L) as CaCO3
MW-1	6/8/2006	0.28	88.15	2.6	0.116	<0.008	<0.052	48.3	<0.002	6.62	494	317	<0.46
	Q3 2006	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]
	11/15/2006	4.87[6]	25	0.37 J	1	0.22	0.079	108	<0.002	6.67	882	597	<0.46
	3/31/2009	2.45	-147	10.3J	0.534	0.12	<0.052	62.4	0.051	6.61	650	343	<0.46
	6/10/2009	0.00	-115	0.42	0.576	0.2	<0.052	72.6	<0.005	7.07	614	422	<0.46
	Q4 2009	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	3/10/2010	0.00	-118	NM[7]	0.431	<0.01	<0.0522	56.9	0.067	6.79	551	347	<0.46
	Q2 2010	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	Q3 2010	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	12/14/2010	1.97	-193	<0.25	1.07	1.5 J	0.538	26.4	0.017	6.55	647	495	<0.46
	3/29/2011	2.84	-5	9J	0.21	<0.01J-	<0.052	49.4	0.012	7.01	532	327	<0.46
	8/22/2011	2.34	-276	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	6.88	NM[9]	NM[9]	NM[9]
	3/21/2012	0.31	-54	1	0	0.58 J-	0	106	<0.005	6.93	868	574	<0.46
	9/25/2012	2.93	-108	<0.25	0.872	3.7 J-	<0.0333	45.9	0.0096	6.80	740	530	<0.7
	3/26/2013	1.85	-156	15.7	0.198	0.43	<0.0333	71.8	0.15	8.29	596	366	<0.7
MW-2	6/7/2006	NR[3]	36.43	11.9	0.003	<0.008	<0.052	47.5	<0.002	6.56	465	286	<0.46
	8/23/2006	0.32	25.69	7	0.024	0.015	<0.052	121	0.005	6.63	811	470	<0.46
	11/14/2006	0.2	220.84	4	0.021	0.021	<0.052 UJ	126 J	0.004	6.72	867	530	<0.46
	3/27/2009	5.47	-86	18.2	0.017	0.036J	<0.052	65	<0.01	6.62	642	347	<0.46
	Q2 2009	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	Q4 2009	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	3/10/2010	2.81	38	13 J	0.0182	0.35	<0.0522	54.9	<0.005	6.89	532	322	<0.46
	6/23/2010	2.18	173	13.2	0.103	4	<0.0522	50.9	<0.005	11.51	524	319	<0.46
	Q3 2010	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	Q4 2010	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	3/28/2011	6.11	168	16.600	0.001	0.021J-	<0.052	53.8	<0.01	7.04	529	304	<0.46
	Q3 2011	NM[7]	NM[7]	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	NM[7]	NM[9]	NM[9]	NM[9]
	3/21/2012	1.22	134	4	0	<0.010 R	0	159	<0.005	7.01	874	568	<0.46
	Q3 2012	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	3/26/2013	2.28	-144	13.2	0.13	1	0.568	74	0.77	7.98	597	383	<0.7
MW-3	6/7/2006	0.37	31.23	10.9	0.005	<0.008	<0.052	45.1	<0.002	6.56	446	274	<0.46
	8/23/2006	0.3	-1.8	<0.25	0.368	0.24	<0.052	26.3	1.5	6.6	711	421	<0.46
	11/14/2006	0.12	-17.57	NM[5]	NM[5]	NM[5]	NM[5]	NM[5]	0.42	6.95	NM[5]	NM[5]	NM[5]
	3/31/2009	0.00	48	22.2J	0.0017	0.08	<0.052	57.7	<0.01	6.75	688	320	<0.46
	Q2 2009	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	Q4 2009	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]

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Well ID	Date	DO[(1)] (mg/L)	ORP[(1)] (mV)	Nitrate (mg/L)	Manganese (mg/L)	Ferrous Iron (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	pH[(1)]	TDS (mg/L)	Alkalinity to pH 4.5 (mg/L) as CaCO3	Alkalinity to pH 8.3 (mg/L) as CaCO3
MW-3 cont.	3/9/2010	1.75	182	12.6 J	0.0093	0.064	<0.0522	54.4	<0.005	6.78	496	293	<0.46
	Q2 2010	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]
	Q3 2010	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]
	Q4 2010	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]
	3/28/2011	5.32	185	12.8	<0.0084	0.026J-	<0.052	46.3	<0.01	7.06	454	269	<0.46
	8/22/2011	2.15	-183	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	7.02	NM[(9)]	NM[(9)]	NM[(9)]
	3/20/2012	4.40	37	15	0	0.054 J-	0.0219 J+	65	0	6.66	686	396	<0.46
	Q3 2012	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]
	3/26/2013	3.97	116	21.5	0.0095	0.73	<0.0333	66.4	<0.003	8.07	546	313	<0.7
MW-4	6/7/2006	0.28	29.57	9.2	0.02	0.059	<0.052	60.2	<0.002	6.65	423	282	<0.46
	8/23/2006	NR[(3)]	-22.49	<0.25	0.226	0.7	<0.052	78.4	0.003	6.62	590	396	<0.46
	11/15/2006	3.46[(6)]	106	0.34 J	0.137	0.47	<0.052	90.3	0.003	6.74	672	490	<0.46
	3/31/2009	3.96	5	19.5J	0.0406	0.14	<0.052	83.7	<0.01	6.64	631	323	<0.46
	Q2 2009	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]
	Q4 2009	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]
	3/9/2010	0.05	123	10.5 J	0.0343	0.13	<0.0522	89.8	<0.005	6.74	560	312	<0.46
	6/23/2010	0.03	164	9.4	0.0295	0.034	<0.0522	62.5	<0.005	11.03	491	297	<0.46
	Q3 2010	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]
	12/14/2010	1.24	162	6.6	0.084	0.021 J	<0.052	213	<0.010	6.51	771	354	<0.46
	3/29/2011	3.81	220	12J	0.018	0.032J-	<0.052	59.5	<0.010	6.98	488	290	<0.46
	Q3 2011	NM[(7)]	NM[(7)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(7)]	NM[(9)]	NM[(9)]	NM[(9)]
	3/21/2012	2.69	107	13	0	0.021 J-	0	119	0	6.85	672	384	<0.46
	Q3 2012	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]	NM[(7)]
	3/26/2013	2.51	153	17.8	0.221	0.13	<0.0333	89.7	0.00	6.85	560	306	<0.7
MW-5	6/8/2006	0.19	12.05	<0.25	0.029	0.120	<0.052	71.30	0.004	7.24	502.00	313.00	2.60
	8/24/2006	NR[(3)]	-151.92	<0.25	0.021	0.280	<0.052	72.20	0.0054 J	7.32	506.00	320.00	<0.46
	11/16/2006	0.08	-48.11	<0.25	0.020 J	0.280	<0.052	73.80 J	0.005	7.45	513.00	320.00	<0.46
MW-6	6/7/2006	NM[(2)]	NM[(2)]	<0.25	0.599	12.600	<0.052	41.60	<0.002	NM[2)]	531.00	364.00	3.70
	8/22/2006	NM[(2)]	NM[(2)]	<0.25	0.600	5.500	<0.052	36.90	5.800	NM[2)]	553.00	375.00	<0.46
	11/16/2006	0.04	-71.00	<0.25	0.203 J	0.700	<0.052	38.30 J	5.700	7.92	541.00	366.00	<0.46
MW-7	6/8/2006	NM[(2)]	NM[(2)]	<0.25	0.706	13.400	<0.052	70.40	0.022	NM[2)]	542.00	310.00	5.90
	8/22/2006	NM[(2)]	NM[(2)]	<0.25	0.160	0.910	<0.052	75.70	0.094	NM[2)]	534.00	335.00	<0.46
	11/16/2006	0.06	-24.00	<0.25	0.376	5.800	<0.052	77.60 J	0.061	7.42	533.00	358.00	<0.46

TABLE 4
Summary of Groundwater Analytical Results Geochemical Indicators and Other Parameters
First Semi-Annual 2013 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date	DO[1] (mg/L)	ORP[1] (mV)	Nitrate (mg/L)	Manganese (mg/L)	Ferrous Iron (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	pH[1]	TDS (mg/L)	Alkalinity to pH 4.5 (mg/L) as CaCO3	Alkalinity to pH 8.3 (mg/L) as CaCO3
MW-8	8/24/2006	NM[2]	NM[2]	<0.25	0.171	0.14	<0.052	90.2	<0.002 UJ	NM[2]	563	362	<0.46
	11/16/2006	0.05	-74	<0.25	0.123	0.8	<0.052	78.6 J	0.002	7.22	564	350	<0.46
	3/27/2009	6.88[6]	-113	0.27	0.553	2.5J	<0.052	15.5	0.13	6.74	639	467	<0.46
	Q2 2009	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]	NM[7]
	12/10/2009	0.04	-165	<0.25 UJ	0.549 J	<2.5	0.06	2 J	<0.2	6.94	576	445	<0.46
	3/10/2010	0.00	-85	<0.25	0.334	3	<0.0522	1.7	0.33	6.89	587	453	<0.46
	6/24/2010	5.83[6]	-84	<0.25	1.08	7.8	0.0949 J+	6.1	0.65	6.72	679	502	<0.46
	Q3 2010	NM[8]	NM[8]	NM[8]	NM[8]	NM[8]	NM[8]	NM[8]	NM[8]	NM[8]	NM[8]	NM[8]	NM[8]
	12/15/2010	NM[8]	NM[8]	<0.25	1.57	1.2 J	0.0693	23	0.59	NM[8]	803.00	536	<0.46
	3/29/2011	NM[8]	NM[8]	<0.25UJ	2.29	1.2J-	0.413	84.1	0.39J	NM[8]	1210.00	680	<0.46
	8/23/2011	1.18	-261	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	6.94	NM[9]	NM[9]	NM[9]
	3/21/2012	8.75[6]	-103	0.29/ <0.25	0.383 J/ 0.590 J	2.6 J-/ 3.0 J-	0.017 J/ 0.385 J	<1.5 J/ 3.9 J	67/ 58	7.43	599/ 674	473/ 507	<0.46/ <0.46
	Q3 2012	NM[5]	NM[5]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[5]	NM[4]	NM[4]	NM[4]
	3/25/2013	1.79	-95	<0.25/<0.25	0.869 J/0.593 J	2.3/2.4	0.161 J/0.515 J	<0.25/<0.25	8.1/7.7	8.15	607/610	518/518	<0.7/<0.7
MW-9	Q3 2006	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]
	11/15/2006	3.01[6]	4	<0.25 UJ	4.41	1.2	0.496	29.5	0.009	6.92	836	657	<0.46
	3/31/2009	3.35	-179	0.39J	3.2	0.099	<0.052	60.5	0.012	6.59	632	419	<0.46
	6/10/2009	0.00	-141	<0.25	3.01	1.7	<0.052	46.4	<0.005	6.98	622	468	<0.46
	12/10/2009	1.43	-188	<0.25 UJ	4.39 J	3.3	2.54	4.5 J	<0.2	6.6	734	620	<0.46
	3/10/2010	0.00	-197	<0.25	2.94	1.7	<0.0522	40.9	0.046	6.84	596	448	<0.46
	6/24/2010	0.00	-108	<0.25	2.46	1.5	0.131 J+	33.5	0.012	6.61	489	380	<0.46
	9/29/2010	0.70	-231	<0.25	3.83	2.2 J	0.082	4.5	0.018	6.68	627	549	<0.46
	12/14/2010	3.37	-181	0.89	2.98	2.8 J	1.48	25	0.025	6.46	666	523	<0.46
	3/29/2011	2.78	-140	6.40J	1.58	0.043	<0.052	63	0.018	7.09	608	396	<0.46
	8/22/2011	2.32	-451	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	7.08	NM[9]	NM[9]	NM[9]
	3/21/2012	0.48	-147	2	0.154	0.18 J-	0.146	103	<0.005	6.91	784	552	<0.046
	9/25/2012	2.67	-156	<0.25	0.401	0.58 J-	<0.0333	32.3	0.028	6.79	742	529	<0.7
	3/26/2013	1.86	-132	11.4	0.506	0.27	0.248	58	0.057	8.19	569	379	<0.7
MW-10	3/27/2009	3.65	48	8.2	0.367	0.21J	<0.052	155	0.28	6.69	1,200	645	<0.46
	6/10/2009	0.37	109	<0.25	0.767	0.8	<0.052	133	2.30	7.20	1,100	623	<0.46
	12/10/2009	0.06	-74	0.33 J	0.964 J	10.90	<0.052	640 J	<0.2	6.85	1,580	512	<0.46
	3/9/2010	1.52	105	13.9 J	0.0357	0.054	<0.052	63.6	0.19	6.89	596	349	<0.46
	6/23/2010	0.00	79	0.68	0.2650	0.200	<0.0522	136.0	0.94	6.76	1000	604	<0.46
	9/29/2010	0.87	22	<0.25	0.384	5.0 J	<0.0522	148	0.550	6.89	998	610	<0.46
	12/15/2010	2.28	61	0.41	0.581	0.29 J	<0.0522	155	0.74	6.78	1,070	606	<0.46
	3/28/2011	5.56	48	18.00	0.101	0.39J-	<0.052	57	0.03	7.00	652	392	<0.46
	8/22/2011	0.00	9	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	7.09	NM[9]	NM[9]	NM[9]
	3/20/2012	0.56	-34	3	0	0.280 J-	0.0743 J+	256	0.54	7.03	960	592	<0.46

TABLE 4
Summary of Groundwater Analytical Results Geochemical Indicators and Other Parameters
First Semi-Annual 2013 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date	DO[1] (mg/L)	ORP[1] (mV)	Nitrate (mg/L)	Manganese (mg/L)	Ferrous Iron (mg/L)	Dissolved Iron (mg/L)	Sulfate (mg/L)	Methane (mg/L)	pH[1]	TDS (mg/L)	Alkalinity to pH 4.5 (mg/L) as CaCO3	Alkalinity to pH 8.3 (mg/L) as CaCO3
MW-10 cont.	9/24/2012	2.44	-28	1.5	0.210	0.29 J-	<0.0333	112	1.30	6.91	970	567	<0.7
	3/25/2013	1.36	-4	2.5	0.282	2.800	<0.0333	115	0.81	7.59	930	573	<0.7
MW-11	3/27/2009	5.86	53	15.3	0.114	0.058J	<0.052	134	0.06	6.61	742	365	<0.46
	6/10/2009	0.37	44	NM	0.415	NM	NM	NM	0.12	7.16	NM	NM	NM
	12/10/2009	1.01	-50	0.48 J	0.804 J	3.6	<0.052	151 J	<0.2	6.84	1720	556	<0.46
	3/9/2010	3.68	133	11.9 J	0.0176	0.087	<0.0522	91.7	0.039	6.73	615	314	<0.46
	6/23/2010	0.45	-2	0.4	0.2420	0.150	<0.0522	437	0.29	6.70	1,300	479	<0.46
	9/28/2010	1.16	7	<0.25	0.320	0.3 J	<0.0522	457	0.350	6.99	1,310	458	<0.46
	12/15/2010	NM[8]	NM[8]	<0.25	0.245	0.84 J	<0.0522	451	0.23	NM[8]	1,320	494	<0.46
	2/28/2011	5.25	91.00	17.50	0.022	0.03J-	<0.052	76	0.06	6.98	602	319	<0.46
	8/22/2011	2.89	-38.00	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	NM[9]	6.53	NM[9]	NM[9]	NM[9]
	3/20/2012	0.38	-16.00	0	0	0.20 J-	0.025 J+	134	0	7.02	954	455	<0.46
	9/24/2012	2.28	-3.00	<0.25	0.195	0.028 J-	<0.0333	216	0.380	6.87	876	469	<0.7
	3/25/2013	2.08	-56	3.7	0.166	0.18	<0.0333	286	0.130	7.97	922	419	<0.7
MW-12	3/26/2013	NM[10]	NM[10]	<0.25	0.842	0.580	0.042	44.3	0.13	NM[10]	571	441	<0.7
MW-13	3/26/2013	NM[10]	NM[10]	NM[11]	NM[11]	NM[11]	NM[11]	NM[11]	NM[11]	NM[10]	NM[11]	NM[11]	NM[11]
MW-14	3/26/2013	NM[10]	NM[10]	NM[11]	NM[11]	NM[11]	NM[11]	NM[11]	NM[11]	NM[10]	NM[11]	NM[11]	NM[11]
MW-15	3/26/2013	NM[10]	NM[10]	NM[11]	NM[11]	NM[11]	NM[11]	NM[11]	NM[11]	NM[10]	NM[11]	NM[11]	NM[11]

Notes:

DO = Dissolved oxygen
ORP = Oxygen reduction potential
TDS = Total dissolved solids
$CaCO_3$ = Calcium Carbonate
NM = Not measured
NR = Not Reported
J = Estimated result
UJ = Estimated result
J- = Biased low value
R = Rejected

Note: MW-5, MW-6, and MW-7 were destroyed on 6/23/08

(1) DO, ORP, and pH values were obtained in the field using a flow-through cell and a multi-parameter meter unless otherwise noted.

(2) Field data was not collected for DO, ORP, and pH because groundwater was removed from the well without using the in-line flow-through cell due to insufficient recharge.

(3) DO meter did not appear to be functioning correctly.

(4) The well was not sampled and parameters were not measured due to the presence of free product at this location.

(5) The well was purged dry and recharge was insufficient to collect groundwater for geochemical analysis.

(6) DO readings were artificially high because purge water was poured into the multi-parameter meter from a bailer.

(7) Sample not collected during quarterly monitoring because well is not hydraulically connected to unconfined water-bearing zone.

(8) Parameters not collected because well dewatered before 1 well volume was collected

(9) Geochemical parameters were not collected because the sampling crew could not collect enough sample from at least 4 of the monitoring wells for analysis.

(10) Field data was not collected for DO, ORP, and pH because groundwater was purged using a disposable bailer.

(11) Monitoring wells MW-13 through MW-15 had insufficient water to collect geochemical samples.

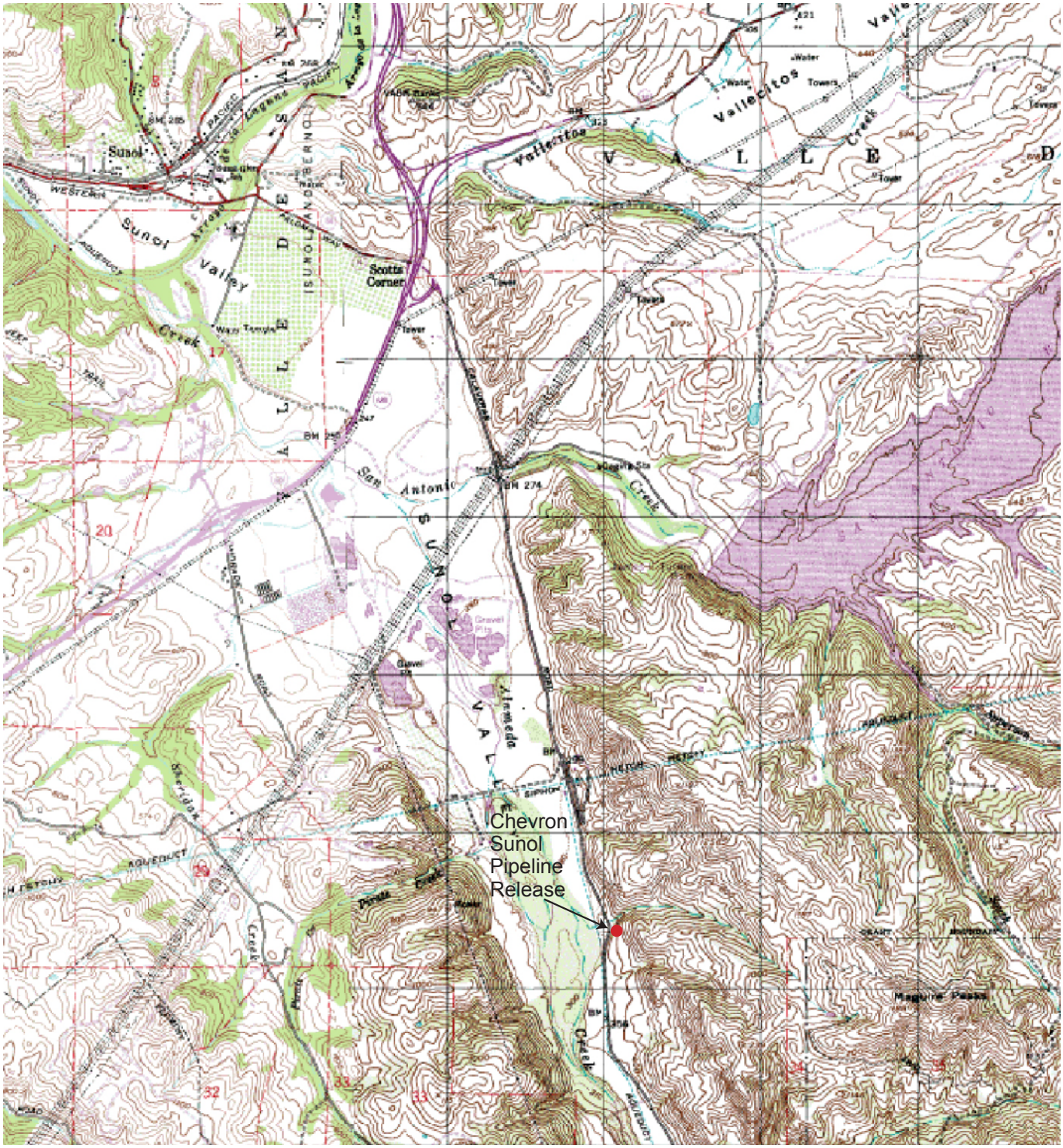


Image obtained from topozone.com

N

MAP REFERENCE:

PORTION OF U.S.G.S. QUANDRANGLE MAP
7 1/2 MINUTE SERIES (TOPOGRAPHIC)
LA COSTA VALLEY QUADRANGLE

URS	Chevron Pipeline Company Project No. 26817187	SITE VICINITY MAP CHEVRON SUNOL PIPELINE SUNOL, CALIFORNIA	Figure 1

NORTH

0 40 80

SCALE IN FEET

CURRENT STREAM SAMPLE LOCATION

VERY SMALL STREAM

MW-10

PROPERTY LINE/FENCE

CALAVERAS ROAD

SW-CREEK (FORMER SURFACE WATER SAMPLING LOCATION)

UPPER DIRT ROAD

LOWER DIRT ROAD

PIPELINE

HILL SLOPE

MW-11

MW-9

MW-4

MW-14

MW-7

MW-13

SVE-1D

SVE-2S

SVE-8

RELEASE LOCATION

MW-8

MW-3

MW-1

MW-5

SVE-7

SVE-3S

SVE-4D

SVE-6

SVE-5

MW-12

SVE-9

MW-15

MW-6

MW-2

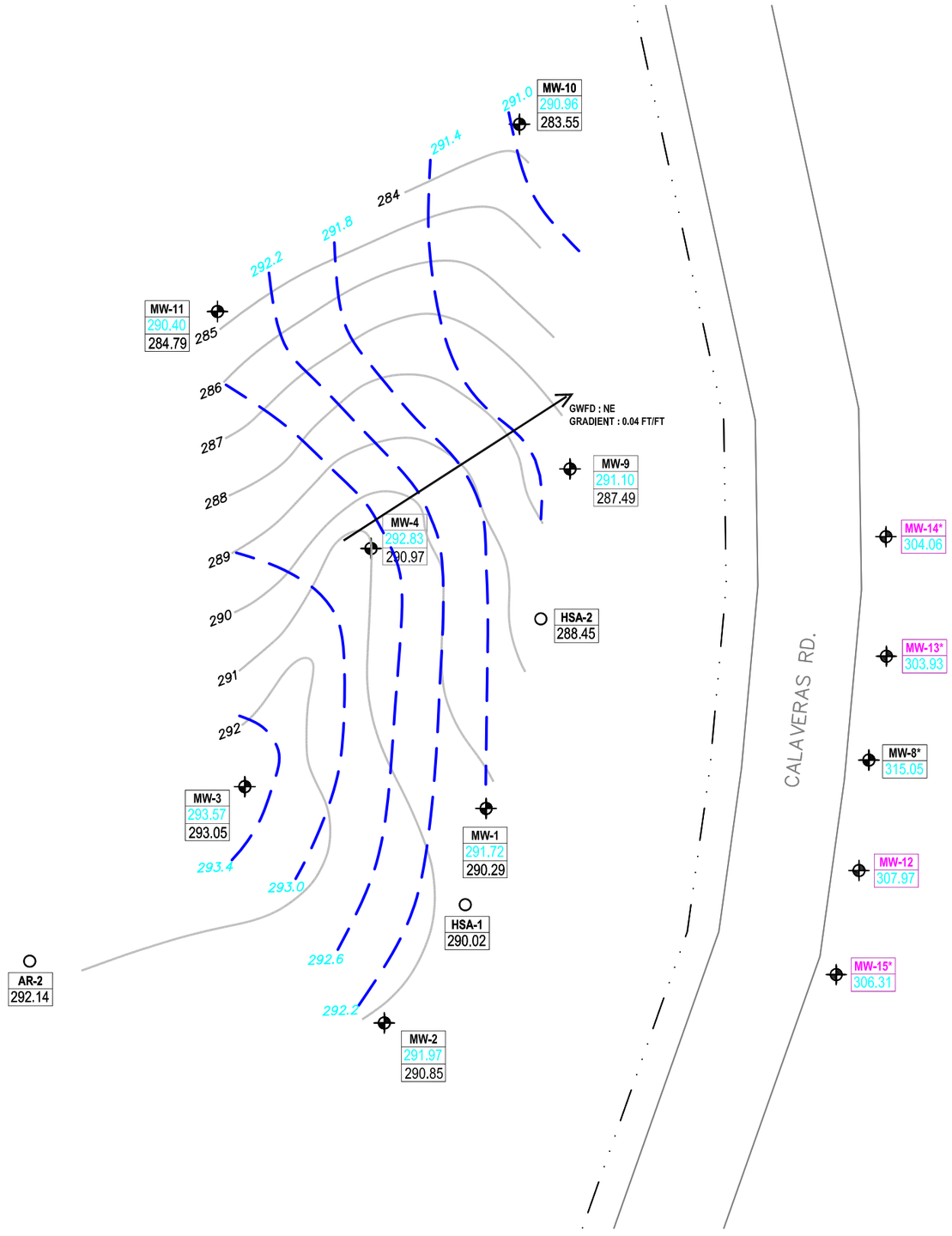
HILL SLOPE AND DENSE VEGETATION

LEGEND:

- SURFACE WATER SAMPLE LOCATIONS
- MONITORING WELL
- ABANDONED MONITORING WELLS
- SVE WELL
- SHELF
- STAIRS
- FENCE
- PIPELINE
- VERY SMALL STREAM
- PROPERTY LINE/FENCE
- HILL SLOPE 80-90% GRADE

URS	CHEVRON PIPELINE COMPANY Project No. 26818071	SVE AND GROUNDWATER MONITORING WELL LOCATIONS CHEVRON SUNOL PIPELINE	Figure 2

Apr 16, 2013 - 4:40pm
T:\SFPUC Sunol Pipeline\Figures\TRANSECT\FIGURE 2.dwg



LEGEND:

- MONITORING WELL
- MW-1 / 291.36 / 290.29 — MONITORING WELL LABEL; GROUNDWATER ELEVATION; BEDROCK CONTACT ELEVATION
- SOIL BORING
- HSA-2 / 288.45 — SOIL BORING LABEL; BEDROCK CONTACT ELEVATION
- 292 — BEDROCK SURFACE ELEVATION
- GWFD — GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION
- MW-12 / 307.97 — NOT PART OF THE MONITORING WELL NETWORK.

NOTES:

1. ELEVATIONS IN FEET ABOVE AVERAGE MEAN SEA LEVEL (msl).
2. GROUNDWATER ELEVATIONS FOR MW–1 THROUGH MW–4 AND MW–8 THROUGH MW–15, AS MEASURED ON MARCH 25, 2013.
3. BEDROCK ELEVATION DATA OBTAINED FROM THE BORING LOGS OF MW–1 THROUGH MW–4, MW–9 THROUGH MW–11, HSA–1, HSA–2, AND AR–2.
4. THE BEDROCK ELEVATIONS SHOWN REPRESENT THE OVERBURDEN CONTACT WITH THE WEATHERED SILTSTONE/CLAYSTONE BEDROCK UNIT (POSSIBLY CRETACEOUS–AGE CLAY SHALE OF THE PANOCHE FORMATION).
5. CALCULATED GROUNDWATER GRADIENT IN NORTHEASTERLY FLOW DIRECTION dh/dl = 0.04 ft/ft.
6. MW–12 THROUGH MW–15 INSTALLED IN DECEMBER 2012. WELLS NOT YET DEVELOPED DUE TO INSUFFICIENT WATER AT THE TIME OF MARCH 2013 GAUGING EVENT, AND THEREFORE NOT YET PART OF THE MONITORING WELL NETWORK.

* NOT USED IN GROUNDWATER CONTOURS.

NORTH

0 30' 60'

SCALE 1"= 30'

URS	CHEVRON PIPELINE COMPANY Project No. 26817187	UNCONFINED WATER–BEARING ZONE GROUNDWATER AND BEDROCK ELEVATIONS MAP CHEVRON SUNOL PIPLINE	Figure 3

Apr 18, 2013 – 2:34pm
T:\SFPUC Sunol Pipeline\Figures\FIGURE 3.dwg

Appendix A
Groundwater Sampling Forms

URS

Horiba U-22

03/26/13 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Suzanne Nase	Pump Model/Type	Mega Monsoon
Company Name	URS	Tubing Type	Polyethylene
Project Name	Chevron Sunol Pipeline	Tubing Diameter	3/8 [in]
Site Name	Sunol	Tubing Length	45 [ft]
		Pump placement from TOC	2 feet off bottom [ft]

Well Information:		**Pumping information:**	
Well Id	MW-1	Final pumping rate	200 mL/min
Well diameter	4 [in]	Flowcell volume	1000 mL
Well total depth	39.3 [ft]	Calculated Sample Rate	NM
Depth to top of screen	29.3 [ft]	Sample rate	NM
Screen length	10 [ft]	Stabilized drawdown	NM
Depth to Water	36.32 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [S/m]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-10	+/-0.2	+/-20
Multi-parameter Readings	12:17	17.6	8.29	1.09	139.0	1.85	-156
	12:20	17.9	7.97	1.08	85.6	0.97	-162
	12:23	18.1	7.85	1.06	72.8	0.85	-160
	12:26	18.3	7.79	1.05	52.7	0.81	-155
	12:29	18.5	7.75	1.04	41.5	0.79	-152
	12:32	18.6	7.74	1.03	35.2	0.77	-148
	12:35	18.5	7.72	1.03	32.7	0.76	-146
	Sample collected from MW-1 at 12:45						
Variance in last 4 readings		0.2	-0.04	-0.01	-11.2	-0.02	3
		0.1	-0.01	-0.01	-6.3	-0.02	4
		-0.1	-0.02	0.00	-2.5	-0.01	2

Notes:
Starting Pumping at 12:17
Initial Depth to Water = 36.32 ft
Total Volume Purged = 1 gallons
Sample collected at 12:45

URS

Horiba U-22

03/26/13 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Suzanne Nase	Pump Model/Type	Mega Monsoon
Company Name	URS	Tubing Type	Polyethylene
Project Name	Chevron Sunol Pipeline	Tubing Diameter	3/8 [in]
Site Name	Sunol	Tubing Length	45 [ft]
		Pump placement from TOC	37 [ft]

Well Information:		**Pumping information:**	
Well Id	MW-2	Final pumping rate	200 mL/min
Well diameter	4 [in]	Flowcell volume	100 mL
Well total depth	38.3 [ft]	Calculated Sample Rate	NM
Depth to top of screen	23.3 [ft]	Sample rate	NM
Screen length	15 [ft]	Stabilized drawdown	NM
Depth to Water	32.18 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [mS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-10	+/-0.2	+/-20
Multi-parameter Readings	10:36	16.8	7.98	1.26	86.2	2.28	-144
	10:39	17.3	8.12	1.24	100	0.92	-157
	10:42	17.5	8.06	1.22	84.2	0.79	-161
	10:45	17.8	8.07	1.21	66.1	0.76	-163
	10:48	18.0	8.10	1.18	57.3	0.74	-162
	10:51	18.0	8.08	1.17	52.2	0.75	-162
	10:54	18.1	8.11	1.16	44.6	0.81	-161
	10:57	18.1	8.11	1.14	39.2	0.97	-155
	11:00	18.1	8.07	1.13	36.4	1.14	-151
	11:03	18.3	8.09	1.12	36.0	1.24	-147
	11:06	18.1	8.09	1.09	31.1	1.43	-138
	Sample collected from MW-2 at 11:25						
Variance in last 4 readings		0.0	-0.04	-0.01	-2.8	0.17	4
		0.2	0.02	-0.01	-0.4	0.10	4
		-0.2	0.00	-0.03	-4.9	0.19	9

Notes: Starting Pumping at 10:36
Initial Depth to Water = 32.18 ft
Total Volume Purged = 2 gallons
Sample collected at 11:25

URS

Horiba U-22
03/26/13 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Suzanne Nase	Pump Model/Type	Mega Monsoon
Company Name	URS	Tubing Type	Polyethylene
Project Name	Chevron Sunol Pipeline	Tubing Diameter	3/8 [in]
Site Name	Sunol	Tubing Length	40 [ft]
		Pump placement from TOC	2 feet off bottom [ft]

Well Information:		**Pumping information:**	
Well Id	MW-3	Final pumping rate	240 mL/min
Well diameter	4 [in]	Flowcell volume	1000 mL
Well total depth	36.3 [ft]	Calculated Sample Rate	NM
Depth to top of screen	21.3 [ft]	Sample rate	NM
Screen length	15 [ft]	Stabilized drawdown	NM
Depth to Water	32.08 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [mS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-10	+/-0.2	+/-20
Multi-parameter Readings	9:41	15.4	8.07	0.860	50.5	3.97	116
	9:44	15.6	7.86	0.861	35.7	2.90	109
	9:47	15.7	7.76	0.861	31.1	2.75	103
	9:50	15.8	7.72	0.864	23.9	2.69	99
	9:53	15.9	7.70	0.864	20.8	2.65	97
	9:56	16.0	7.67	0.865	18.9	2.60	95
	Sample collected from MW-3 at 10:05						
Variance in last 4 readings		0.1	-0.04	0.003	-7.20	-0.06	-4
		0.1	-0.02	0.000	-3.10	-0.04	-2
		0.1	-0.03	0.001	-1.90	-0.05	-2

Notes: Starting Pumping at 9:41
Initial Depth to Water = 32.08 ft
Total Volume Purged = 0.9 gallons
Sample collected at 10:05

URS

Horiba U-22

03/26/13 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Suzanne Nase	Pump Model/Type	Mega Monsoon
Company Name	URS	Tubing Type	Polyethylene
Project Name	Chevron Sunol Pipeline	Tubing Diameter	3/8 [in]
Site Name	Sunol	Tubing Length	43 [ft]
		Pump placement from TOC	2 feet off bottom [ft]

Well Information:		**Pumping information:**	
Well Id	MW-4	Final pumping rate	280 mL/min
Well diameter	4 [in]	Flowcell volume	1000 mL
Well total depth	40.7 [ft]	Calculated Sample Rate	NM
Depth to top of screen	30.7 [ft]	Sample rate	NM
Screen length	10 [ft]	Stabilized drawdown	NM
Depth to Water	36.84 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [mS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-10	+/-0.2	+/-20
Multi-parameter Readings	8:40	16.1	6.85	0.903	75.3	2.51	153
	8:43	16.7	7.26	0.894	59.9	1.42	117
	8:46	16.9	7.27	0.888	56.6	1.24	98
	8:49	17.3	7.33	0.882	35.9	1.15	86
	8:52	17.5	7.30	0.875	35.8	1.18	79
	8:55	17.5	7.43	0.870	28.2	1.22	73
	Sample collected from MW-4 at 9:10						
Variance in last 4 readings		0.4	0.06	-0.006	-20.7	-0.09	-12
		0.2	-0.03	-0.007	-0.1	0.03	-7
		0.0	0.13	-0.005	-7.6	0.04	-6

Notes:
Starting Pumping at 8:40
Initial Depth to Water =36.84
Total Volume Purged = 1 gallon
Sample collected at 9:10

URS

Horiba U-22
03/25/13 ISI Low-Flow Log

Project Information:

Operator Name	Jeremy Quick/Suzanne Nase
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	Mega Monsoon
Tubing Type	Polyethylene
Tubing Diameter	1/4 [in]
Tubing Length	25 [ft]
Pump placement from TOC	6 inches off bottom [ft]

Well Information:

Well Id	MW-8
Well diameter	2 [in]
Well total depth	24.5 [ft]
Depth to top of screen	14.5 [ft]
Screen length	10 [ft]
Depth to Water	18.88 [ft]

Pumping information:

Final pumping rate	200 mL/min
Flowcell volume	1000 mL
Calculated Sample Rate	NM
Sample rate	NM
Stabilized drawdown	NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [S/m]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-10	+/-0.2	+/-20
Multi-parameter Readings	15:16	21.0	8.15	0.994	273.0	1.79	-95
	15:19	20.7	7.88	0.985	174.0	0.89	-104
	15:22	20.8	7.75	0.977	125.0	0.77	-107
	15:25	20.8	7.69	0.975	87.2	0.71	-107
	15:28	20.9	7.66	0.974	76.4	0.69	-107
	15:31	20.9	7.64	0.973	66.8	0.66	-106
	15:34	20.9	7.62	0.973	58.8	0.65	-105
	15:37	20.9	7.63	0.974	55.2	0.63	-104
	15:40	20.9	7.60	0.976	52.9	0.63	-105
	Sample collected at 16:00						
Variance in last 4 readings		0.0	-0.02	0.000	-8.0	-0.01	1
		0.0	0.01	0.001	-3.6	-0.02	1
		0.0	-0.03	0.002	-2.3	0.00	-1

Notes:

Starting Pumping at 15:16
Initial Depth to Water = 18.88 ft
Total Volume Purged = 1.2 gallons
Sample collected at 16:00

MW-X collected at this location.

URS

Horiba U-22

3/26/2013 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Suzanne Nase	Pump Model/Type	Mega Monsoon
Company Name	URS	Tubing Type	Polyethylene
Project Name	Chevron Sunol Pipeline	Tubing Diameter	3/8 [in]
Site Name	Sunol	Tubing Length	50.0 [ft]
		Pump placement from TOC	2 feet off bottom [ft]

Well Information:		**Pumping information:**	
Well Id	MW-9	Final pumping rate	200 mL/min
Well diameter	2 [in]	Flowcell volume	NM
Well total depth	46.0 [ft]	Calculated Sample Rate	NM
Depth to top of screen	36.0 [ft]	Sample rate	NM
Screen length	10 [ft]	Stabilized drawdown	NM
Depth to Water	41.97 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/m]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-10	+/-0.2	+/-20
Multi-parameter Readings	13:22	18.9	8.19	1.03	221.0	1.86	-132
	13:25	19.7	7.99	1.00	93.2	0.94	-133
	13:28	19.8	7.86	0.98	40.6	0.82	-127
	13:31	19.9	7.80	0.98	28.2	0.78	-130
	13:34	20.0	7.76	0.98	23.4	0.78	-136
	13:37	20.2	7.76	0.98	21.8	0.74	-139
	13:40	20.5	7.74	0.99	21.7	0.76	-140
	Sample collected at 13:55						
Variance in last 4 readings		0.1	-0.04	0.00	-4.8	0.00	-6
		0.2	0.00	0.00	-1.6	-0.04	-3
		0.3	-0.02	0.01	-0.1	0.02	-1

Notes:
Starting Pumping at 13:22
Initial Depth to Water = 41.97 ft
Total Volume Purged = 1.2 gal
Sample collected at 13:55

URS

Horiba U-22

3/25/2013 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Suzanne Nase	Pump Model/Type	Mega Monsoon
Company Name	URS	Tubing Type	Polyethylene
Project Name	Chevron Sunol Pipeline	Tubing Diameter	3/8 [in]
Site Name	Sunol	Tubing Length	56 [ft]
		Pump placement from TOC	2 feet off bottom [ft]

Well Information:		**Pumping information:**	
Well Id	MW-10	Final pumping rate	220 mL/min
Well diameter	2 [in]	Flowcell volume	1000 mL
Well total depth	55.3 [ft]	Calculated Sample Rate	NM
Depth to top of screen	40.3 [ft]	Sample rate	NM
Screen length	15 [ft]	Stabilized drawdown	NM
Depth to Water	44.93 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [S/m]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-10	+/-0.2	+/-20
Multi-parameter Readings	11:35	17.9	7.59	1.66	301.0	1.36	-4
	11:38	18.8	7.58	1.67	120.0	0.82	-22
	11:41	18.9	7.58	1.67	79.6	0.80	-21
	11:44	19.3	7.60	1.66	57.9	0.75	-25
	11:47	19.6	7.61	1.66	33.2	0.76	-20
	11:50	19.4	7.64	1.66	22.5	0.88	-14
	11:53(1)		7.64	1.64	18.9		
	11:57	20.2	7.75	1.56	-5.0(2)	1.01	-14
	12:02	20.1	7.71	1.56	-5.0(2)	0.93	-12
	12:05	20.0	7.74	1.56	965.0	0.91	-12
	12:08	20.0	7.61	1.56	923.0	0.89	-13
	12:11	20.1	7.65	1.57	898.0	0.84	-15
	Sample collected from MW-10 at 12:25						
Variance in last 4 readings		-0.10	0.03	0.00	0.0	-0.02	0
		0.00	-0.13	0.00	-42.0	-0.02	-1
		0.10	0.04	0.01	-25.0	-0.05	-2

Notes:

Starting Pumping at 11:35
Initial Depth to Water = 44.93 ft
Total Volume Purged = 1.8 gallons
Sample collected at 12:25

(1) = Well dewatered to pump level; pump lowered accordingly.
(2) = Turbidity out of measureable range.

URS

Horiba U-22
3/25/2013 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Suzanne Nase	Pump Model/Type	Mega Monsoon
Company Name	URS	Tubing Type	Polyethylene
Project Name	Chevron Sunol Pipeline	Tubing Diameter	3/8 [in]
Site Name	Sunol	Tubing Length	50 [ft]
		Pump placement from TOC	2 feet off bottom [ft]

Well Information:		**Pumping information:**	
Well Id	MW-11	Final pumping rate	200 mL/min
Well diameter	2 [in]	Flowcell volume	1000 mL
Well total depth	47.0 [ft]	Calculated Sample Rate	NM
Depth to top of screen	37.0 [ft]	Sample rate	NM
Screen length	10 [ft]	Stabilized drawdown	NM
Depth to Water	37.49 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [S/m]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-10	+/-0.2	+/-20
Multi-parameter Readings	13:22	18.8	7.97	1.86	271.0	2.08	-56
	13:25	18.9	7.89	1.84	130.0	0.91	-56
	13:28	19.2	7.81	1.82	83.0	0.81	-44
	13:31	19.6	7.72	1.79	61.6	0.75	-31
	1:34	19.7	7.64	1.76	59.1	0.73	-21
	13:37	19.9	7.58	1.73	48.8	0.76	-11
	13:40	19.9	7.53	1.64	47.5	1.17	1
	13:43	20.0	7.50	1.59	36.4	1.60	7
	13:47	20.2	7.47	1.51	40.8	1.57	12
	13:50	20.4	7.44	1.46	24.0	1.41	14
	13:53	20.5	7.43	1.46	23.5	1.35	16
	13:56	20.5	7.43	1.45	21.2	1.25	15
	Sample collected from MW-11 at 14:07						
Variance in last 4 readings		0.2	-0.03	-0.05	-16.80	-0.16	2
		0.1	-0.01	0.00	-0.50	-0.06	2
		0.0	0.00	-0.01	-2.30	-0.10	-1

Notes:
Starting Pumping at 13:22
Initial Depth to Water = 37.49 ft
Total Volume Purged = 1.8 gallons
Sample collected at 14:07

Appendix B
Laboratory Analytical Results

REVISED

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

April 11, 2013

Project: Sunol, CA

Submittal Date: 03/27/2013
Group Number: 1378294
PO Number: 0015075159
Release Number: GWIN
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
MW-4 NA Groundwater	6997869
MW-4 Filtered NA Groundwater	6997870
MW-3 NA Groundwater	6997871
MW-3 Filtered NA Groundwater	6997872
MW-2 NA Groundwater	6997873
MW-2 Filtered NA Groundwater	6997874
MW-1 NA Groundwater	6997875
MW-1 Filtered NA Groundwater	6997876
MW-9 NA Groundwater	6997877
MW-9 Filtered NA Groundwater	6997878
MW-12 NA Groundwater	6997879
MW-12 Filtered NA Groundwater	6997880
MW-15 NA Groundwater	6997881
Stream NA Groundwater	6997882
Trip Blank NA Water	6997883

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

ELECTRONIC COPY TO	URS	Attn: Rachel Naccarati
ELECTRONIC COPY TO	URS Corporation	Attn: Christine Pilachowski
ELECTRONIC COPY TO	URS	Attn: Jeremy Quick

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Respectfully Submitted,

Jill M. Parker
Senior Specialist

(717) 556-7262

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Analysis Report

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Sample Description: MW-4 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997869
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 09:10 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN-4

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene		71-43-2	N.D.	0.5	1
10943	Ethylbenzene		100-41-4	1	0.5	1
10943	Toluene		108-88-3	N.D.	0.5	1
10943	Xylene (Total)		1330-20-7	5	0.5	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12		n.a.	N.D.	50	1
GC Miscellaneous		**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane		74-82-8	N.D.	3.0	1
Metals		**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese		7439-96-5	221	0.83	1
Wet Chemistry		**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen		14797-55-8	17,800	500	10
00228	Sulfate		14808-79-8	89,700	3,000	10
		SM 2320 B-1997		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity		n.a.	306,000	700	1
12707	Phenolphthalein Alkalinity		n.a.	N.D.	700	1
		SM 2540 C-1997		**ug/l**	**ug/l**	
00212	Total Dissolved Solids		n.a.	560,000	19,400	1
		SM 3500-Fe B modified-1997		**ug/l**	**ug/l**	
08344	Ferrous Iron		n.a.	130	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	Z130922AA	04/02/2013 12:18	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z130922AA	04/02/2013 12:18	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 10:31	Laura M Krieger	1

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Analysis Report

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Sample Description: MW-4 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997869
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 09:10 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN-4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 10:31	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130910002A	04/01/2013 11:18	Elizabeth J Marin	1
07058	Manganese	SW-846 6010B	1	130861848002	03/29/2013 02:17	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13086655601A	03/28/2013 09:41	Christopher D Meeks	10
00228	Sulfate	EPA 300.0	1	13086655601A	03/28/2013 09:41	Christopher D Meeks	10
12150	Total Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 03:55	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 03:55	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13086021202B	03/27/2013 13:31	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13087834401A	03/28/2013 19:10	Daniel S Smith	1

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Analysis Report

REVISED

Sample Description: MW-4 Filtered NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997870
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 09:10 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848002	03/29/2013 02:20	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1

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Analysis Report

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Sample Description: MW-3 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997871
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 10:05 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN-3

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene		71-43-2	N.D.	0.5	1
10943	Ethylbenzene		100-41-4	N.D.	0.5	1
10943	Toluene		108-88-3	N.D.	0.5	1
10943	Xylene (Total)		1330-20-7	1	0.5	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12		n.a.	N.D.	50	1
GC Miscellaneous		**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane		74-82-8	N.D.	3.0	1
Metals		**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese		7439-96-5	9.5	0.83	1
Wet Chemistry		**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen		14797-55-8	21,500	1,000	20
00228	Sulfate		14808-79-8	66,400	1,500	5
		SM 2320 B-1997		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity		n.a.	313,000	700	1
12707	Phenolphthalein Alkalinity		n.a.	N.D.	700	1
		SM 2540 C-1997		**ug/l**	**ug/l**	
00212	Total Dissolved Solids		n.a.	546,000	19,400	1
		SM 3500-Fe B modified-1997		**ug/l**	**ug/l**	
08344	Ferrous Iron		n.a.	73	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	Z130922AA	04/02/2013 13:38	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z130922AA	04/02/2013 13:38	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 10:56	Laura M Krieger	1

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Analysis Report

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Sample Description: MW-3 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997871
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 10:05 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN-3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 10:56	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130910002A	04/01/2013 12:12	Elizabeth J Marin	1
07058	Manganese	SW-846 6010B	1	130861848002	03/29/2013 02:25	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13086655601A	03/28/2013 09:56	Christopher D Meeks	20
00228	Sulfate	EPA 300.0	1	13086655601B	03/28/2013 01:09	Christopher D Meeks	5
12150	Total Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 03:20	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 03:20	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13086021202B	03/27/2013 13:31	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13087834401A	03/28/2013 19:10	Daniel S Smith	1

REVISED

Sample Description: MW-3 Filtered NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997872
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 10:05 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848002	03/29/2013 02:28	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1

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Analysis Report

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Sample Description: MW-2 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997873
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 11:25 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN-2

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene		71-43-2	N.D.	0.5	1
10943	Ethylbenzene		100-41-4	N.D.	0.5	1
10943	Toluene		108-88-3	N.D.	0.5	1
10943	Xylene (Total)		1330-20-7	1	0.5	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12		n.a.	N.D.	50	1
GC Miscellaneous		**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane		74-82-8	77	3.0	1
Metals		**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese		7439-96-5	130	0.83	1
Wet Chemistry		**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen		14797-55-8	13,200	250	5
00228	Sulfate		14808-79-8	74,000	1,500	5
		SM 2320 B-1997		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity		n.a.	383,000	700	1
12707	Phenolphthalein Alkalinity		n.a.	N.D.	700	1
		SM 2540 C-1997		**ug/l**	**ug/l**	
00212	Total Dissolved Solids		n.a.	597,000	19,400	1
		SM 3500-Fe B modified-1997		**ug/l**	**ug/l**	
08344	Ferrous Iron		n.a.	1,000	20	2

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	Z130922AA	04/02/2013 14:02	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z130922AA	04/02/2013 14:02	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 11:22	Laura M Krieger	1

REVISED

Sample Description: MW-2 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997873
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 11:25 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN-2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 11:22	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130910002A	04/01/2013 12:30	Elizabeth J Marin	1
07058	Manganese	SW-846 6010B	1	130861848002	03/29/2013 02:32	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13086655601B	03/28/2013 01:24	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13086655601B	03/28/2013 01:24	Christopher D Meeks	5
12150	Total Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 04:01	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 04:01	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13086021202B	03/27/2013 13:31	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13087834401A	03/28/2013 19:10	Daniel S Smith	2

REVISED

Sample Description: MW-2 Filtered NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997874
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 11:25 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	568	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848002	03/29/2013 02:36	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1

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Analysis Report

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Sample Description: MW-1 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997875
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 12:45 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

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100 Northpark Blvd.
Covington LA 70433

SUN-1

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene		71-43-2	N.D.	0.5	1
10943	Ethylbenzene		100-41-4	N.D.	0.5	1
10943	Toluene		108-88-3	N.D.	0.5	1
10943	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12		n.a.	710	50	1
GC Miscellaneous		**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane		74-82-8	150	3.0	1
Metals		**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese		7439-96-5	198	0.83	1
Wet Chemistry		**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen		14797-55-8	15,700	500	10
00228	Sulfate		14808-79-8	71,800	3,000	10
		SM 2320 B-1997		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity		n.a.	366,000	700	1
12707	Phenolphthalein Alkalinity		n.a.	N.D.	700	1
		SM 2540 C-1997		**ug/l**	**ug/l**	
00212	Total Dissolved Solids		n.a.	596,000	19,400	1
		SM 3500-Fe B modified-1997		**ug/l**	**ug/l**	
08344	Ferrous Iron		n.a.	430	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	Z130922AA	04/02/2013 14:26	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z130922AA	04/02/2013 14:26	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 11:47	Laura M Krieger	1

REVISED

Sample Description: **MW-1 NA Groundwater**
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997875
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 12:45 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

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SUN-1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 11:47	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130910002A	04/01/2013 12:48	Elizabeth J Marin	1
07058	Manganese	SW-846 6010B	1	130861848002	03/29/2013 02:47	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13086655601A	03/28/2013 10:11	Christopher D Meeks	10
00228	Sulfate	EPA 300.0	1	13086655601A	03/28/2013 10:11	Christopher D Meeks	10
12150	Total Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 04:07	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 04:07	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13086021202B	03/27/2013 13:31	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13087834401A	03/28/2013 19:10	Daniel S Smith	1

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Analysis Report

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Sample Description: MW-1 Filtered NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997876
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 12:45 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848002	03/29/2013 02:51	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1

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Analysis Report

REVISED

Sample Description: MW-9 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997877
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 13:55 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

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SUN-9

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene		71-43-2	N.D.	0.5	1
10943	Ethylbenzene		100-41-4	43	0.5	1
10943	Toluene		108-88-3	2	0.5	1
10943	Xylene (Total)		1330-20-7	71	0.5	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12		n.a.	2,100	50	1
GC Miscellaneous		**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane		74-82-8	57	3.0	1
Metals		**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese		7439-96-5	506	0.83	1
Wet Chemistry		**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen		14797-55-8	11,400	250	5
00228	Sulfate		14808-79-8	58,000	1,500	5
		SM 2320 B-1997		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity		n.a.	379,000	700	1
12707	Phenolphthalein Alkalinity		n.a.	N.D.	700	1
		SM 2540 C-1997		**ug/l**	**ug/l**	
00212	Total Dissolved Solids		n.a.	569,000	19,400	1
		SM 3500-Fe B modified-1997		**ug/l**	**ug/l**	
08344	Ferrous Iron		n.a.	270	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	F130934AA	04/04/2013 05:13	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130934AA	04/04/2013 05:13	Kevin A Sposito	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 12:13	Laura M Krieger	1

REVISED

Sample Description: **MW-9 NA Groundwater**
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997877
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 13:55 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
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Covington LA 70433

SUN-9

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 12:13	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130910002A	04/01/2013 13:06	Elizabeth J Marin	1
07058	Manganese	SW-846 6010B	1	130861848002	03/29/2013 02:55	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13086655603A	03/28/2013 02:55	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13086655603A	03/28/2013 23:27	Christopher D Meeks	5
12150	Total Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 04:13	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 04:13	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13086021202B	03/27/2013 13:31	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13087834401A	03/28/2013 19:10	Daniel S Smith	1

REVISED

Sample Description: MW-9 Filtered NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997878
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 13:55 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	248	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848002	03/29/2013 02:59	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1

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Analysis Report

REVISED

Sample Description: MW-12 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997879
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 15:15 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN12

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene		71-43-2	2	0.5	1
10943	Ethylbenzene		100-41-4	1	0.5	1
10943	Toluene		108-88-3	N.D.	0.5	1
10943	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12		n.a.	520	50	1
GC Miscellaneous		**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane		74-82-8	130	3.0	1
Metals		**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese		7439-96-5	842	0.83	1
Wet Chemistry		**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen		14797-55-8	N.D.	250	5
00228	Sulfate		14808-79-8	44,300	1,500	5
		SM 2320 B-1997		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity		n.a.	441,000	700	1
12707	Phenolphthalein Alkalinity		n.a.	N.D.	700	1
		SM 2540 C-1997		**ug/l**	**ug/l**	
00212	Total Dissolved Solids		n.a.	571,000	19,400	1
		SM 3500-Fe B modified-1997		**ug/l**	**ug/l**	
08344	Ferrous Iron		n.a.	580	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	F130943AA	04/04/2013 19:32	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130943AA	04/04/2013 19:32	Brett W Kenyon	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 12:38	Laura M Krieger	1

REVISED

Sample Description: **MW-12 NA Groundwater**
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997879
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 15:15 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN12

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 12:38	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130910002A	04/01/2013 13:24	Elizabeth J Marin	1
07058	Manganese	SW-846 6010B	1	130861848002	03/29/2013 03:02	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13086655603A	03/28/2013 03:40	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13086655603A	03/29/2013 00:43	Christopher D Meeks	5
12150	Total Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 04:26	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13086008103A	03/28/2013 04:26	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13086021202B	03/27/2013 13:31	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13087834401A	03/28/2013 19:10	Daniel S Smith	1

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Analysis Report

REVISED

Sample Description: MW-12 Filtered NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997880
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 15:15 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	42.1	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848002	03/29/2013 03:06	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848002	03/28/2013 08:40	Denise K Conners	1

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Analysis Report

REVISED

Sample Description: MW-15 NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997881
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 15:30 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN15

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	F130943AA	04/04/2013 20:38	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130943AA	04/04/2013 20:38	Brett W Kenyon	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 13:04	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 13:04	Laura M Krieger	1

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Analysis Report

REVISED

Sample Description: Stream NA Groundwater
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997882
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013 14:35 by SN

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN-S

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	F130943AA	04/04/2013 21:00	Brett W Kenyon	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130943AA	04/04/2013 21:00	Brett W Kenyon	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 13:30	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 13:30	Laura M Krieger	1

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Analysis Report

REVISED

Sample Description: Trip Blank NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6997883
LLI Group # 1378294
Account # 11875

Project Name: Sunol, CA

Collected: 03/26/2013

Submitted: 03/27/2013 09:25
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SUN-T

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	F130934AA	04/03/2013 21:36	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F130934AA	04/03/2013 21:36	Kevin A Sposito	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 14:41	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 14:41	Laura M Krieger	1

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1378294
Reported: 04/11/13 at 08:33 AM

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F130934AA	Sample number(s): 6997877,6997883							
Benzene	N.D.	0.5	ug/l	90		77-121		
Ethylbenzene	N.D.	0.5	ug/l	89		79-120		
Toluene	N.D.	0.5	ug/l	89		79-120		
Xylene (Total)	N.D.	0.5	ug/l	91		77-120		
Batch number: F130943AA	Sample number(s): 6997879,6997881-6997882							
Benzene	N.D.	0.5	ug/l	91		77-121		
Ethylbenzene	N.D.	0.5	ug/l	89		79-120		
Toluene	N.D.	0.5	ug/l	89		79-120		
Xylene (Total)	N.D.	0.5	ug/l	89		77-120		
Batch number: Z130922AA	Sample number(s): 6997869,6997871,6997873,6997875							
Benzene	N.D.	0.5	ug/l	94		77-121		
Ethylbenzene	N.D.	0.5	ug/l	90		79-120		
Toluene	N.D.	0.5	ug/l	96		79-120		
Xylene (Total)	N.D.	0.5	ug/l	95		77-120		
Batch number: 13086A94A	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879,6997881-6997883							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	106	75-135	3	30
Batch number: 130910002A	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879							
Methane	N.D.	3.0	ug/l	99		80-120		
Batch number: 130861848002	Sample number(s): 6997869-6997880							
Iron	N.D.	33.3	ug/l	98		90-112		
Manganese	N.D.	0.83	ug/l	98		90-110		
Batch number: 13086655601A	Sample number(s): 6997869,6997871,6997875							
Nitrate Nitrogen	N.D.	50.	ug/l	104		90-110		
Sulfate	N.D.	300.	ug/l	103		90-110		
Batch number: 13086655601B	Sample number(s): 6997871,6997873							
Nitrate Nitrogen	N.D.	50.	ug/l	104		90-110		
Sulfate	N.D.	300.	ug/l	103		90-110		
Batch number: 13086655603A	Sample number(s): 6997877,6997879							
Nitrate Nitrogen	N.D.	50.	ug/l	107		90-110		
Sulfate	N.D.	300.	ug/l	105		90-110		
Batch number: 13086008103A	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879							
Total Alkalinity	890	700.	ug/l as CaCO3	98		90-110		

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

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1378294
Reported: 04/11/13 at 08:33 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 13086021202B	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879							
Total Dissolved Solids	N.D.	9,700.	ug/l	88		80-120		
Batch number: 13087834401A	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879							
Ferrous Iron	N.D.	10.	ug/l	98		93-105		

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: F130934AA	Sample number(s): 6997877,6997883 UNSPK: 6997877								
Benzene	92	90	72-134	3	30				
Ethylbenzene	85	79	71-134	2	30				
Toluene	89	87	80-125	2	30				
Xylene (Total)	89	85	79-125	2	30				
Batch number: F130943AA	Sample number(s): 6997879,6997881-6997882 UNSPK: 6997879								
Benzene	94	93	72-134	1	30				
Ethylbenzene	94	93	71-134	2	30				
Toluene	94	92	80-125	2	30				
Xylene (Total)	92	94	79-125	2	30				
Batch number: Z130922AA	Sample number(s): 6997869,6997871,6997873,6997875 UNSPK: 6997869								
Benzene	99	112	72-134	12	30				
Ethylbenzene	96	109	71-134	12	30				
Toluene	103	118	80-125	13	30				
Xylene (Total)	100	116	79-125	13	30				
Batch number: 130910002A	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879 UNSPK: 6997869								
Methane	58	63	35-157	8	20				
Batch number: 130861848002	Sample number(s): 6997869-6997880 UNSPK: P997750 BKG: P997750								
Iron	98	95	75-125	1	20	2,600	2,580	1	20
Manganese	-126 (2)	173 (2)	75-125	17	20	8,680	8,640	0	20
Batch number: 13086655601A	Sample number(s): 6997869,6997871,6997875 UNSPK: P996922 BKG: P996922								
Nitrate Nitrogen	105		90-110			9,600	9,600	0	20
Sulfate	108		90-110			84,100	85,400	2 (1)	20
Batch number: 13086655601B	Sample number(s): 6997871,6997873 UNSPK: P996924 BKG: P996924								
Nitrate Nitrogen	89*		90-110			9,600	9,600	0	20
Sulfate	96		90-110			78,700	81,200	3	20
Batch number: 13086655603A	Sample number(s): 6997877,6997879 UNSPK: 6997877 BKG: 6997877								
Nitrate Nitrogen	108		90-110			11,400	11,500	1	20
Sulfate	101		90-110			58,000	58,800	1	20
Batch number: 13086008103A	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879 UNSPK: 6997871								

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

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1378294
Reported: 04/11/13 at 08:33 AM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
	BKG: 6997871								
Total Alkalinity	85		73-121			313,000	312,000	0	5
Phenolphthalein Alkalinity						N.D.	N.D.	0 (1)	5
Batch number: 13086021202B	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879 UNSPK: P997705								
	BKG: 6997871								
Total Dissolved Solids	98		51-144			546,000	558,000	2	9
Batch number: 13087834401A	Sample number(s): 6997869,6997871,6997873,6997875,6997877,6997879 UNSPK: P999885								
	BKG: P999885								
Ferrous Iron	93	98	81-112	3	6	1,800	1,700	4 (1)	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: F130934AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6997877	101	93	97	100
6997883	101	100	99	96
Blank	102	97	100	96
LCS	101	101	98	97
MS	99	98	98	101
MSD	103	96	99	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: F130943AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6997879	102	95	100	99
6997881	104	96	99	98
6997882	101	96	97	97
Blank	100	97	99	96
LCS	104	98	98	98
MS	101	100	99	98
MSD	102	98	98	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z130922AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6997869	99	97	100	96

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

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1378294
Reported: 04/11/13 at 08:33 AM

Surrogate Quality Control

6997871	99	99	100	96
6997873	99	98	100	96
6997875	98	96	102	99
Blank	99	98	99	94
LCS	97	99	100	101
MS	98	99	100	102
MSD	96	98	101	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 13086A94A

	Trifluorotoluene-F
6997869	85
6997871	71
6997873	71
6997875	82
6997877	85
6997879	79
6997881	70
6997882	70
6997883	69
Blank	72
LCS	89
LCSD	89
Limits:	63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 130910002A

	Propene
6997869	54
6997871	53
6997873	56
6997875	57
6997877	53
6997879	52
Blank	86
LCS	95
MS	58
MSD	62
Limits:	42-131

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

Chevron Generic Analysis Request/Chain of Custody

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Acct. # 11875 Group # 1378294 Sample # 6997869-83

For Lancaster Laboratories use only

Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # | WBS

Site Address: Sunol, Ca

Chevron PM | Lead Consultant

Consultant/Office: URS Oakland

Consultant Project Mgr.: Joe Morgan

Consultant Phone #: 510-874-3201

Sampler: S. Nase / J. Quick

4 Matrix: Soil ☐ | Sediment ☐ | Potable ☐ | Ground ☑ | NPDES ☐ | Surface ☐ | Water | Air ☐ | Oil ☐

3 Grab | Composite

2 Sample Identification

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total Number of Containers	BTEX + MTBE	8260 full scan	Oxygenates	TPHG EPA 8015 Mod	TPHD Silica Gel Cleanup ☐	Lead Total ☐ Diss. ☐ Method	VPH/EPH Method	Nitrate and Sulfate EPA 300.0	methane EPA 8015B
MW-4	3-26-13	0910			10	X			X				X	X
MW-3		1005			10	X			X				X	X
MW-2		1125			10	X			X				X	X
MW-1		1245			10	X			X				X	X
MW-9		1355			10	X			X				X	X
MW-12		1515			10	X			X				X	X
MW-15		1530			6	X			X					
Stream		1435			6	X			X					
Trip Blank	↓	—			2	X			X					

SCR #: _____

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

6 Remarks

7 Turnaround Time Requested (TAT) (please circle)

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

8 Data Package Options (please circle if required)

Type I - Full | Type VI (Raw Data) | Alaska/Type III

Project Std

	Relinquished by	Date	Time	Received by	Date	Time
9	[signature]	3-26-13	1730			
	Relinquished by	Date	Time	Received by	Date	Time
	Relinquished by Commerical Carrier: UPS ____ FedEx ✓ Other ____			Received by [signature]	Date 3/27/13	Time 0925
	Temperature Upon Receipt 0.9 °C			Custody Seals Intact?	Yes	No

Chevron Generic Analysis Request/Chain of Custody

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For Lancaster Laboratories use only
Acct. # 11875 Group # 1378294 Sample # 6997869-83
Instructions on reverse side correspond with circled numbers.

SCR #: ______

① Client Information

Facility #: WBS:
Site Address: Sunol, Ca.
Chevron PM: Lead Consultant:
Consultant/Office: URS Oakland
Consultant Project Mgr.: Joe Morgan
Consultant Phone #: 510-874-3201
Sampler: S. Nase/J. Quick

④ Matrix: ☐ Sediment ☑ Ground ☐ Surface; ☐ Potable ☐ NPDES ☐ Air

⑤ Analyses Requested: BTEX ~~+ MTBE~~ ☐ 8021 ☐ 8260 ☐ Naphth ☐; 8260 full scan; Oxygenates; TPHG ~~EPA 8015 Mod~~; ~~Methane EPA 8015 B Mod~~ ~~TPHD~~ ☐ Silica Gel Cleanup; Lead Total ☐ Diss ☐ Method ~~Nitrate Sulfate EPA 300.0~~; VPH/EPH Method; TDS by 2540C; Alkalinity + breakdown EPA 310.1; Ferrous Iron ~~EPA~~ SM 20 ~~6010B~~ 3500Fe-B; Dissolved Iron EPA 6010B; Total Manganese EPA 6010B

② Sample Identification	Date	Time	③ Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX	8260 full scan	Oxygenates	TPHG	~~Methane~~	Lead	VPH/EPH Method	TDS by 2540C	Alkalinity + breakdown EPA 310.1	Ferrous Iron SM 20 3500Fe-B	Dissolved Iron EPA 6010B	Total Manganese EPA 6010B
MW-4	3-26-13	0910				X		5								X	X	X	X	X
MW-3	↓	1005				X		5								X	X	X	X	X
MW-2		1125				X		5								X	X	X	X	X
MW-1		1245				X		5								X	X	X	X	X
MW-9		1355				X		5								X	X	X	X	X
MW-12	↓	1515				X		5								X	X	X	X	X
~~MW-15~~ SN																				
~~Stream~~ SN																				
~~Trip Blank~~ SN																				

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

⑥ Remarks

⑦ Turnaround Time Requested (TAT) (please circle)
(Standard — circled) 5 day 4 day
72 hour 48 hour 24 hour

⑧ Data Package Options (please circle if required)
Type I - Full Type VI (Raw Data) Alaska/Type III
Project Std

Relinquished by	Date	Time	Received by	Date	Time
Jeremy [signature]	3-26-13	1730			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Commerical Carrier: UPS ____ FedEx ✓ Other ____			Received by C. [signature]	3/27/13	0925
Temperature Upon Receipt 1.1 °C			Custody Seals Intact? (Yes) No		

⑨

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The white copy should accompany samples to Lancaster Laboratories. The yellow copy should be retained by the client.
Issued by Dept. 40 Management 7047.01

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Explanation of Symbols and Abbreviations

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

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

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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

ppb parts per billion

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

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

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

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

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

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Analysis Report

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ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

April 11, 2013

Project: Sunol, CA

Submittal Date: 03/26/2013
Group Number: 1377876
PO Number: 0015075159
Release Number: GWIN
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
MW-10 NA Water	6995776
MW-10 Filtered NA Water	6995777
MW-11 NA Water	6995778
MW-11 Filtered NA Water	6995779
MW-8 NA Water	6995780
MW-8 Filtered NA Water	6995781
MW-X NA Water	6995782
MW-X Filtered NA Water	6995783
Equipment Blank NA Water	6995784
Trip Blank NA Water	6995785

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

ELECTRONIC COPY TO	URS	Attn: Rachel Naccarati
ELECTRONIC COPY TO	URS Corporation	Attn: Christine Pilachowski
ELECTRONIC COPY TO	URS	Attn: Jeremy Quick

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Respectfully Submitted,

Jill M. Parker
Senior Specialist

(717) 556-7262

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Analysis Report

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Sample Description: MW-10 NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995776
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 12:25 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNL10

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene		71-43-2	N.D.	0.5	1
10943	Ethylbenzene		100-41-4	N.D.	0.5	1
10943	Toluene		108-88-3	N.D.	0.5	1
10943	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12		n.a.	N.D.	50	1
GC Miscellaneous		**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane		74-82-8	810	15	5
Metals		**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese		7439-96-5	282	0.83	1
Wet Chemistry		**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen		14797-55-8	2,500	250	5
00228	Sulfate		14808-79-8	115,000	6,000	20
		SM 2320 B-1997		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity		n.a.	573,000	700	1
12707	Phenolphthalein Alkalinity		n.a.	N.D.	700	1
		SM 2540 C-1997		**ug/l**	**ug/l**	
00212	Total Dissolved Solids		n.a.	930,000	38,800	1
		SM 3500-Fe B modified-1997		**ug/l**	**ug/l**	
08344	Ferrous Iron		n.a.	2,800	50	5

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	P130942AA	04/04/2013 21:15	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P130942AA	04/04/2013 21:15	Emily R Styer	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A07A	03/28/2013 07:02	Laura M Krieger	1

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Analysis Report

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Sample Description: MW-10 NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995776
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 12:25 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNL10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	13086A07A	03/28/2013 07:02	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130880004A	03/30/2013 15:25	Monica M Souders	5
07058	Manganese	SW-846 6010B	1	130861848001	03/28/2013 15:47	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848001	03/28/2013 08:25	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13085655901A	03/27/2013 02:44	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13085655901A	03/27/2013 16:47	Christopher D Meeks	20
12150	Total Alkalinity	SM 2320 B-1997	1	13085003215A	03/27/2013 10:38	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13085003215A	03/27/2013 10:38	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13085021201B	03/26/2013 13:32	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13086834401A	03/27/2013 20:00	Daniel S Smith	5

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Analysis Report

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Sample Description: MW-10 Filtered NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995777
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 12:25 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848001	03/28/2013 15:58	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848001	03/28/2013 08:25	Denise K Conners	1

REVISED

Sample Description: MW-11 NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995778
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 14:07 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNL11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
GC Miscellaneous	**SW-846 8015B modified**		ug/l	ug/l	
07105	Methane	74-82-8	130	3.0	1
Metals	**SW-846 6010B**		ug/l	ug/l	
07058	Manganese	7439-96-5	166	0.83	1
Wet Chemistry	**EPA 300.0**		ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	3,700	250	5
00228	Sulfate	14808-79-8	286,000	15,000	50
	SM 2320 B-1997		ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	419,000	700	1
12707	Phenolphthalein Alkalinity	n.a.	N.D.	700	1
	SM 2540 C-1997		ug/l	ug/l	
00212	Total Dissolved Solids	n.a.	922,000	38,800	1
	SM 3500-Fe B modified-1997		ug/l	ug/l	
08344	Ferrous Iron	n.a.	180	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	P130922AA	04/02/2013 12:56	Emily R Styer	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P130922AA	04/02/2013 12:56	Emily R Styer	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A07A	03/28/2013 07:27	Laura M Krieger	1

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Analysis Report

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Sample Description: MW-11 NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995778
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 14:07 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNL11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	13086A07A	03/28/2013 07:27	Laura M Krieger	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130880004A	03/29/2013 22:43	Monica M Souders	1
07058	Manganese	SW-846 6010B	1	130861848001	03/28/2013 16:02	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848001	03/28/2013 08:25	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13085655901A	03/27/2013 02:59	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13085655901A	03/27/2013 17:33	Christopher D Meeks	50
12150	Total Alkalinity	SM 2320 B-1997	1	13085003215A	03/27/2013 10:45	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13085003215A	03/27/2013 10:45	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13085021201B	03/26/2013 13:32	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13086834401A	03/27/2013 20:00	Daniel S Smith	1

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Analysis Report

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Sample Description: MW-11 Filtered NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995779
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 14:07 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848001	03/28/2013 16:06	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848001	03/28/2013 08:25	Denise K Conners	1

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Analysis Report

REVISED

Sample Description: MW-8 NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995780
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 16:00 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNL08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10943	Benzene	71-43-2	760	5	10
10943	Ethylbenzene	100-41-4	3,100	50	100
10943	Toluene	108-88-3	820	5	10
10943	Xylene (Total)	1330-20-7	12,000	50	100
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	41,000	1,000	20
GC Miscellaneous	**SW-846 8015B modified**		ug/l	ug/l	
07105	Methane	74-82-8	8,100	300	100
Metals	**SW-846 6010B**		ug/l	ug/l	
07058	Manganese	7439-96-5	869	0.83	1
Wet Chemistry	**EPA 300.0**		ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
	SM 2320 B-1997		ug/l as CaCO3	ug/l as CaCO3	
12150	Total Alkalinity	n.a.	518,000	700	1
12707	Phenolphthalein Alkalinity	n.a.	N.D.	700	1
	SM 2540 C-1997		ug/l	ug/l	
00212	Total Dissolved Solids	n.a.	607,000	19,400	1
	SM 3500-Fe B modified-1997		ug/l	ug/l	
08344	Ferrous Iron	n.a.	2,300	50	5

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	P130932AA	04/03/2013 20:40	Emily R Styer	10
10943	BTEX 8260B Water	SW-846 8260B	1	P130942AA	04/04/2013 21:42	Emily R Styer	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P130932AA	04/03/2013 20:40	Emily R Styer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P130942AA	04/04/2013 21:42	Emily R Styer	100

REVISED

Sample Description: **MW-8 NA Water**
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995780
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 16:00 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNL08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 04:15	Laura M Krieger	20
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 04:15	Laura M Krieger	20
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130880004A	03/30/2013 15:43	Monica M Souders	100
07058	Manganese	SW-846 6010B	1	130861848001	03/28/2013 14:35	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848001	03/28/2013 08:25	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13085655901A	03/27/2013 03:14	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13085655901A	03/27/2013 03:14	Christopher D Meeks	5
12150	Total Alkalinity	SM 2320 B-1997	1	13085003215A	03/27/2013 10:52	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13085003215A	03/27/2013 10:52	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13085021201B	03/26/2013 13:32	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13086834401A	03/27/2013 20:00	Daniel S Smith	5

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Analysis Report

REVISED

Sample Description: MW-8 Filtered NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995781
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 16:00 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	161	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848001	03/28/2013 16:10	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848001	03/28/2013 08:25	Denise K Conners	1

REVISED

Sample Description: MW-X NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995782
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 15:00 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNL-X

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene	71-43-2	770	5	10
10943	Ethylbenzene	100-41-4	3,100	50	100
10943	Toluene	108-88-3	820	5	10
10943	Xylene (Total)	1330-20-7	12,000	50	100
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	42,000	500	10
GC Miscellaneous	**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	7,700	300	100
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	593	0.83	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	N.D.	1,500	5
	SM 2320 B-1997		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity	n.a.	518,000	700	1
12707	Phenolphthalein Alkalinity	n.a.	N.D.	700	1
	SM 2540 C-1997		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	610,000	19,400	1
	SM 3500-Fe B modified-1997		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	2,400	50	5

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	P130932AA	04/03/2013 21:07	Emily R Styer	10
10943	BTEX 8260B Water	SW-846 8260B	1	P130942AA	04/04/2013 22:10	Emily R Styer	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P130932AA	04/03/2013 21:07	Emily R Styer	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P130942AA	04/04/2013 22:10	Emily R Styer	100

REVISED

Sample Description: **MW-X NA Water**
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995782
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 15:00 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNL-X

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 05:06	Laura M Krieger	10
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 05:06	Laura M Krieger	10
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	130880004A	03/30/2013 16:01	Monica M Souders	100
07058	Manganese	SW-846 6010B	1	130861848001	03/28/2013 16:14	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848001	03/28/2013 08:25	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	13085655901B	03/27/2013 03:30	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	13085655901B	03/27/2013 03:30	Christopher D Meeks	5
12150	Total Alkalinity	SM 2320 B-1997	1	13085003215A	03/27/2013 10:59	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM 2320 B-1997	1	13085003215A	03/27/2013 10:59	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM 2540 C-1997	1	13085021201B	03/26/2013 13:32	Kelli M Barto	1
08344	Ferrous Iron	SM 3500-Fe B modified-1997	1	13086834401A	03/27/2013 20:00	Daniel S Smith	5

REVISED

Sample Description: MW-X Filtered NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995783
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 15:00 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
Metals Dissolved	**SW-846 6010B**		ug/l	ug/l	
01754	Iron	7439-89-6	515	33.3	1

General Sample Comments

State of California Lab Certification No. 2501
This sample was filtered in the lab for dissolved metals.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	130861848001	03/28/2013 16:18	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	130861848001	03/28/2013 08:25	Denise K Conners	1

REVISED

Sample Description: Equipment Blank NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995784
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013 12:55 by SN

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNLRB

CAT No.	Analysis Name		CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles		**SW-846 8260B**		**ug/l**	**ug/l**	
10943	Benzene		71-43-2	N.D.	0.5	1
10943	Ethylbenzene		100-41-4	N.D.	0.5	1
10943	Toluene		108-88-3	N.D.	0.5	1
10943	Xylene (Total)		1330-20-7	N.D.	0.5	1
GC Volatiles		**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water	C6-C12	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	Z130921AA	04/02/2013 12:06	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z130921AA	04/02/2013 12:06	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 03:49	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 03:49	Laura M Krieger	1

REVISED

Sample Description: Trip Blank NA Water
NA URSO
Sunol Pipeline SL0600100443

LLI Sample # WW 6995785
LLI Group # 1377876
Account # 11875

Project Name: Sunol, CA

Collected: 03/25/2013

Submitted: 03/26/2013 09:30
Reported: 04/11/2013 08:33

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SNLTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	Z130921AA	04/02/2013 12:30	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z130921AA	04/02/2013 12:30	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	13086A94A	03/28/2013 00:25	Laura M Krieger	1
01146	GC VOA Water Prep	SW-846 5030B	1	13086A94A	03/28/2013 00:25	Laura M Krieger	1

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1377876
Reported: 04/11/13 at 08:33 AM

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P130922AA	Sample number(s): 6995778							
Benzene	N.D.	0.5	ug/l	98		77-121		
Ethylbenzene	N.D.	0.5	ug/l	95		79-120		
Toluene	N.D.	0.5	ug/l	96		79-120		
Xylene (Total)	N.D.	0.5	ug/l	95		77-120		
Batch number: P130932AA	Sample number(s): 6995780,6995782							
Benzene	N.D.	0.5	ug/l	96		77-121		
Toluene	N.D.	0.5	ug/l	98		79-120		
Batch number: P130942AA	Sample number(s): 6995776,6995780,6995782							
Benzene	N.D.	0.5	ug/l	93	95	77-121	2	30
Ethylbenzene	N.D.	0.5	ug/l	92	94	79-120	2	30
Toluene	N.D.	0.5	ug/l	93	96	79-120	3	30
Xylene (Total)	N.D.	0.5	ug/l	93	94	77-120	1	30
Batch number: Z130921AA	Sample number(s): 6995784-6995785							
Benzene	N.D.	0.5	ug/l	88		77-121		
Ethylbenzene	N.D.	0.5	ug/l	101		79-120		
Toluene	N.D.	0.5	ug/l	96		79-120		
Xylene (Total)	N.D.	0.5	ug/l	102		77-120		
Batch number: 13086A07A	Sample number(s): 6995776,6995778							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	103	114	75-135	10	30
Batch number: 13086A94A	Sample number(s): 6995780,6995782,6995784-6995785							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	106	75-135	3	30
Batch number: 130880004A	Sample number(s): 6995776,6995778,6995780,6995782							
Methane	N.D.	3.0	ug/l	109		80-120		
Batch number: 130861848001	Sample number(s): 6995776-6995783							
Iron	N.D.	33.3	ug/l	97		90-112		
Manganese	N.D.	0.83	ug/l	100		90-110		
Batch number: 13085655901A	Sample number(s): 6995776,6995778,6995780							
Nitrate Nitrogen	N.D.	50.	ug/l	103		90-110		
Sulfate	N.D.	300.	ug/l	104		90-110		
Batch number: 13085655901B	Sample number(s): 6995782							
Nitrate Nitrogen	N.D.	50.	ug/l	103		90-110		
Sulfate	N.D.	300.	ug/l	104		90-110		
Batch number: 13085003215A	Sample number(s): 6995776,6995778,6995780,6995782							

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

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1377876
Reported: 04/11/13 at 08:33 AM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Total Alkalinity	N.D.	700.	ug/l as CaCO3	98		90-110		
Batch number: 13085021201B	Sample number(s): 6995776,6995778,6995780,6995782							
Total Dissolved Solids	N.D.	9,700.	ug/l	100		80-120		
Batch number: 13086834401A	Sample number(s): 6995776,6995778,6995780,6995782							
Ferrous Iron	N.D.	10.	ug/l	97		93-105		

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: P130922AA	Sample number(s): 6995778 UNSPK: 6995778								
Benzene	103	104	72-134	1	30				
Ethylbenzene	103	102	71-134	1	30				
Toluene	103	104	80-125	1	30				
Xylene (Total)	103	102	79-125	0	30				
Batch number: P130932AA	Sample number(s): 6995780,6995782 UNSPK: P999019								
Benzene	101	104	72-134	4	30				
Toluene	100	105	80-125	5	30				
Batch number: Z130921AA	Sample number(s): 6995784-6995785 UNSPK: P000401								
Benzene	106	113	72-134	7	30				
Ethylbenzene	111	118	71-134	7	30				
Toluene	109	116	80-125	6	30				
Xylene (Total)	112	120	79-125	6	30				
Batch number: 130880004A	Sample number(s): 6995776,6995778,6995780,6995782 UNSPK: 6995776								
Methane	-89 (2)	-210 (2)	35-157	10	20				
Batch number: 130861848001	Sample number(s): 6995776-6995783 UNSPK: 6995780 BKG: 6995780								
Iron	95	96	75-125	0	20	3,190	3,180	0	20
Manganese	99	98	75-125	0	20	869	877	1	20
Batch number: 13085655901A	Sample number(s): 6995776,6995778,6995780 UNSPK: P995695 BKG: P995695								
Nitrate Nitrogen	98		90-110			39,200	39,000	1	20
Sulfate	98		90-110			83,400	83,800	0 (1)	20
Batch number: 13085655901B	Sample number(s): 6995782 UNSPK: P995697 BKG: P995697								
Nitrate Nitrogen	92		90-110			N.D.	N.D.	0 (1)	20
Sulfate	99		90-110			1,140,000	1,150,000	1	20
Batch number: 13085003215A	Sample number(s): 6995776,6995778,6995780,6995782 UNSPK: P995741 BKG: P995741								
Total Alkalinity	86		73-121			42,500	42,400	0	5
Phenolphthalein Alkalinity						N.D.	N.D.	0 (1)	5
Batch number: 13085021201B	Sample number(s): 6995776,6995778,6995780,6995782 UNSPK: P995188 BKG: 6995778								

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

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1377876
Reported: 04/11/13 at 08:33 AM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Total Dissolved Solids	90		51-144			922,000	900,000	2	9
Batch number: 13086834401A	Sample number(s): 6995776,6995778,6995780,6995782 UNSPK: P997768 BKG: P997768								
Ferrous Iron	99	98	81-112	1	6	4,800	5,000	4 (1)	5

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: P130922AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6995778	98	98	101	97
Blank	100	96	101	98
LCS	99	103	101	98
MS	99	101	102	100
MSD	98	101	100	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: P130932AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6995780	101	96	101	99
6995782	98	98	102	98
Blank	99	97	100	97
LCS	99	100	102	99
MS	99	101	101	99
MSD	98	101	100	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: P130942AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6995776	101	99	101	98
Blank	99	96	101	97
LCS	99	99	102	100
LCSD	99	99	101	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z130921AA

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

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1377876
Reported: 04/11/13 at 08:33 AM

Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6995784	100	98	101	95
6995785	100	99	100	96
Blank	100	97	101	96
LCS	97	96	101	101
MS	96	97	101	101
MSD	97	98	101	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 13086A07A

	Trifluorotoluene-F
6995776	86
6995778	86
Blank	84
LCS	97
LCSD	101
Limits:	63-135

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 13086A94A

	Trifluorotoluene-F
6995780	74
6995782	93
6995784	71
6995785	71
Blank	72
LCS	89
LCSD	89
Limits:	63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 130880004A

	Propene
6995776	80
6995778	70
6995780	84
6995782	98
Blank	83
LCS	86
MS	74
MSD	76
Limits:	42-131

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

Chevron Generic Analysis Request/Chain of Custody

eurofins | Lancaster Laboratories

Acct. # 11875 Group # 1377876 For Lancaster Laboratories use only Sample # 6995776-85

Instructions on reverse side correspond with circled numbers.

1 Client Information

Facility # | WBS

Site Address: Sunol, Ca

Chevron PM | Lead Consultant

Consultant/Office: URS Oakland

Consultant Project Mgr.: Joe Morgan

Consultant Phone #: 510-874-3201

Sampler: S. Nase / J. Quick

4 Matrix

Soil ☐ | Sediment ☐ | Water: Potable ☐ Ground ☐ NPDES ☐ Surface ☐ | Oil ☐ | Air ☐

3 Soil ☐ Composite ☐

5 Analyses Requested

2 Sample Identification	Collected Date	Collected Time	3 Grab	3 Composite	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☐ Naphth ☐	8260 full scan	Oxygenates ___	TPHG EPA 8015 Mod	Methane EPA 8015 Mod Silica Gel Cleanup ☐ TPHD	Lead Total ☐ Diss. ☐ Method Surface EPA 3050	VPH/EPH Method ___	TDS by 2540C	Alkalinity + breakdown EPA 310.1	Ferrous Iron SM 3500 Fe-B Modified	Dissolved Iron EPA 6010B	Total Manganese EPA 6010B
MW-10	3-25-13	1225			15	X			X	X	X		X	X	X	X	X
MW-11	↓	1407			15	X			X	X	X		X	X	X	X	X
MW-8		1600			17	X			X	X	X		X	X	X	X	X
MW-X	↓	1500			15	X			X	X	X		X	X	X	X	X

SCR #: ___

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

6 Remarks

Additional samples added per email attached jmp 3/27/13

7 Turnaround Time Requested (TAT) (please circle)

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

8 Data Package Options (please circle if required)

Type I - Full | Type VI (Raw Data) | Alaska/Type III

Project std.

Relinquished by	Date	Time	Received by	Date	Time (9)
[signature]	3-25-13	1745			
Relinquished by	Date	Time	Received by	Date	Time

Relinquished by Commerical Carrier: UPS ___ FedEx ✓ Other ___

Temperature Upon Receipt 10.7 °C

Received by [signature] | Date 3/26/13 | Time 0930

Custody Seals Intact? Yes (No)

A#11875 G#1377876 S#699576-85

Jill M. Parker

From: Quick, Jeremy [jeremy.quick@urs.com]

Sent: Monday, March 25, 2013 10:30 PM

To: Jill M. Parker

Cc: Pilachowski, Christine; Morgan, Joe; Nase, Suzanne; Wilcox, Jacob; Naccarati, Rachel

Subject: Chevron Sunol Spill Site: Trip Blank and Equip Blank Samples Missing from 3/25/13 COC

Hi Jill,

The samples collected today, which were shipped before the FedEx overnight cut-off, included a "Equip Blank" sample and a "Trip Blank" sample. Unfortunately, I only noticed after FedEx had taken the cooler that neither of those samples ended up on the COC.

Could you please add the "Trip Blank" and "Equip Blank" samples to the COC? Print this email for attachment to the COC if you need to document the change. Both samples should be analyzed for TPH-g and BTEX. The Trip Blank sample should have the date and time collected fields struck out, as it was not collected in the field. The Equip Blank sample was collected on 3-25-13, and the exact time will have to be read from the sample's labels.

I apologize for the oversight. Please call my mobile if you have any questions.

Thank you,

Jeremy Quick / Geologist / URS Corporation
1333 Broadway, Suite 800 / Oakland, CA 94612-1924
Main 510.893.3600 / Direct 510.874.3224
Mobile 510.708.5411 / Fax 510.874.3268

Please note my new email address: Jeremy.Quick@urs.com

Explanation of Symbols and Abbreviations

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

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

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

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

ppb parts per billion

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

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

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

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

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

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