REPORT

SECOND SEMI-ANNUAL 2012 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

October 2012

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October 31, 2012

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 –Second Semi-Annual 2012 Groundwater Monitoring Report**" are true and correct to the best of my knowledge at the present time.

Submitted by:

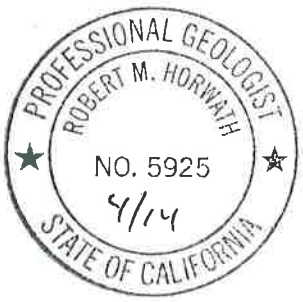
Stephen Gwin
Chevron Pipe Line Company

URS

This letter report ("**Second Semi-Annual 2012 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 Second Semi-Annual 2012 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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October 31, 2012

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, Second Semi-Annual 2012 Groundwater Monitoring Report

Dear Mr. Wickham:

A December 30, 2005 letter provided by the Alameda County Environmental Health Department (ACEHD) staff requested the initiation of a quarterly groundwater monitoring program for the Chevron Pipeline Company (CPL) Sunol Spill Site (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 Second Semi-Annual 2012 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

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On September 24 and 25, 2012, 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 at wells MW-1 through MW-4 and MW-8 through MW-11. URS collected groundwater samples for laboratory analysis from groundwater monitoring wells MW-1 and MW-9 through MW-11. Wells MW-2 through MW-4 were not sampled due because the depth to groundwater level in the wells were below bedrock. MW-8 was not sampled due to LNAPL observed during low-flow purging. 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.

1.1 SITE HYDROGEOLOGY

Prior to collecting groundwater samples, depth to groundwater measurements were recorded monthly from wells MW-1 through MW-4 and MW-8 through MW-11 from the top of casing using an electronic oil/water interface probe. No light non-aqueous phase liquid (LNAPL) was initially measured; however, LNAPL was observed in MW-8 during low-flow purging during the second semi-annual 2012 event. 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 semi-annual monitoring event groundwater elevations are shown on Figure 3.

Unconfined Water Bearing Zone

The groundwater surface elevation slightly decreased in all wells (MW-1 through MW-4 and MW-8 through MW-11) relative to the last sampling event in March 2012. The groundwater elevation during this September 2012 event for well MW-1 was 290.88, MW-2 was 290.95, MW-3 was 290.83, MW-4 was 290.61, MW-9 was 290.49, MW-10 was 289.98 and MW-11 was 290.85 feet above average mean sea level (msl), respectively. The groundwater elevation for MW-8, which is screened in an apparent hillside groundwater recharge source for the Valley Crest Tree Company's (nursery) unconfined water-bearing zone, was 311.82 feet above msl.

Based on water level data from MW-1 through MW-4 and MW-9 through MW-11, the local groundwater flow direction within the nursery's unconfined water-bearing zone is in a northeast direction with a calculated hydraulic gradient of 0.005 feet/feet. The seasonal groundwater recharge from the hillside appears to flow into the unconfined nursery water-bearing zone on a limited basis. Well MW-8 was not included in URS groundwater contour development because it is screened in a different water bearing zone.

Figure 3 provides groundwater contours for the unconfined water-bearing zone as well as bedrock surface elevations for the gravel-siltstone contact for comparison.

2.1 QUARTERLY MONITORING ACTIVITIES

After measuring the depth to groundwater at each well, URS conducted groundwater sampling on September 24 and 25, 2012. The rationale for the method used at each monitoring well is described below:

- MW-1 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.

2.1.1 MW-1 and MW-9 through MW-11

Low-flow purging rates of <100-400 milliliters per minute (mL/min) were used, dependent on the rate of recharge at monitoring wells MW-1 and MW-9 through MW-11. Wells MW-2 through MW-4 were not sampled due because the depth to groundwater level in the wells were below bedrock. MW-8 was not sampled due to LNAPL observed during low-flow purging. 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 multi-parameter meter was calibrated prior the sampling event. 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. No groundwater samples were collected from MW-8 due to the observance of LNAPL during the low-flow purging.

2.1.2 Surface Water Sample

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 September 24, 2012 using a clean disposable container.

3.1 ANALYTICAL PROGRAM

The groundwater samples from wells MW-1 and MW-9 through MW-11 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 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.

Geochemical Parameters

- Field measurements included ORP, DO and pH and were collected in monitoring wells MW-1 and MW-8 through MW-11 using an in-line flow-through cell and multi-parameter Horiba U-22 meter.
- Lab measurements included: 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 in MW-1 and MW-9 through MW-11.

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 second semi-annual 2012 event included MW-1 and MW-9 through MW-11. The second semi-annual 2012 groundwater sample results are as follows:

- The MW-1 sample contained TPH-GRO at 1,100 µg/L, toluene at 7 µg/L, ethylbenzene at 5 µg/L and total xylenes at 29 µg/L. The benzene analytical result was below the laboratory method detection limit of 0.5 µg/L. TPH-GRO sample results increased since the sampling event in March 2012. Toluene, ethylbenzene, and total xylenes sample results increased since the sampling event in March 2012. Monitoring well MW-1 has not been consistently sampled due to the groundwater in the well being hydraulically disconnected from the aquifer. TPH-GRO and BTEX concentrations have decreased since sampling activities began in 2006.
- The MW-9 sample contained TPH-GRO at 3,900 µg/L, toluene at 2 µg/L, ethylbenzene at 6 µg/L, and total xylenes at 18 µg/L. The benzene analytical result was below its respective laboratory reporting method detection limit of 0.5 µg/L. TPH-GRO, toluene, ethylbenzene and total xylenes concentrations have increased since the March 2012 sampling event, but have decreased since 2006.
- 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 Surface Water Sample

A grab surface water sample was collected on September 24, 2012. TPH-GRO and BTEX were below their respective laboratory reporting limits in the sample collected from the stream.

3.2.3 Geochemical Analytical Results

A biodegradation assessment was completed to assess if the residual toluene in groundwater is being decreased by aerobic and/or anaerobic biodegradation. Observations from the recent second semi-annual 2012 monitoring event are discussed to provide an overview of the biodegradation. A brief summary of ORP measurements is provided below, followed by a discussion of the bioremediation parameters in order of the five stages of biodegradation: aerobic respiration (DO); denitrification (nitrate); iron (III) reduction (ferric to ferrous); sulfate reduction (sulfate); and methanogenesis (methane).

The groundwater samples collected from MW-1 and MW-9 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.

3.2.3.1 Oxidation Reduction Potential

ORP in groundwater generally ranges from -400 mV (reducing conditions) to +800 mV (oxidizing conditions). The following ORP ranges were recorded in the field during this sampling event: ORP levels in MW-1 ranged from -108 mV to -82 mV, ORP levels in MW-9 ranged from -156 mV to -132 mV, ORP levels in MW-10 ranged from -99 mV to -27 mV, and ORP levels in MW-11 ranged from -49 mV to 1 mV. In general, reducing conditions appear to exist at the Site.

3.2.3.2 Dissolved Oxygen

DO is the most thermodynamically favored electron acceptor used in the aerobic biodegradation of petroleum hydrocarbons. Final DO concentrations for this sampling event, measured as milligrams per liter (mg/L) in the field, were reported as follows: 2.93 mg/L in MW-1, 2.67 mg/L in MW-9, 2.44 mg/L in MW-10, and 2.28 mg/L in MW-11.

3.2.3.3 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. Final nitrate concentrations for this sampling event, measured by the analytical laboratory as mg/L, were: 1.5 mg/L in MW-10. Nitrate analytical results were below the laboratory method detection limits for monitoring wells: MW-1, MW-9 and MW_11. Nitrate concentrations at the Site are reduced in hydrocarbon impacted wells MW-1 and MW-9. However, monitoring well MW-11 has reduced nitrate concentrations with a non-detect level of TPH-GRO.

3.2.3.4 Ferrous Iron

After both DO and nitrate are depleted in anaerobic groundwater, ferric iron in soil may be consumed by anaerobic biodegradation. In this process, ferric iron in soil is reduced to ferrous iron, which is soluble in water. Therefore, if groundwater has relatively high levels of ferrous iron, anaerobic biodegradation may be occurring. Final ferrous iron concentrations for this sampling event, measured by the analytical laboratory as milligrams per liter (mg/L) were reported as follows: 3.70 mg/L in MW-1, 0.580 mg/L in MW-9, 0.290 mg/L in MW-10, and 0.195 mg/L in MW-11. Ferrous iron concentrations at the Site are generally higher in hydrocarbon impacted well MW-1. However, the ferrous iron concentration is lower in hydrocarbon impacted well MW-9.

3.2.3.5 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. Sulfate results for this sampling event, measured by the analytical laboratory as milligrams per liter (mg/L) were reported as follows: 45.9 mg/L in MW-1, 32.3 mg/L in MW-9, 112 mg/L in MW-10, and 216 mg/L in MW-11. The sulfate concentration at the Site is significantly lower in hydrocarbon impacted wells MW-1 and MW-9 indicating the sulfate reduction process may be occurring.

3.2.3.6 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. Methane results for this sampling event, measured by the analytical laboratory as milligrams per liter (mg/L) were reported as follows: 0.0096 mg/L in MW-1, 0.028 mg/L in MW-9, 1.300 mg/L in MW-10, and 0.380 mg/L in MW-11. Generally, methane concentrations are low in all monitoring wells.

3.2.3.7 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 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. Maximum concentrations of contaminants are as follows: 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.

3.2.3.8 Summary of Geochemical Analytical Results

The geochemical parameters that were collected included ORP, DO, nitrates, ferrous iron, sulfate and methane. ORP concentrations measured in groundwater monitoring wells ranged from -156 mV in MW-9 to 3.00 mV in MW-11. DO concentrations measured in groundwater monitoring wells ranged from 2.28 mg/L in MW-11 to 2.93 in MW-1. Nitrate concentrations ranged from <0.25 mg/L in wells MW-1, MW-9 and MW-11 to 1.5 mg/L in MW-10. Ferrous iron concentrations measured in groundwater monitoring wells ranged from 0.028 mg/L in MW-11 to 3.7 mg/L in MW-1. Sulfate concentrations measured in groundwater monitoring wells ranged from 32.3 mg/L in MW-9 to 216 mg/L in MW-11. Methane concentrations ranged from 0.0096 mg/L in MW-1 to 1.300 mg/L in MW-10. These results may indicate that both aerobic and/or anaerobic biodegradation is occurring at different locations at the site.

3.3 SUMMARY OF QA/QC REVIEW PAREMETERS

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 and trip 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. The sample hold time for ferrous iron was exceeded for all samples. Ferrous iron detections in samples MW-1, MW-9, MW-10, and MW-11 were qualified as estimated, biased low, and flagged with a "J-". No other hold times were exceeded.

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. Total alkalinity was detected in the method blank in report 1338025. Total alkalinity detection levels in samples MW-1 and MW-9 were greater than ten times the method blank concentration and did not require to be flagged. All other reported results for the laboratory method blanks were nondetect (less than the laboratory reporting limit), indicating no evidence 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.

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:

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

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-9), 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. All field sample/duplicate sample pair RPDs were less than 20%, indicating homogeneity 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, with the exception of the following:

- High Trifluorotoluene surrogate recovery was observed for TPH-GRO (Total Petroleum Hydrocarbons – Gasoline Range Organics) analysis in batch number 12271A20A. The TPH-GRO detection in samples MW-1 and MW-X were qualified as estimated, and flagged with a "J."

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.

The sample hold time for ferrous iron was exceeded for all samples. Ferrous iron detections in samples MW-1, MW-9, MW-10, and MW-11 were qualified as estimated, biased low, and flagged with a "J-."

Total alkalinity was detected in the method blank in report 1338025. Total alkalinity detection levels in samples MW-1 and MW-9 were greater than ten times the method blank concentration and did not require to be flagged.

High Trifluorotoluene surrogate recovery was observed for TPH-GRO analysis in batch number 12271A20A. The TPH-GRO detection in samples MW-1 and MW-X were qualified as estimated, and flagged with a "J."

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.

Semi-annual groundwater monitoring field activities conducted on September 24 and 25, 2012 included measuring the depth to groundwater at monitoring wells MW-1 through MW-4 and MW-8 through MW-11 and collecting analytical samples from monitoring wells MW-1 and MW-9 through MW-11, and the stream. The findings are as follows:

- LNAPL was not initially observed during the gauging of MW-8, but was observed during the low-flow purging of the monitoring well. LNAPL was not observed any of the other monitoring wells (MW-1 through MW-4 and MW-9 through MW-11) during the second semi-annual 2012 groundwater monitoring activities.
- The groundwater elevations decreased in all wells since the last sampling event in March 2012. The local groundwater flow direction within the nursery's unconfined water-bearing zone is in a northeast direction with a calculated hydraulic gradient of 0.005 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.
- TPH-GRO were detected in monitoring wells MW-1 and MW-9 during the second semi-annual 2012 monitoring event. TPH-GRO was detected at a concentrations of 1,100 µg/L and 3,900 µg/L in wells MW-1 and MW-9, respectively. The MW-1 sample contained toluene at 7 µg/L, ethylbenzene at 5 µg/L and total xylenes at 29 µg/L. The MW-9 sample contained toluene at 2 µg/L, ethylbenzene at 6 µg/L, and total xylenes at 18 µg/L. Benzene analytical results was below the laboratory method detection limit of 0.5 µg/L for samples MW-1 and MW-9.
- The geochemical parameters that were collected included ORP, DO, nitrates, ferrous iron, sulfate and methane. ORP concentrations measured in groundwater monitoring wells ranged from -156 mV in MW-9 to -3.00 mV in MW-11. DO concentrations measured in groundwater monitoring wells ranged from 2.28 mg/L in MW-11 to 2.93 in MW-1. Nitrate concentrations ranged from below laboratory detection limits in monitoring wells MW-1, MW-9 and MW-11 to 1.5 mg/L in MW-10. Ferrous iron concentrations measured in groundwater monitoring wells ranged from 0.195 mg/L in MW-11 to 3.70 mg/L in MW-1. Sulfate concentrations measured in groundwater monitoring wells ranged from 32.3 in MW-9 to 216 mg/L in MW-11. Methane concentrations ranged from 0.0096 mg/L in MW-1 to 1.300 mg/L in MW-9. These results may indicate that both aerobic and/or anaerobic biodegradation is occurring at the site.
- 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 nursery.
- 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 September 2012 field observations and analytical results URS makes the following recommendations:

- Continue monthly groundwater gauging to assess the effect of seasonal and long-term groundwater elevation fluctuations within the unconfined water-bearing zone.
- Continue semi-annual groundwater monitoring.
- ACEHD approved the additional 2012 Data Gaps Investigation/Remediation work plan on September 19, 2012. The work plan will be implemented during fourth quarter 2012.

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
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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-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	--	--
		9/29/2010	37.36	--	--
		10/27/2010	37.21	--	--

TABLE 1
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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-1 cont	29.3-39.3	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	--	--
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	--	--
		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	--	--

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-2 cont.	23.3-38.3	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	--	--
		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	--	--
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	--	--

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-3 cont.	21.3-36.3	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	34.7	--	--
		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	--	--
		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	--	--

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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-3 cont.	21.3-36.3	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	--	--
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	--	--

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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	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	--	--
		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	--	--
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	--	--

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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	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	19.5	--	--
		3/27/2009	19.54	--	--
		4/23/2009	20.24	--	--
		5/28/2009	20.96	--	--
		6/9/2009	23.31	--	--
		8/25/2009	22.5	--	--
		9/28/2009	22.58	--	--
		10/21/2009	21.61	--	--
		11/10/2009	21.15	--	--
		12/9/2009	20.66	20.65	0.01
		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	21.4	--	--
		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	18.9	--	--
		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	--	--

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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	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	--	--
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	--	--
		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	--	--

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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-9 cont.	36.0-46.0	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	--	--
		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	--	--
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	46.5	--	--
		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	--	--

TABLE 1
Monitoring Well Groundwater Levels
Second Semi-Annual 2012 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-10 cont.	40.3-55.3	4/22/2010	43.51	--	--
		5/27/2010	44.03	--	--
		6/23/2010	44.52	--	--
		7/27/2010	46.11	--	--
		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	43.2	--	--
		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	--	--
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	--	--
		3/27/2009	36.87	--	--
		4/23/2009	37.13	--	--
		5/28/2009	37.99	--	--
		6/9/2009	38.30	--	--

TABLE 1
Monitoring Well Groundwater Levels
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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-11 cont.	37.0-47.0	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	--	--

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.

Table 1 was updated to include monthly groundwater elevation data. Groundwater elevation was gauged continously on a monthly basis starting in August 2009.

TABLE 2
Monitoring Well Groundwater Elevations
Second Semi-Annual 2012 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	--	--
				9/29/2010	290.68	--	--
				10/27/2010	290.83	--	--
				11/23/2010	290.87	--	--

TABLE 2
Monitoring Well Groundwater Elevations
Second Semi-Annual 2012 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	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	--	--
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	--	--
				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	--	--

TABLE 2
Monitoring Well Groundwater Elevations
Second Semi-Annual 2012 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	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	--	--
				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	--	--
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	--	--

TABLE 2
Monitoring Well Groundwater Elevations
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Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	9/12/2007	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	--	--
				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	--	--

TABLE 2
Monitoring Well Groundwater Elevations
Second Semi-Annual 2012 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	6/12/2012	292.05	--	--
				7/25/2012	290.91	--	--
				8/28/2012	290.86	--	--
				9/24/2012	290.83	--	--
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	--	--
				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	--	--

TABLE 2
Monitoring Well Groundwater Elevations
Second Semi-Annual 2012 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	1/31/2011	293.51	--	--
				2/28/2011	293.74	--	--
				3/28/2011	296.04	--	--
				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	--	--
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	--	--

TABLE 2
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Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
MW-8 cont.	8/15/2006	335.23	333.93	12/9/2009	313.27	20.65	0.01
				1/25/2010	314.74	--	--
				2/19/2010	314.80	--	--
				3/9/2010	314.96	--	--
				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	--	--
				8/28/2012	311.85	--	--
				9/24/2012	311.82	--	--
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	--	--
				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	--	--

TABLE 2
Monitoring Well Groundwater Elevations
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Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	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	--	--
				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	--	--
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	--	--

TABLE 2
Monitoring Well Groundwater Elevations
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Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	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	--	--
				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	--	--

TABLE 2
Monitoring Well Groundwater Elevations
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Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of Casing Elevation (feet msl)[1, 2]	Date Measured	Groundwater Elevation (feet msl)[1]	Product Elevation (feet msl)[1]	Product Thickness (feet)
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	--	--
				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	--	--

TABLE 2
Monitoring Well Groundwater Elevations
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Well ID	Date Completed	Ground Surface Elevation (feet msl)[1]	Top of 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	5/30/2012	291.92	--	--
				6/12/2012	291.81	--	--
				7/25/2012	291.07	291.07	0.00
				8/28/2012	290.91	--	--
				9/24/2012	290.85	--	--

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.

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-5 through MW-7 abandoned 6/23/08.

Table 2 was updated to include monthly groundwater elevation data. Groundwater elevation was gauged continously on a monthly basis starting in August 2009.

TABLE 3
Summary of Groundwater Analytical Results Gasoline Compounds
Second Semi-Annual 2012
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Well ID	Date	Gasoline Compounds				
		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**
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
	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

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Well ID	Date	Gasoline Compounds				
		TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
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
	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
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**
	Q3 2012 (3)	NS	NS	NS	NS	NS

TABLE 3
Summary of Groundwater Analytical Results Gasoline Compounds
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Well ID	Date	Gasoline Compounds				
		TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
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**
	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
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**
	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**
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

TABLE 3
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Well ID	Date	Gasoline Compounds				
		TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
MW-10/MW-X[6] cont.	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
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
	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
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

TABLE 3
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Well ID	Date	Gasoline Compounds				
		TPH-GRO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
Stream cont.	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
	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

Notes:

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

(1) Both sample and duplicate concentrations from well location are displayed.
(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.

TABLE 4
Summary of Groundwater Analytical Results Geochemical Indicators and Other Parameters
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Well ID	Date	Geochemical Indicators and Other Parameters											
		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 $CaCO_3$	Alkalinity to pH 8.3 (mg/L) as $CaCO_3$
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
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]
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]
	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

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		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 $CaCO_3$	Alkalinity to pH 8.3 (mg/L) as $CaCO_3$
MW-3 cont.	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]
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]
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]	NM(8)	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	NM(8)	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(8)	NM[4]	NM[4]	NM[4]
MW-9	Q3 2006	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM(8)	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	NM(8)	836	657	<0.46
	3/31/2009	3.35	-179	0.39J	3.2	0.099	<0.052	60.5	0.012	NM(8)	632	419	<0.46
	6/10/2009	0.00	-141	<0.25	3.01	1.7	<0.052	46.4	<0.005	NM(8)	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	NM(8)	734	620	<0.46
	3/10/2010	0.00	-197	<0.25	2.94	1.7	<0.0522	40.9	0.046	NM(8)	596	448	<0.46
	6/24/2010	0.00	-108	<0.25	2.46	1.5	0.131 J+	33.5	0.012	NM(8)	489	380	<0.46
	9/29/2010	0.70	-231	<0.25	3.83	2.2 J	0.082	4.5	0.018	NM(8)	627	549	<0.46
	12/14/2010	3.37	-181	0.89	2.98	2.8 J	1.48	25	0.025	NM(8)	666	523	<0.46

TABLE 4
Summary of Groundwater Analytical Results Geochemical Indicators and Other Parameters
Second Semi-Annual 2012
Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date	Geochemical Indicators and Other Parameters											
		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 $CaCO_3$	Alkalinity to pH 8.3 (mg/L) as $CaCO_3$
MW-9 cont.	3/29/2011	2.78	-140	6.40J	1.58	0.043	<0.052	63	0.018	NM(8)	608	396	<0.46
	8/22/2011	2.32	-451	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM(8)	NM[(9)]	NM[(9)]	NM[(9)]
	3/21/2012	0.48	-147	2	0.154	0.18 J-	0.146	103	<0.005	NM(8)	784	552	<0.046
	9/25/2012	2.67	-156	<0.25	0.401	0.58 J-	<0.0333	32.3	0.028	NM(8)	742	529	<0.7
MW-10	3/27/2009	3.65	48	8.2	0.367	0.21J	<0.052	155	0.28	NM(8)	1,200	645	<0.46
	6/10/2009	0.37	109	<0.25	0.767	0.8	<0.052	133	2.30	NM(8)	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	NM(8)	1,580	512	<0.46
	3/9/2010	1.52	105	13.9 J	0.0357	0.054	<0.052	63.6	0.19	NM(8)	596	349	<0.46
	6/23/2010	0.00	79	0.68	0.2650	0.200	<0.0522	136.0	0.94	NM(8)	1000	604	<0.46
	9/29/2010	0.87	22	<0.25	0.384	5.0 J	<0.0522	148	0.550	NM(8)	998	610	<0.46
	12/15/2010	2.28	61	0.41	0.581	0.29 J	<0.0522	155	0.74	NM(8)	1,070	606	<0.46
	3/28/2011	5.56	48	18.00	0.101	0.39J-	<0.052	57	0.03	NM(8)	652	392	<0.46
	8/22/2011	0.00	9	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM[(9)]	NM(8)	NM[(9)]	NM[(9)]	NM[(9)]
	3/20/2012	0.56	-34	3	0	0.280 J-	0.0743 J+	256	1	NM(8)	960	592	<0.46
	9/24/2012	2.44	-28	1.5	0.210	0.29 J-	<0.0333	112	1.300	NM(8)	970	567	<0.7
MW-11	3/27/2009	5.86	53	15.3	0.114	0.058J	<0.052	134	0.06	NM(8)	742	365	<0.46
	6/10/2009	0.37	44	NM	0.415	NM	NM	NM	0.12	NM(8)	NM	NM	NM
	12/10/2009	1.01	-50	0.48 J	0.804 J	3.6	<0.052	151 J	<0.2	NM(8)	1720	556	<0.46
	3/9/2010	3.68	133	11.9 J	0.0176	0.087	<0.0522	91.7	0.039	NM(8)	615	314	<0.46
	6/23/2010	0.45	-2	0.4	0.2420	0.150	<0.0522	437	0.29	NM(8)	1,300	479	<0.46
	9/28/2010	1.16	7	<0.25	0.320	0.3 J	<0.0522	457	0.350	NM(8)	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

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.

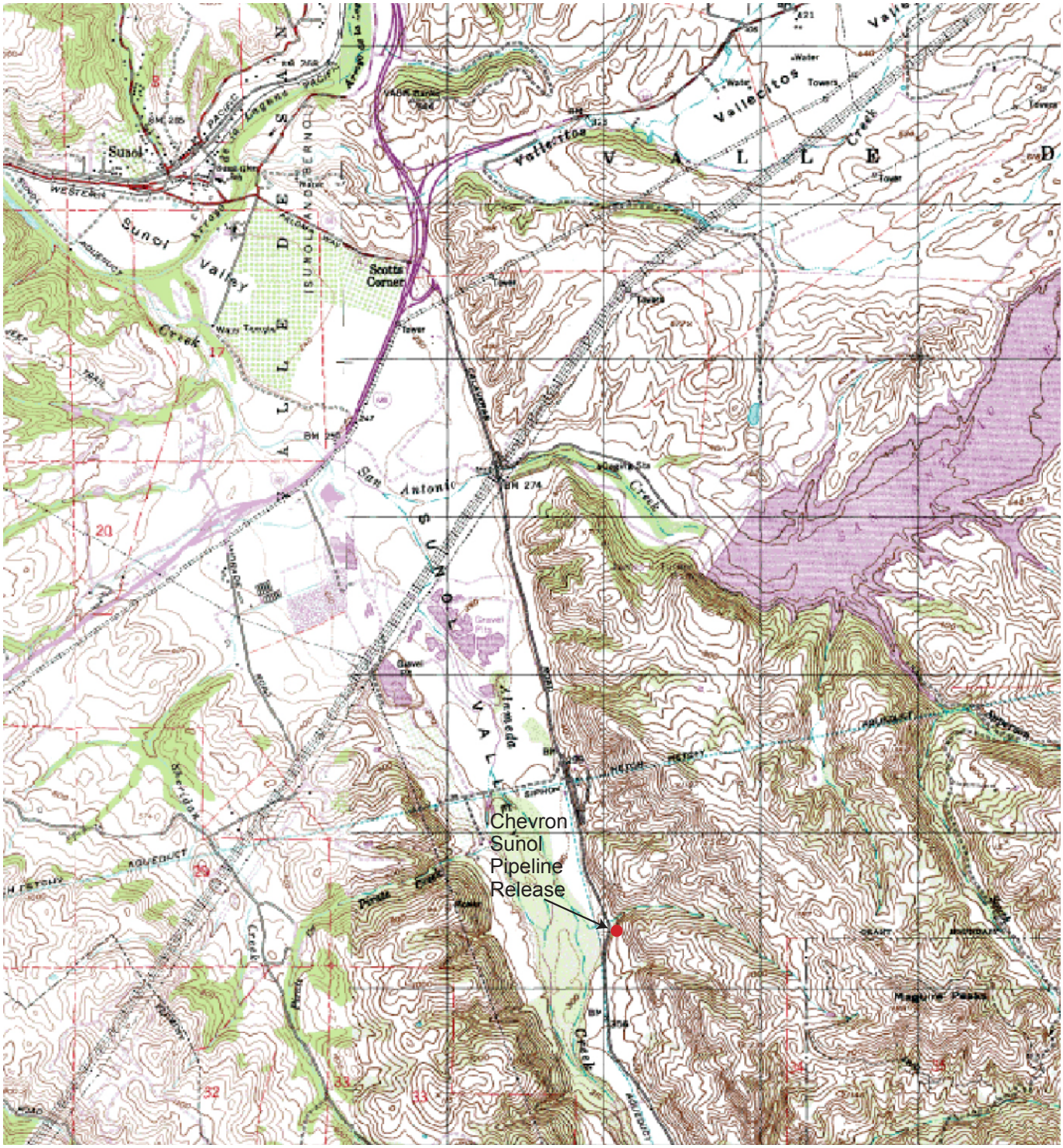


Image obtained from topozone.com

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 50 100

SCALE IN FEET

SW–CREEK
(Former Surface Water Sampling Location)

UPPER DIRT ROAD

LOWER DIRT ROAD

PIPELINE

CURRENT STREAM
SAMPLE LOCATION

VERY SMALL STREAM

MW–10

PROPERTY
LINE/FENCE

CALAVERAS ROAD

MW–11

MW–9

MW–4

HILL SLOPE

SVE–1D

SVE–2S

MW–7

SVE–8

RELEASE LOCATION

MW–8

SVE–3S

MW–3

MW–1

MW–5

SVE–7

SVE–4D

SVE–5

SVE–6

SVE–9

HILL SLOPE

HILL SLOPE
AND DENSE
VEGETATION

MW–2

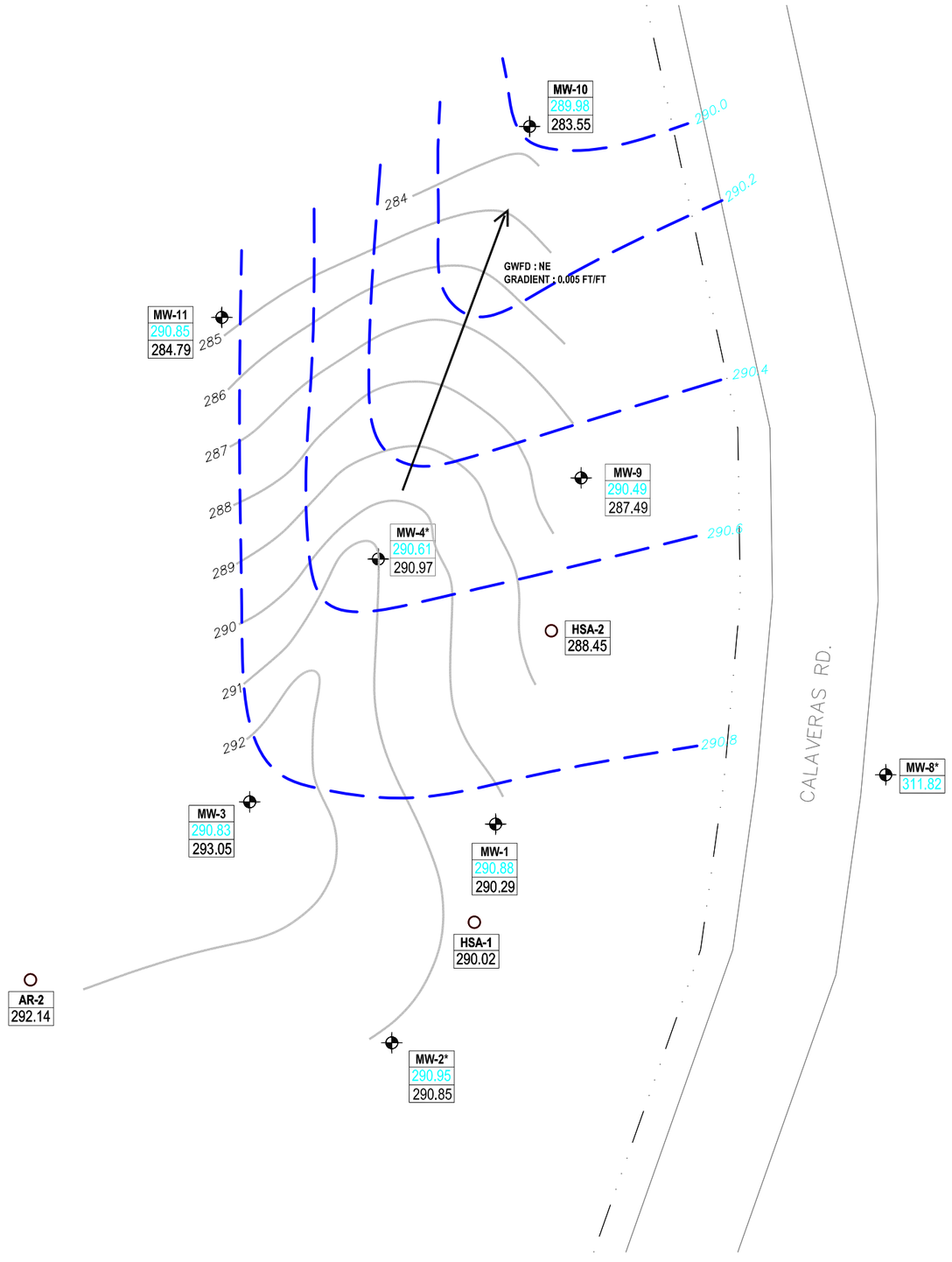
MW–6

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. 26817187	SVE AND GROUNDWATER MONITORING WELL LOCATIONS CHEVRON SUNOL PIPELINE	Figure 2

Aug 05, 2010 – 9:25am
X:\x_env_waste\Chevron Pipeline Company\Sunol Spill\Site Figures\Current CADD\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
- 285 — BEDROCK SURFACE ELEVATION
- GWFD — GROUNDWATER FLOW DIRECTION
- 291.5 — GROUNDWATER ELEVATION

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-11, AS MEASURED ON SEPTEMBER 25, 2012.
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 = 0.005 ft/ft.

* 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

Oct 17, 2012 - 1:14pm
T:\SFPUC Sunol Pipeline\Figures\FIGURE 3.dwg

Appendix A

Groundwater Sampling Forms

URS

09/25/12

Horiba U-22
ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Christine Orlowski	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	<100 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	37.18 [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	10:21	19.10	7.28	0.125	198.0	5.24	-82
	10:24	19.50	6.99	0.125	218.0	3.83	-95
	10:27	19.50	6.91	0.125	214.0	3.48	-100
	10:30	19.40	6.89	0.125	211.0	3.47	-101
	10:33	19.50	6.86	0.125	228.0	3.27	-103
	10:36	19.60	6.84	0.125	256.0	3.19	-104
	10:39	19.70	6.82	0.125	252.0	3.11	-106
	10:42	19.70	6.81	0.125	240.0	3.05	-108
	10:45	19.70	6.80	0.125	236.0	3.00	-108
	10:48	19.70	6.80	0.125	233.0	2.93	-108
	Sample collected from MW-1 at 11:10						
Variance in last 4 readings		0.00	-0.01	0.00	-12.00	-0.06	-2.00
		0.00	-0.01	0.00	-4.00	-0.05	0.00
		0.00	0.00	0.00	-3.00	-0.07	0.00

Notes:
Starting Pumping at 10:18
Initial Depth to Water = 37.18 ft
Total Volume Purged = 0.7 gallons
Sample collected at 11:10

URS

09/24/12

Horiba U-22
ISI Low-Flow Log

Project Information:

Operator Name	Jeremy Quick/Christine Orlowski
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	22.11 [ft]

Pumping information:

Final pumping rate	<100 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	13:56	20.9	7.28	0.109	206.0	3.55	-96
	13:59	21.4	6.96	0.109	226.0	3.06	-102
	14:02	22.0	6.87	0.109	161.0	2.76	-108
	14:05	22.7	6.83	0.109	105.0	2.57	-113
	14:08	22.0	6.80	0.109	91.2	2.65	-114
	14:11	22.9	6.78	0.109	error	2.58	-116
	14:14	22.3	6.79	0.109	446.0[1]	2.50	-121
	14:17	21.9	6.79	0.109	237.0	2.52	-126
	14:20	21.9	6.84	0.109	error	2.48	-141
	14:23	22.0	6.86	0.109	error	2.44	-147
	Well dewatered at 14:26[2]						
Variance in last 4 readings		-0.4	0.00	0.00	-209.01	0.02	-5
		0.0	0.05	0.00	NC	-0.04	-15
		0.1	0.02	0.00	NC	-0.04	-6

Notes:

Starting Bailing at 13:53
Initial Depth to Water = 22.11 ft
Total Volume Purged = 1 gallons
Well dewatered at 14:26

NC = not calculated
1) Pump lowered and most likely stirred up turbidity.
2) As the well was dewatering, product was evident in the purge water and flow-cell of the pump. Due to product evident in well, MW-8 was not sampled.

URS

09/25/12

Horiba U-22
ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Jeremy Quick/Christine Orlowski	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	280 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	42.58 [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	11:44	19.2	7.20	0.122	199.0	3.72	-132
	11:47	19.6	7.01	0.121	96.5	3.31	-141
	11:51	19.7	6.89	0.121	47.6	3.01	-147
	11:54	19.8	6.84	0.122	33.0	2.87	-150
	11:57	19.8	6.81	0.122	25.3	2.79	-153
	12:00	19.9	6.80	0.122	22.0	2.73	-155
	12:03	19.8	6.79	0.122	18.7	2.67	-156
	Sample collected at 12:15						
Variance in last 4 readings		0.00	-0.03	0.00	-7.7	-0.08	-3
		0.10	-0.01	0.00	-3.3	-0.06	-2
		-0.10	-0.01	0.00	-3.3	-0.06	-1

Notes:

Starting Pumping at 11:41
Initial Depth to Water = 42.58 ft
Total Volume Purged = 1.25 gal
Sample collected at 12:15

Sample MW-X collected at 12:00

URS

09/24/12

Horiba U-22
ISI Low-Flow Log

Project Information:

Operator Name	Jeremy Quick/Christine Orlowski
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	Mega Monsoon
Tubing Type	Polyethylene
Tubing Diameter	3/8 [in]
Tubing Length	56 [ft]
Pump placement from TOC	2 feet off bottom [ft]

Well Information:

Well Id	MW-10
Well diameter	2 [in]
Well total depth	55.3 [ft]
Depth to top of screen	40.3 [ft]
Screen length	15 [ft]
Depth to Water	45.91 [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	10:22	17.6	8.06	0.177	782.0	3.37	-99
	10:25	18.0	7.63	0.175	504.0	2.96	-88
	10:28	18.1	7.46	0.173	413.0	2.83	-84
	10:31	18.4	7.31	0.172	260.0	2.67	-77
	10:34	18.4	7.21	0.170	206.0	2.62	-69
	10:37	18.6	7.13	0.167	140.0	2.59	-59
	10:40	18.8	7.07	0.163	96.7	2.59	-46
	10:43	18.9	7.00	0.162	66.0	2.56	-40
	10:46	19.0	6.98	0.162	69.1	2.51	-35
	10:49	19.1	6.95	0.162	45.9	2.50	-30
	10:52	19.0	6.92	0.162	43.3	2.48	-27
	10:55	19.2	6.91	0.163	41.6	2.44	-28
	Sample collected from MW-10 at 10:55						
Variance in last 4 readings		0.10	-0.03	0.00	-23.2	-0.01	5
		-0.10	-0.03	0.00	-2.6	-0.02	3
		0.20	-0.01	0.00	-1.7	-0.04	-1

Notes:

Starting Pumping at 10:20
Initial Depth to Water = 45.91 ft
Total Volume Purged = 2 gallons
Sample collected at 10:55

URS

09/24/12

Horiba U-22
ISI Low-Flow Log

Project Information:

Operator Name	Jeremy Quick/Christine Orlowski
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	Mega Monsoon
Tubing Type	Polyethylene
Tubing Diameter	3/8 [in]
Tubing Length	50 [ft]
Pump placement from TOC	2 feet off bottom [ft]

Well Information:

Well Id	MW-11
Well diameter	2 [in]
Well total depth	47.0 [ft]
Depth to top of screen	37.0 [ft]
Screen length	10 [ft]
Depth to Water	39.04 [ft]

Pumping information:

Final pumping rate	240 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	12:06	18.5	7.46	0.174	282.0	4.09	-48
	12:09	18.6	7.26	0.161	148.0	3.01	-49
	12:12	19.0	7.15	0.153	113.0	2.73	-38
	12:15	19.1	7.07	0.151	82.9	2.67	-29
	12:18	19.2	7.01	0.144	59.7	2.64	-15
	12:21	19.1	6.95	0.140	44.8	2.59	-4
	12:24	19.3	6.90	0.138	32.3	2.50	0
	12:27	19.2	6.88	0.137	22.3	2.45	1
	12:30	19.2	6.87	0.136	10.4	2.37	1
	12:33	19.3	6.86	0.137	8.0	2.32	-0
	12:36	19.4	6.87	0.139	2.7	2.28	-3
	Sample collected from MW-11 at 12:45						
Variance in last 4 readings		0.00	-0.01	-0.001	-11.90	-0.08	0
		0.10	-0.01	0.001	-2.40	-0.05	-1
		0.10	0.01	0.002	-5.30	-0.04	-3

Notes:
Starting Pumping at 12:03
Initial Depth to Water = 39.04 ft
Total Volume Purged = 1.9 gallons
Sample collected at 12:45

Appendix B

Laboratory Analytical Results

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

October 03, 2012

Project: Sunol, CA

Submittal Date: 09/25/2012
Group Number: 1337712
PO Number: 0015068674
Release Number: GWIN
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
MW-10 NA Water	6799766
MW-10 Filtered NA Water	6799767
MW-11 NA Water	6799768
MW-11 Filtered NA Water	6799769
Stream NA Water	6799770
Equip Blank NA Water	6799771
Trip Blank NA Water	6799772

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

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Respectfully Submitted,

Jill M. Parker
Senior Specialist

(717) 556-7262

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Analysis Report

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

LLI Sample # WW 6799766
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012 10:55 by JQ

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

10SUN

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	1,300	100	20
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	210	0.83	1
Wet Chemistry	**EPA 300.0**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	1,500	250	5
00228	Sulfate	14808-79-8	112,000	6,000	20
	SM20 2320 B		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity	n.a.	567,000	700	1
12707	Phenolphthalein Alkalinity	n.a.	N.D.	700	1
	SM20 2540 C		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	970,000	38,800	1
	SM20 3500 Fe B modified		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	290	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	F122711AA	09/27/2012 07:13	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F122711AA	09/27/2012 07:13	Anita M Dale	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12270A20A	09/27/2012 02:24	Catherine J Schwarz	1

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Analysis Report

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

LLI Sample # WW 6799766
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012 10:55 by JQ

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

10SUN

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	12270A20A	09/27/2012 02:24	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	122700038A	09/27/2012 15:54	Elizabeth J Marin	20
07058	Manganese	SW-846 6010B	1	122701848003	09/29/2012 20:46	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	122701848003	09/27/2012 10:09	James L Mertz	1
00368	Nitrate Nitrogen	EPA 300.0	1	12269655901A	09/25/2012 21:04	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	12269655901A	09/30/2012 07:53	Christopher D Meeks	20
12150	Total Alkalinity	SM20 2320 B	1	12272002101B	09/28/2012 18:54	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM20 2320 B	1	12272002101B	09/28/2012 18:54	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM20 2540 C	1	12271021201A	09/27/2012 11:07	Kelli M Barto	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	12272834401A	09/28/2012 18:50	Daniel S Smith	1

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Analysis Report

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

LLI Sample # WW 6799767
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012 10:55 by JQ

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

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	122701848003	09/29/2012 20:50	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	122701848003	09/27/2012 10:09	James L Mertz	1

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Analysis Report

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

LLI Sample # WW 6799768
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012 12:45 by JQ

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

11SUN

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	380	5.0	1
Metals		**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese		7439-96-5	195	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	216,000	15,000	50
		SM20 2320 B		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity		n.a.	469,000	700	1
12707	Phenolphthalein Alkalinity		n.a.	N.D.	700	1
		SM20 2540 C		**ug/l**	**ug/l**	
00212	Total Dissolved Solids		n.a.	876,000	38,800	1
		SM20 3500 Fe B modified		**ug/l**	**ug/l**	
08344	Ferrous Iron		n.a.	28	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	F122752AA	10/01/2012 09:48	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F122752AA	10/01/2012 09:48	Anita M Dale	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12270A20A	09/27/2012 02:46	Catherine J Schwarz	1

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Analysis Report

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

LLI Sample # WW 6799768
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012 12:45 by JQ

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

11SUN

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	12270A20A	09/27/2012 02:46	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	122700038A	09/27/2012 02:16	Elizabeth J Marin	1
07058	Manganese	SW-846 6010B	1	122701848003	09/29/2012 20:54	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	122701848003	09/27/2012 10:09	James L Mertz	1
00368	Nitrate Nitrogen	EPA 300.0	1	12269655901B	09/25/2012 21:18	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	12269655901B	09/30/2012 08:07	Christopher D Meeks	50
12150	Total Alkalinity	SM20 2320 B	1	12272002101A	09/28/2012 19:06	Kenneth A Bell	1
12707	Phenolphthalein Alkalinity	SM20 2320 B	1	12272002101A	09/28/2012 19:06	Kenneth A Bell	1
00212	Total Dissolved Solids	SM20 2540 C	1	12271021201A	09/27/2012 11:07	Kelli M Barto	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	12272834401A	09/28/2012 18:50	Daniel S Smith	1

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Analysis Report

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

LLI Sample # WW 6799769
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012 12:45 by JQ

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

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	122701848003	09/29/2012 20:59	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	122701848003	09/27/2012 10:09	James L Mertz	1

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Analysis Report

Sample Description: Stream NA Water
NA URSO
Sunol Pipeline SL0600100443 Stream

LLI Sample # WW 6799770
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012 15:30 by JQ

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

STSUN

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	Z122752AA	10/01/2012 15:25	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z122752AA	10/01/2012 15:25	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12270A20A	09/27/2012 03:08	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12270A20A	09/27/2012 03:08	Catherine J Schwarz	1

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Analysis Report

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

LLI Sample # WW 6799771
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012 11:30 by JQ

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

EBSUN

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	Z122752AA	10/01/2012 14:15	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z122752AA	10/01/2012 14:15	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12270A20A	09/27/2012 02:02	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12270A20A	09/27/2012 02:02	Catherine J Schwarz	1

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Analysis Report

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

LLI Sample # WW 6799772
LLI Group # 1337712
Account # 11875

Project Name: Sunol, CA

Collected: 09/24/2012

Submitted: 09/25/2012 09:30
Reported: 10/03/2012 14:22

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

TBSUN

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	Z122752AA	10/01/2012 14:38	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z122752AA	10/01/2012 14:38	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12270A20A	09/27/2012 00:33	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12270A20A	09/27/2012 00:33	Catherine J Schwarz	1

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Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1337712
Reported: 10/03/12 at 02:22 PM

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F122711AA	Sample number(s): 6799766							
Benzene	N.D.	0.5	ug/l	92		77-121		
Ethylbenzene	N.D.	0.5	ug/l	93		79-120		
Toluene	N.D.	0.5	ug/l	92		79-120		
Xylene (Total)	N.D.	0.5	ug/l	93		77-120		
Batch number: F122752AA	Sample number(s): 6799768							
Benzene	N.D.	0.5	ug/l	101		77-121		
Ethylbenzene	N.D.	0.5	ug/l	97		79-120		
Toluene	N.D.	0.5	ug/l	96		79-120		
Xylene (Total)	N.D.	0.5	ug/l	97		77-120		
Batch number: Z122752AA	Sample number(s): 6799770-6799772							
Benzene	N.D.	0.5	ug/l	96		77-121		
Ethylbenzene	N.D.	0.5	ug/l	103		79-120		
Toluene	N.D.	0.5	ug/l	101		79-120		
Xylene (Total)	N.D.	0.5	ug/l	99		77-120		
Batch number: 12270A20A	Sample number(s): 6799766,6799768,6799770-6799772							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	82	83	75-135	1	30
Batch number: 122700038A	Sample number(s): 6799766,6799768							
Methane	N.D.	5.0	ug/l	98		80-120		
Batch number: 122701848003	Sample number(s): 6799766-6799769							
Iron	N.D.	33.3	ug/l	96		90-112		
Manganese	N.D.	0.83	ug/l	96		90-110		
Batch number: 12269655901A	Sample number(s): 6799766							
Nitrate Nitrogen	N.D.	50.	ug/l	98		90-110		
Sulfate	N.D.	300.	ug/l	95		90-110		
Batch number: 12269655901B	Sample number(s): 6799768							
Nitrate Nitrogen	N.D.	50.	ug/l	98		90-110		
Sulfate	N.D.	300.	ug/l	95		90-110		
Batch number: 12271021201A	Sample number(s): 6799766,6799768							
Total Dissolved Solids	N.D.	9,700.	ug/l	104		80-120		
Batch number: 12272002101A	Sample number(s): 6799768							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	96		90-110		
Batch number: 12272002101B	Sample number(s): 6799766							
Total Alkalinity	N.D.	700.	ug/l as CaCO3	96		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: 1337712
Reported: 10/03/12 at 02:22 PM

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 12272834401A	Sample number(s): 6799766,6799768							
Ferrous Iron	N.D.	10.	ug/l	99		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: F122711AA	Sample number(s): 6799766 UNSPK: 6799766								
Benzene	98	98	72-134	0	30				
Ethylbenzene	96	99	71-134	3	30				
Toluene	96	98	80-125	1	30				
Xylene (Total)	97	99	79-125	2	30				
Batch number: F122752AA	Sample number(s): 6799768 UNSPK: 6799768								
Benzene	102	102	72-134	0	30				
Ethylbenzene	97	99	71-134	1	30				
Toluene	98	98	80-125	0	30				
Xylene (Total)	100	98	79-125	1	30				
Batch number: Z122752AA	Sample number(s): 6799770-6799772 UNSPK: 6799770								
Benzene	106	102	72-134	3	30				
Ethylbenzene	110	107	71-134	3	30				
Toluene	109	104	80-125	5	30				
Xylene (Total)	106	103	79-125	2	30				
Batch number: 122700038A	Sample number(s): 6799766,6799768 UNSPK: P798660								
Methane	-5817 (2)	-7963 (2)	35-157	20	20				
Batch number: 122701848003	Sample number(s): 6799766-6799769 UNSPK: P798663 BKG: P798663								
Iron	52 (2)	55 (2)	75-125	0	20	12,000	11,700	2	20
Manganese	70 (2)	57 (2)	75-125	2	20	3,880	3,850	1	20
Batch number: 12269655901A	Sample number(s): 6799766 UNSPK: P799819 BKG: P799819								
Nitrate Nitrogen	100		90-110			N.D.	N.D.	0 (1)	20
Sulfate	109		90-110			55,800	57,200	2	20
Batch number: 12269655901B	Sample number(s): 6799768 UNSPK: P799821 BKG: P799821								
Nitrate Nitrogen	100		90-110			N.D.	N.D.	0 (1)	20
Sulfate	118*		90-110			53,900	54,500	1	20
Batch number: 12271021201A	Sample number(s): 6799766,6799768 UNSPK: P800795 BKG: P800795								
Total Dissolved Solids	94		51-144			1,270,000	1,180,000	7	9
Batch number: 12272002101A	Sample number(s): 6799768 UNSPK: P799206 BKG: P799206								
Total Alkalinity	94		73-121			59,600	59,100	1	5
Phenolphthalein Alkalinity						N.D.	N.D.	0 (1)	5
Batch number: 12272002101B	Sample number(s): 6799766 UNSPK: P799206 BKG: 6799766								
Total Alkalinity	94		73-121			567,000	569,000	0	5

*- 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: 1337712
Reported: 10/03/12 at 02:22 PM

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Phenolphthalein Alkalinity						N.D.	N.D.	0 (1)	5
Batch number: 12272834401A	Sample number(s): 6799766,6799768 UNSPK: P802945 BKG: P802945								
Ferrous Iron	94	98	81-112	2	6	3,100	3,100	0 (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: F122711AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6799766	101	98	97	98
Blank	102	99	95	94
LCS	100	99	98	97
MS	101	100	97	97
MSD	101	99	98	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: F122752AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6799768	105	97	98	97
Blank	108	100	98	98
LCS	106	103	98	98
MS	108	101	97	99
MSD	106	99	96	97
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: Z122752AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6799770	108	103	100	91
6799771	108	104	101	93
6799772	108	101	101	90
Blank	107	102	100	92
LCS	104	99	100	100
MS	106	100	100	99
MSD	104	99	100	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 12270A20A

*- 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: 1337712
Reported: 10/03/12 at 02:22 PM

Surrogate Quality Control

	Trifluorotoluene-F
6799766	82
6799768	82
6799770	80
6799771	80
6799772	80
Blank	80
LCS	97
LCSD	96
Limits:	63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 122700038A

	Propene
6799766	83
6799768	82
Blank	109
LCS	101
MS	62
MSD	64
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 California Region Analysis Request/Chain of Custody

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Acct. #: 11875 Sample #: 6799766-72 SCR#: ______ 251255

Grp#1337712

Facility #:
Site Address: Sunol, CA
Chevron PM: ______ Lead Consultant: ______
Consultant/Office: URS Oakland
Consultant Prj. Mgr.: Joe Morgan
Consultant Phone #: 510-874-3201 Fax #: 510-874-3268
Sampler: J. Quick C. Orlowski
Service Order #: 26817187.00300 ☐ Non SAR: ______

Analyses Requested / Preservation Codes

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	BTEX ~~+MTBE~~ 8260 ☐ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	___ Oxygenates	Lead 7420 ☐ 7421 ☐	Nitrate + Sulfate EPA 300.0	TDS by 2540C	Alkalinity + breakdown EPA 310.1	Methane EPA 8015B MOD	Ferrous Iron SM 20 Method 3500 Fe-B Modified	Dissolved IRON EPA 6010B	Total Manganese EPA 6010B
MW-10	W			12 09 24	1055				14	X	X					X	X	X	X	X	X	X
MW-11	W			12 09 24	1245				14	X	X					X	X	X	X	X	X	X
Stream	W			12 09 24	1530				6	X	X											
EquipBlank	W			12 09 24	1130				6	X	X											
Trip Blank	W			——	——				2	X	X											

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

☐ J value reporting needed
☐ Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy's on highest hit
☐ Run ____ oxy's on all hits

Comments / Remarks
cold/on ice

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

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

Relinquished by:	Date	Time	Received by:	Date	Time
Jeremy Quick [signature]	9-24-12	1715			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS (FedEx) Other ______			Received by: [signature]	~~9/25/12~~ 9/25/12	0930
Temperature Upon Receipt 0.5 C°			Custody Seals Intact? (Yes) No		

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Explanation of Symbols and Abbreviations

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

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

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

> greater than

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.

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

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

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

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

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

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

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

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

Prepared for:

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

October 08, 2012

Project: Sunol, CA

Submittal Date: 09/26/2012
Group Number: 1338025
PO Number: 0015068674
Release Number: GWIN
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
MW-1 NA Water	6801326
MW-1 Filtered NA Water	6801327
MW-9 NA Water	6801328
MW-9 Filtered NA Water	6801329
MW-X NA Water	6801330
Trip Blank NA Water	6801331

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

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Respectfully Submitted,

Jill M. Parker
Senior Specialist

(717) 556-7262

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Analysis Report

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

LLI Sample # WW 6801326
LLI Group # 1338025
Account # 11875

Project Name: Sunol, CA

Collected: 09/25/2012 11:10 by JQ

Submitted: 09/26/2012 09:25
Reported: 10/08/2012 16:49

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SPMW1

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	5	0.5	1
10943	Toluene	108-88-3	7	0.5	1
10943	Xylene (Total)	1330-20-7	29	0.5	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	1,100	50	1
GC Miscellaneous	**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	9.6	5.0	1
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	872	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	45,900	1,500	5
	SM20 2320 B		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity	n.a.	530,000	700	1
12707	Phenolphthalein Alkalinity	n.a.	N.D.	700	1
	SM20 2540 C		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	740,000	19,400	1
	SM20 3500 Fe B modified		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	3,700	100	10

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	D122772AA	10/03/2012 14:57	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D122772AA	10/03/2012 14:57	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12271A20A	09/27/2012 19:32	Catherine J Schwarz	1

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

LLI Sample # WW 6801326
LLI Group # 1338025
Account # 11875

Project Name: Sunol, CA

Collected: 09/25/2012 11:10 by JQ

Submitted: 09/26/2012 09:25
Reported: 10/08/2012 16:49

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SPMW1

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	12271A20A	09/27/2012 19:32	Catherine J Schwarz	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	122760032A	10/03/2012 05:43	Kerrie A Freeburn	1
07058	Manganese	SW-846 6010B	1	122721848002	09/30/2012 09:28	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	122721848002	09/29/2012 06:46	James L Mertz	1
00368	Nitrate Nitrogen	EPA 300.0	1	12270655602B	09/27/2012 12:43	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	12270655602B	09/27/2012 12:43	Christopher D Meeks	5
12150	Total Alkalinity	SM20 2320 B	1	12272002102A	09/28/2012 22:02	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM20 2320 B	1	12272002102A	09/28/2012 22:02	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM20 2540 C	1	12271021202B	09/27/2012 11:11	Kelli M Barto	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	12272834401A	09/28/2012 18:50	Daniel S Smith	10

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Analysis Report

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

LLI Sample # WW 6801327
LLI Group # 1338025
Account # 11875

Project Name: Sunol, CA

Collected: 09/25/2012 11:10 by JQ

Submitted: 09/26/2012 09:25
Reported: 10/08/2012 16:49

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	122721848002	09/30/2012 09:31	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	122721848002	09/29/2012 06:46	James L Mertz	1

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Analysis Report

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

LLI Sample # WW 6801328
LLI Group # 1338025
Account # 11875

Project Name: Sunol, CA

Collected: 09/25/2012 12:15 by JQ

Submitted: 09/26/2012 09:25
Reported: 10/08/2012 16:49

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SPMW9

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.	1	2
10943	Ethylbenzene	100-41-4	6	1	2
10943	Toluene	108-88-3	2	1	2
10943	Xylene (Total)	1330-20-7	18	1	2
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	3,900	250	5
GC Miscellaneous	**SW-846 8015B modified**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	28	5.0	1
Metals	**SW-846 6010B**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	401	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	32,300	1,500	5
	SM20 2320 B		**ug/l as CaCO3**	**ug/l as CaCO3**	
12150	Total Alkalinity	n.a.	529,000	700	1
12707	Phenolphthalein Alkalinity	n.a.	N.D.	700	1
	SM20 2540 C		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	742,000	19,400	1
	SM20 3500 Fe B modified		**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	D122772AA	10/03/2012 15:20	Daniel H Heller	2
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D122772AA	10/03/2012 15:20	Daniel H Heller	2
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12271A20B	09/28/2012 13:45	Marie D John	5

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Analysis Report

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

LLI Sample # WW 6801328
LLI Group # 1338025
Account # 11875

Project Name: Sunol, CA

Collected: 09/25/2012 12:15 by JQ

Submitted: 09/26/2012 09:25
Reported: 10/08/2012 16:49

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SPMW9

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	12271A20B	09/28/2012 13:45	Marie D John	5
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	122760032A	10/03/2012 06:02	Kerrie A Freeburn	1
07058	Manganese	SW-846 6010B	1	122721848002	09/30/2012 09:43	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	122721848002	09/29/2012 06:46	James L Mertz	1
00368	Nitrate Nitrogen	EPA 300.0	1	12270655602B	09/27/2012 12:59	Christopher D Meeks	5
00228	Sulfate	EPA 300.0	1	12270655602B	09/27/2012 12:59	Christopher D Meeks	5
12150	Total Alkalinity	SM20 2320 B	1	12272002102A	09/28/2012 22:08	Clayton C Litchmore	1
12707	Phenolphthalein Alkalinity	SM20 2320 B	1	12272002102A	09/28/2012 22:08	Clayton C Litchmore	1
00212	Total Dissolved Solids	SM20 2540 C	1	12271021202B	09/27/2012 11:11	Kelli M Barto	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	12272834401A	09/28/2012 18:50	Daniel S Smith	1

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Analysis Report

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

LLI Sample # WW 6801329
LLI Group # 1338025
Account # 11875

Project Name: Sunol, CA

Collected: 09/25/2012 12:15 by JQ

Submitted: 09/26/2012 09:25
Reported: 10/08/2012 16:49

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	122721848002	09/30/2012 09:47	Katlin N Cataldi	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	122721848002	09/29/2012 06:46	James L Mertz	1

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Analysis Report

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

LLI Sample # WW 6801330
LLI Group # 1338025
Account # 11875

Project Name: Sunol, CA

Collected: 09/25/2012 12:00 by JQ

Submitted: 09/26/2012 09:25
Reported: 10/08/2012 16:49

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SPMWX

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.	1	2
10943	Ethylbenzene	100-41-4	7	1	2
10943	Toluene	108-88-3	2	1	2
10943	Xylene (Total)	1330-20-7	19	1	2
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	4,100	50	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX 8260B Water	SW-846 8260B	1	D122772AA	10/03/2012 15:43	Daniel H Heller	2
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D122772AA	10/03/2012 15:43	Daniel H Heller	2
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12271A20A	09/27/2012 20:16	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12271A20A	09/27/2012 20:16	Catherine J Schwarz	1

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Analysis Report

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

LLI Sample # WW 6801331
LLI Group # 1338025
Account # 11875

Project Name: Sunol, CA

Collected: 09/25/2012

Submitted: 09/26/2012 09:25
Reported: 10/08/2012 16:49

Chevron Pipeline Co.
100 Northpark Blvd.
Covington LA 70433

SPTB-

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	D122791AA	10/05/2012 13:47	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D122791AA	10/05/2012 13:47	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	12271A20A	09/27/2012 14:33	Catherine J Schwarz	1
01146	GC VOA Water Prep	SW-846 5030B	1	12271A20A	09/27/2012 14:33	Catherine J Schwarz	1

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Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1338025
Reported: 10/08/12 at 04:49 PM

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

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D122772AA	Sample number(s): 6801326,6801328,6801330							
Benzene	N.D.	0.5	ug/l	82		77-121		
Ethylbenzene	N.D.	0.5	ug/l	87		79-120		
Toluene	N.D.	0.5	ug/l	91		79-120		
Xylene (Total)	N.D.	0.5	ug/l	90		77-120		
Batch number: D122791AA	Sample number(s): 6801331							
Benzene	N.D.	0.5	ug/l	87		77-121		
Ethylbenzene	N.D.	0.5	ug/l	92		79-120		
Toluene	N.D.	0.5	ug/l	94		79-120		
Xylene (Total)	N.D.	0.5	ug/l	96		77-120		
Batch number: 12271A20A	Sample number(s): 6801326,6801330-6801331							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	90	90	75-135	0	30
Batch number: 12271A20B	Sample number(s): 6801328							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	90	90	75-135	0	30
Batch number: 122760032A	Sample number(s): 6801326,6801328							
Methane	N.D.	5.0	ug/l	98	94	80-120	4	20
Batch number: 122721848002	Sample number(s): 6801326-6801329							
Iron	N.D.	33.3	ug/l	101		90-112		
Manganese	N.D.	0.83	ug/l	100		90-110		
Batch number: 12270655602B	Sample number(s): 6801326,6801328							
Nitrate Nitrogen	N.D.	50.	ug/l	102		90-110		
Sulfate	N.D.	300.	ug/l	101		90-110		
Batch number: 12271021202B	Sample number(s): 6801326,6801328							
Total Dissolved Solids	N.D.	9,700.	ug/l	104		80-120		
Batch number: 12272002102A	Sample number(s): 6801326,6801328							
Total Alkalinity	700	700.	ug/l as CaCO3	96		90-110		
Batch number: 12272834401A	Sample number(s): 6801326,6801328							
Ferrous Iron	N.D.	10.	ug/l	99		93-105		

Sample Matrix Quality Control

*- 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.

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Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1338025
Reported: 10/08/12 at 04:49 PM
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: D122772AA	Sample number(s): 6801326,6801328,6801330 UNSPK: P802580								
Benzene	97	99	72-134	1	30				
Ethylbenzene	100	101	71-134	1	30				
Toluene	102	105	80-125	2	30				
Xylene (Total)	101	103	79-125	2	30				
Batch number: D122791AA	Sample number(s): 6801331 UNSPK: P803612								
Benzene	-57*	-51*	72-134	2	30				
Ethylbenzene	92	97	71-134	5	30				
Toluene	87	92	80-125	4	30				
Xylene (Total)	92	97	79-125	5	30				
Batch number: 122721848002	Sample number(s): 6801326-6801329 UNSPK: P803165 BKG: P803165								
Iron	96	95	75-125	1	20	1,140	1,120	1	20
Manganese	96	98	75-125	1	20	475	470	1	20
Batch number: 12270655602B	Sample number(s): 6801326,6801328 UNSPK: P801317 BKG: P801317								
Nitrate Nitrogen	102		90-110			N.D.	N.D.	0 (1)	20
Sulfate	102		90-110			1,530,000	1,470,000	4	20
Batch number: 12271021202B	Sample number(s): 6801326,6801328 UNSPK: P801231 BKG: P801172								
Total Dissolved Solids	105		51-144			3,080,000	3,180,000	3	9
Batch number: 12272002102A	Sample number(s): 6801326,6801328 UNSPK: P801174 BKG: P801174								
Total Alkalinity	0*		73-121			N.D.	N.D.	0 (1)	5
Phenolphthalein Alkalinity						N.D.	N.D.	0 (1)	5
Batch number: 12272834401A	Sample number(s): 6801326,6801328 UNSPK: P802945 BKG: P802945								
Ferrous Iron	94	98	81-112	2	6	3,100	3,100	0 (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: D122772AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6801326	100	99	106	101
6801328	97	96	105	103
6801330	98	95	106	102
Blank	102	97	104	95
LCS	100	100	105	104
MS	99	101	105	104
MSD	98	99	105	102
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: D122791AA

*- 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.

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Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1338025
Reported: 10/08/12 at 04:49 PM

Surrogate Quality Control

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6801331	102	99	101	97
Blank	103	97	101	96
LCS	102	99	100	102
MS	99	98	100	101
MSD	98	99	101	103
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 12271A20A

	Trifluorotoluene-F
6801326	106
6801330	157*
6801331	80
Blank	82
LCS	100
LCSD	105
Limits:	63-135

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 12271A20B

	Trifluorotoluene-F
6801328	97
Blank	83
LCS	100
LCSD	105
Limits:	63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 122760032A

	Propene
6801326	77
6801328	67
Blank	104
LCS	102
LCSD	97
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 # 1338025 Sample # 6801326-31
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, CA

Consultant Project Mgr.: Joe Morgan

Consultant Phone #: 510-874-3201

Sampler: J. Quick C. Orlowski

④ Matrix: ☐ Sediment ☐ Ground ☐ Surface; ☐ Potable ☐ NPDES ☐ Air; ☐ Soil, Water, Oil

⑤ Analyses Requested

② Sample Identification	Collected Date	Collected Time	③ Grab	Composite	Soil	Water	Oil	Total Number of Containers	BTEX + MTBE 8021 ☐ 8260 ☒ Naphth ☐	~~8260 full scan~~ TDS by 2540C	Oxygenates	8015B TPHG	TPHD	Silica Gel Cleanup ☐	Lead Total ☐ Diss. ☐ Method	~~VPH/EPH Method~~ CD total Manganese EPA 6010B	Nitrate + Sulfate by EPA 300.0	Alkalinity + Breakdown EPA 310.1	Methane EPA 8015B Mod	Ferrous Iron SM 3500 Fe B Modified	Dissolved Iron EPA 6010B
MW-1	9-25-12	1110				X		14	X	X		X				X	X	X	X	X	X
MW-9	9-25-12	1215				X		14	X	X		X				X	X	X	X	X	X
MW-X	9-25-12	1200				X		6	X			X									
Trip Blank	9-25-12	—				X		2	X			X									

☐ 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

service order No: 26817187.00300

cold/on ice

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
Jeremy Quick [signature]	09/25/2012	1530			
Relinquished by	Date	Time	Received by	Date	Time
Relinquished by Commerical Carrier: UPS ____ FedEx X Other ____			Received by [signature]	9/26/12	0925

Temperature Upon Receipt 3.0 °C ⑨ Custody Seals Intact? (Yes) No

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Explanation of Symbols and Abbreviations

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

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

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

> greater than

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.

Data Qualifiers:

C – result confirmed by reanalysis.

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

U.S. EPA CLP Data Qualifiers:

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

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

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

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

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