Chevron

Global Gas

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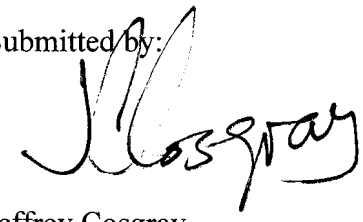
May 8, 2009

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

Dear Mr. Wickham:

I declare, under penalty of perjury, that the information and/or recommendations contained in URS' report titled "**SLIC Case No. RO0002892, Chevron Sunol Pipeline, 2793 Calaveras Road, Sunol, CA – First Quarter 2009 Groundwater Monitoring Report**" are true and correct to the best of my knowledge at the present time.

Submitted by:



Jeffrey Cosgray

REPORT

FIRST QUARTER 2009 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

May 2009

URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612

26815217

URS

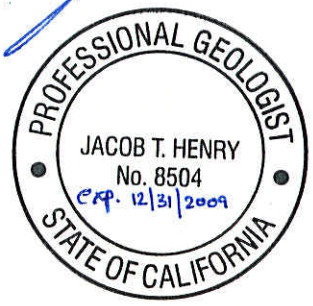
This letter report ("**First Quarter 2009 Groundwater Monitoring Report**") was prepared under my direct supervision. The information presented in this report is based on our review of available data obtained during our quarterly sampling activities and our previous subsurface investigation efforts. To the best of our knowledge, we have incorporated into our recommendations all relevant data pertaining to the Chevron Pipeline Release site in Sunol, California.

The first quarter 2009 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.

URS Corporation
Approved by:

Joe Morgan III

Jacob Henry, P.G.



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URS

May 12, 2009

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

Subject: SLIC Case No. RO0002892, Chevron Pipeline Company, Sunol Spill, 2793 Calaveras Rd, Sunol, CA, First Quarter 2009 Groundwater Monitoring Report

Dear Mr. Wickham:

A December 30, 2005 letter provided by the Alameda County Environmental Health staff (ACEH) requested the initiation of a Quarterly Groundwater Monitoring Program. In response to this request, URS, on behalf of Chevron Pipe Line Company (CPL), has prepared this groundwater monitoring report for the CPL Sunol site (Site) for the first quarter of 2009.

Section 1 of this report discusses the groundwater monitoring program and measured groundwater levels. Section 2 discusses field activities and groundwater sampling methodologies. Section 3 presents the analytical results. Section 4 provides the findings and Section 5 presents the recommendations for the groundwater monitoring program. Section 6 describes the limitations applicable to this report.

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

Sincerely yours,

URS Corporation

PROFESSIONAL GEOLOGIST
JACOB T. HENRY
No. 8504
exp. 12/31/2009
STATE OF CALIFORNIA

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Senior Geologist

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Senior Project Manager

cc: Mr. Jeff Cosgray, Chevron Pipeline Company
Ms. Rachel Naccarati, URS Oakland

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May 12, 2009

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Senior Project Manager

cc: Mr. Jeff Cosgray, Chevron Pipeline Company
Ms. Rachel Naccarati, URS Oakland

On March 27, 2009 and March 31, 2009, URS conducted field activities to assess the groundwater conditions at the Site. A Site vicinity map is included as Figure 1. URS measured the fluid levels and collected analytical samples from groundwater monitoring wells MW-1 through MW-4 and MW-8 through MW-11. URS collected a surface water sample for analysis from the very small stream, located northwest of the release location, at the Site. The monitoring wells and surface water sampling location are provided on Figure 2. Monitoring wells MW-5 through MW-7 were abandoned on June 23, 2008 after the tree removal was completed during the week of June 18, 2008.

1.1 SITE HYDROGEOLOGY

Prior to collecting groundwater samples, the water levels were measured at MW-1 through MW-4 and MW-8 through MW-11 from the top of casing using an electronic oil/water interface probe. A slight sheen was observed during purging activities at MW-1, MW-8, and MW-9. Product was not measured in any of the wells during the quarterly monitoring activities. The measured groundwater levels are displayed in Table 1 and the calculated groundwater elevations are displayed in Table 2.

Unconfined Water Bearing Zone

Due to seasonal precipitation, the water table elevation increased since the last sampling event in December 2008, hydraulically reconnecting all wells screened within the unconfined water-bearing zone. The groundwater elevations for monitoring wells MW-1 through MW-4 and MW-9 through MW-11, located in the nursery, ranged from a high of 294.78 feet above average mean sea level (msl) at MW-3 to a low of 292.05 feet msl at MW-9. The groundwater elevation for MW-8, which screens an apparent hillside groundwater recharge source for the Valley Crest Tree Company's (nursery) unconfined water-bearing zone, was 314.39 feet above msl.

Based on 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 an east-northeast direction with a calculated hydraulic gradient of 0.031 feet/feet. The seasonal groundwater recharge from the hillside appears to flow into the unconfined nursery water-bearing zone in a northwesterly direction with a steep hydraulic gradient. Figure 3 provides groundwater contours for the unconfined water-bearing zone as well as bedrock surface elevations for the gravel-siltstone contact for comparison.

Confined Water Bearing Zone

As stated before (MW-5 through MW-7), are no longer a part of the groundwater monitoring program. After four quarters of non-detect analytical results, ACEH agreed, in a letter dated February 1, 2008, that further groundwater monitoring of the confined sandstone water-bearing zone was unnecessary. The wells were abandoned according to Alameda County Zone 7 Water Agency (Zone 7) standards on June 23, 2008.

2.1 QUARTERLY MONITORING ACTIVITIES

After measuring the fluid levels at each well, URS conducted groundwater sampling. First quarter sampling efforts were influenced by the seasonally low groundwater levels. The rationale for the method used at each well is described below:

- Three well volumes were removed from MW-8 before sampling using a 2 inch diameter disposable bailer due to traffic safety issues along Calaveras Road.
- MW-1 through MW-4 and MW-9 through MW-11 were sampled using low-flow methods.
- A surface water sample was also collected from the very small stream northwest of the release location (Figure 2) on March 31, 2009.

2.1.1 MW-1 and MW-9 Sorbent Booms

URS replaced sorbent booms (booms) in MW-1 and MW-9 during the December 2008 sampling event as an interim remedial measure. The booms have been successful in passively collecting and facilitating degradation of hydrocarbons within the wells and allow for quarterly groundwater sample collection when measurable product is not present. MW-1 and MW-9 have been gauged monthly, including the first quarter 2009 groundwater monitoring event, with no measurable product observed. At this time, URS proposes to discontinue use of the booms once the current booms have expired. URS will monitor MW-1 and MW-9 during the monthly groundwater gauging events. If measurable product is observed in either MW-1 or MW-9 once the booms have been removed, URS will reinstall booms in one or both wells, if needed.

2.1.2 MW-8

Monitoring well MW-8 was sampled using a 2 inch disposable bailer. Low-flow methods were not utilized to sample the well due to traffic safety hazards along Calaveras Road. Approximately 3 gallons were purged from MW-8 to confirm that the water collected during sampling was from the aquifer and not stagnant in the well. After three well volumes were bailed from the well, groundwater samples were collected directly from the bailer.

2.1.3 MW-1 through MW-4 and MW-9 through MW-11

Low-flow purging rates were between 200 to 500 milliliters per minute (mL/min) depending on the rate of recharge at each well. The low-flow groundwater sampling forms are included in Appendix A.

In addition to monitoring the water level at each well during low-flow sampling, parameters such as temperature, pH, conductivity, oxidation reduction potential (ORP), dissolved oxygen (DO) and turbidity of the groundwater were monitored using an in-line flow-through cell and multi-parameter device. The multi-parameter device was calibrated prior to sampling. During purging, the parameter readings described above were recorded every 3 minutes until the parameters stabilized.

In all of the wells where low-flow purging was conducted, the 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), turbidity +/- 1.0 nephelometric turbidity units (NTU).

After monitoring all field parameters, the flow through cell was detached from the pump and tubing assembly. Tubing at each well was dedicated for future groundwater monitoring events. Groundwater samples were collected directly from the pump tubing.

2.1.4 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 sampling location, the very small stream fans out into the floodplain and surface flow terminates within floodplain grasses.

This section summarizes the design of the SVE system and the monitoring and analysis program implemented at the Site.

3.1 SVE SYSTEM HISTORY

First SVE System Operational Period

URS observed the installation of four SVE wells (SVE-1D, SVE-2S, SVE-3S, and SVE-4D) on the dirt road in November 2005, as shown in Figure 2. The system operated for 3 months and removed an estimated 7,294 pounds of gasoline (approximately 1,042 gallons) during the period from November 8, 2005 through February 13, 2006.

Second SVE System Operational Period

Upon ACEH's request, URS observed the installation of four five additional SVE wells (SVE-5 through SVE 9) below the dirt road on the steep hillside in November 2006. The updated system was restarted on November 28, 2006. The updated system operated for approximately 9 months and removed an estimated total of 9,742 pounds of gasoline (approximately 1,597 gallons) during the period from November 28, 2006 through August 17, 2007.

The updated system was disconnected and removed from the Site on August 17, 2007, due to the trees impacted during the initial release. CPL and URS were concerned that the trees, which were losing limbs on a daily basis, would damage the SVE wells and piping or injury URS/subcontractor personnel. CPL and URS requested closure of SVE system activities in the *Third Quarter 2007 Groundwater and Soil Vapor Extraction Monitoring Report* dated November 15, 2007. In a letter dated November 27, 2007, ACEH requested an SVE system be reinstalled and be in operation by January 29, 2008. In a letter to ACEH dated January 15, 2008, URS requested clarification on and suggested closure requirements. In a letter dated February 1, 2008, ACEH requested a schedule for the tasks to be completed prior to the reinstallation of an SVE system. URS complied and submitted monthly SVE system updates to ACEH from March 2008 through January 2009.

Third SVE System Operational Period

Upon receipt of ACEH's letter dated February 1, 2008, URS and CPL coordinated to complete the removal of impacted trees, which occurred in June 2008. CPL also decided to install and electrical power system to provide power to the SVE system. In order to go forth with the installation of the electrical power system, an Alameda County Building Department (ACBD) permit was required. Furthermore, as a condition of the ACBD permit, several Alameda County Fire Department (ACFD) requirements needed to be met. The ACFD requirements included vegetation removal, the construction of an all purpose road for fire truck access, and the installation of a 2, 500 gallon water tank. All ACBD and ACFD requirements were met by December 2008, with start-up of the SVE system conducted on December 12, 2008. Once results from the start-up were obtained, the new SVE system was operational on December 22, 2008.

Operation of the new SVE system was discontinued February 17, 2009 when Pacific Gas and Electric (PG&E) disconnected the power from the electrical power system (see Section 3.4.2 for further details). During this time, the current SVE system subcontractor, Stratus, Inc. (Stratus), contract ended and the SVE system was removed from the Site on March 13, 2009. URS has since hired a local SVE subcontractor to continue SVE system operations. This report covers

operation of the third SVE system from December 22, 2008 through February 17, 2009. Results of this operational period are presented in Section 3.4.

3.2 SVE SYTEM DESIGN

The SVE treatment system was installed by Stratus, the system consists of the following components:

- A trailer-mounted 350-cubic-feet-per-minute (cfm) thermal oxidizer (manufactured by Mako Industries (Mako)) that includes a 15-horsepower (hp) liquid ring blower and a 250-gallon knockout pot;
- An electrical power system with electrical power provided by PG&E;
- Conveyance pipes and manifolds;
- A 500-gallon poly tank and associated level switch for groundwater extracted from the SVE wells, specifically SVE-8; and
- A 1000-gallon propane tank.

The SVE treatment system was located north of the release location on San Francisco Public Utilities Commission (SFPUC) property (Figure 2). The SFPUC property is fenced and has a locked gate for security. An additional separate 8-foot-high, slatted chain-link fence with a locked gate encloses the SVE equipment compound. Vapors are extracted from the SVE wells with the liquid ring blower and conveyed to the treatment compound through two separate sets of piping. The first set of piping connects SVE-1D through SVE-5 to the treatment system and the second set of piping connects SVE-6 through SVE-9 to the treatment system. Both sets of piping consist of 2-inch-diameter Schedule 40 PVC conveyance pipes that run from each wellhead to the appropriate manifold. The manifold for each set of piping consists of valves to regulate the flow to each well. A single 1.5-inch diameter Schedule 40 PVC conveyance pipe connects each manifold to the treatment system. The extracted vapor stream is conveyed from the manifold to the knockout pot, which separates and collects moisture from the vapor stream. Hydrocarbon-impacted vapors are abated by the thermal oxidizer before discharge to the atmosphere. Stratus obtained all necessary permits and approvals from the Bay Area Air Quality Management District prior to the operation of the SVE system.

3.3 MONITORING AND ANALYSIS PROGRAM

Photoionization detector (PID) readings at each SVE wellhead and at the system influent and effluent points were recorded every week during this reporting period.

Grab vapor samples for laboratory analysis were collected at each wellhead and at the system influent and effluent points once a month for confirmation purposes. All vapor samples for chemical analysis were transported under URS chain-of-custody to Lancaster Laboratories via FedEx. The vapor samples were analyzed for the following:

- Hydrocarbon concentrations as hexane by USEPA Method 25 Modified
- BTEX by USEPA Method TO-14A

Attachment B provides the complete laboratory analytical results.

3.4 SVE SYSTEM OPERATION AND MONITORING RESULTS

This section contains the operation and monitoring results of the SVE system from December 12, 2008 through February 17th, 2009. Figure 4 shows the PID readings at each well. Figure 5 shows the cumulative mass of hydrocarbons removed from each well. Figure 6 shows the mass removal rate as pounds per day (lbs/day) at each well. Figure 7 shows the mass removal rate as lbs/day for the SVE system. Gasoline mass removal was calculated based on the PID readings collected at the wellheads and on the analytical lab data.

After system start-up and stabilization, URS collected vapor samples on the first day of operation (December 12, 2008), and then monthly until shutdown on February 17, 2008. However, due to the disconnection of electrical power by PG&E, URS' planned February 18, 2009 vapor sample collection was canceled. Site visits were conducted weekly to confirm that the system was operating properly and to record system readings.

Due to decreased PID readings and mass removals reaching asymptotic values at SVE-1D, SVE-2S, and SVE-4D (Figure 4 and Figure 5); the well valves were closed on January 22, 2009. URS recorded similar data during previous SVE system operations.

3.4.1 SVE Removal Results

During the first operational period of the SVE system from November 8, 2005, through February 13, 2006, utilizing only SVE-1D, SVE-2S, SVE-3S, and SVE-4D, an estimated 7,294 pounds of gasoline (approximately 1,042 gallons) were removed. The average product removal rate during this time period was 99.58 pounds per day (lbs/day).

During the second operational period of the SVE system from November 28, 2006, through August 17, 2007, utilizing SVE-1D, SVE-2S, SVE-3S, SVE-4D, and SVE-5 through SVE-9, an estimated 9,742 pounds of gasoline (approximately 1,597 gallons) were removed. The average removal rate during this entire time period was 44.21 lbs/day.

During the third operational period of the SVE system from December 22, 2008, through February 17, 2009, utilizing SVE-1D, SVE-2S, SVE-3S, SVE-4D, and SVE-5 through SVE-9, an estimated 2,329 pounds of gasoline (approximately 382 gallons) were removed. The average removal rate during this entire time period was 6.70 lbs/day.

To date, an estimated 19,365 pounds of gasoline (approximately 3,021 gallons) have been removed.

3.4.2 SVE System Shutdown

PG&E disconnected electrical power to the SVE system on February 17, 2009 due to an invoicing issue with CPL. During this time; the Stratus contract ended and the SVE system was removed from the Site on March 13, 2009. Based on the results obtained during the third operational period of the SVE system, URS has the following recommendations for future SVE system operations.

Closure of SVE Well SVE-1D

The average mass removal rate at SVE-1D during the third operational period was 1.24 lbs/day with actual mass removal rates falling below 0.5 lbs/day after January 29, 2009. URS

recommends disconnection of SVE-1D from the SVE system and proper abandonment according to Alameda County Zone 7 Water District guidelines.

Closure of SVE Well SVE-2S

The average mass removal rate at SVE-2S during the third operational period was 0.37 lbs/day with the majority of actual mass removal rates below 0.5 lbs/day. URS recommends disconnection of SVE-2S from the SVE system and proper abandonment according to Alameda County Zone 7 Water District guidelines.

Closure of SVE Well SVE-4D

The average mass removal rate at SVE-4D during the third operational period was 1.16 lbs/day with the majority of actual mass removal rates below 0.5 lbs/day. URS recommends disconnection of SVE-4D from the SVE system and proper abandonment according to Alameda County Zone 7 Water District guidelines.

Closure of SVE Well SVE-8

The average mass removal rate at SVE-8 during the third operational period was 0.41 lbs/day with actual mass removal rates never exceeding 0.5 lbs/day. The SVE-8 well head was modified by installing a 1/2–inch tube approximately 3-inches above the bottom of the well so groundwater could effectively be removed. Approximately 300 gallons of groundwater was collected during the third operational period of the SVE system, primarily from SVE-8. URS recommends disconnection of SVE-8 from the SVE system and proper abandonment according to Alameda County Zone 7 Water District guidelines.

URS has subcontracted with Mako to provide SVE system services. Currently, all SVE wells are connected to the new SVE system. The system was started on April 30, 2009 and will continue operation through at least July 2009 at which time URS will assess the data collected and determine if further operation is required.

3.5 MASS REMOVAL CALCULATIONS

The assumptions used in the mass removal calculations were as follows:

- The relative vapor density of gasoline is approximately 3.3 (unitless).
- The vapor density of pure, dry air is 1,200 grams per cubic meter (g/m^3) at 68° Fahrenheit (°F).

The vapor density of gasoline is therefore calculated as 3.3 x 1,200 g/m^3 = 3,960 g/m^3 at 68°F.

Air flow in standard cubic foot per minute (SCFM) at 14.7 pounds per square inch atmosphere (psia) and 68°F is converted from air flow in cubic feet per minute as follows:

SCFM (at 14.7psia and 68°F) = CFM x ([(Pg + Patm)/(Patm)] x [(68 +460)/(Tact +460)])

Where

- *Pg* is the gauge pressure at the wellhead
- *Patm* is the atmospheric pressure
- *Tact* is the actual temperature

- *460* is the temperature conversion factor from Fahrenheit to Rankin.

The mass removed in pounds is calculated as follows:

Pounds of Petroleum Hydrocarbons Removed = (flowrate in SCFM)(average concentration in ppmv)*(60 min/hr)*(106.88 lbs/molecule)*(Operation Time in hr)/1000000/379*

4.1 ANALYTICAL PROGRAM

The groundwater samples from each monitoring well and the very small stream were collected in clean laboratory provided containers, labeled with unique project specific identification, packed to prevent breakage, and placed on ice in a cooler immediately after collection. The sample cooler included a trip blank and was 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.

As discussed in URS' *February 2006 Groundwater Monitoring Report*, groundwater and surface water samples collected during quarterly sampling activities are 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 Indicator Parameters

- Nitrate and sulfate by USEPA Method 300.0
- Total manganese and dissolved iron by USEPA Method 6010B
- Ferrous iron by SM20 Method 3500-FE B Modified
- Methane by USEPA Method 8015B Modified
- Alkalinity including breakdown by USEPA Method 310.1
- Total dissolved solids (TDS) by USEPA Method 160.1

The surface water sample was analyzed for TPH-GRO and BTEX.

4.2 GROUNDWATER ANALYTICAL RESULTS

A summary of the analytical results for the gasoline compounds and associated environmental screening levels (ESLs) developed by Regional Water Quality Control Board (RWQCB 2008) are presented in Table 3 and the complete laboratory analytical results and chain of custodies are included as Appendix B.

4.2.1 Unconfined Water-Bearing Zone Wells

The unconfined water bearing zone wells include nursery unconfined water-bearing zone wells (MW-1 through MW-4 and MW-9 through MW-11) and the Calaveras Road shallow unconfined water-bearing zone well (MW-8), the apparent hillside groundwater recharge source for the nursery. The first quarter groundwater sample results are as follows:

- The MW-1 sample contained TPH-GRO at 3,700 micrograms per liter (µg/L), toluene at 1 µg/L, ethylbenzene at 1 µg/L, and total xylenes at 44 µg/L. Benzene was below laboratory reporting limits.
- The MW-2 sample was below laboratory reporting limits for TPH-GRO, benzene, toluene, ethylbenzene, and total xylenes.

- The MW-3 sample was below laboratory reporting limits for TPH-GRO, benzene, toluene, ethylbenzene, and total xylenes.
- The MW-4 sample was below laboratory reporting limits for TPH-GRO, benzene, toluene, ethylbenzene, and total xylenes.
- The MW-8 sample contained TPH-GRO at 29,000 µg/L, benzene at 1,500 µg/L, toluene at 7,200 µg/L, ethylbenzene at 1,200 µg/L, and total xylenes at 4,700 µg/L.
- The MW-9 sample contained TPH-GRO at 20,000 µg/L, benzene at 3 µg/L, toluene at 100 µg/L, ethylbenzene at 460 µg/L, and total xylenes at 3,200 µg/L.
- The MW-10 sample contained TPH-GRO at 52 µg/L and toluene at 0.7 µg/L. Benzene, ethylbenzene. And total xylenes were below laboratory reporting limits.
- The MW-11 sample was below laboratory reporting limits for TPH-GRO, benzene, toluene, ethylbenzene, and total xylenes.

All groundwater analytical results are presented in Table 3.

4.2.2 Confined Water-Bearing Zone Wells

Wells MW-5 through MW-7 were abandoned June 23, 2008 as approved by ACEH in the November 29, 2007 ACEH letter.

4.2.3 Surface Water Sample

The surface water sampling location is shown on Figure 2. The surface water sample was below laboratory reporting limits for all constituents analyzed.

4.2.4 Analytical Result Comparison to ESLs

The groundwater samples collected from MW-2, MW-3, MW-4, MW-10, and MW-11 were below the most stringent ESLs for all constituents analyzed. The surface water sample was also below the respective ESLs. The sample collected from MW-1 exceeded the ESLs for TPH-GRO and total xylenes. The samples from MW-8 and MW-9 exceeded the ESLs for all constituents analyzed.

4.2.5 Geochemical Analytical Results

The groundwater samples collected from MW-2, MW-3, MW-4, MW-10, and MW-11 were also analyzed for geochemical indicators. The results are presented in Table 4.

4.3 SUMMARY OF QA/QC REVIEW PARAMETERS

The quality assurance/quality control (QA/QC) program includes using standard sample collection procedures in the field and established analytical methodologies in the laboratory. Laboratory and field QC sample results were evaluated to assess the quality of the individual sample results and overall method performance. Analytical performance was evaluated on a

"batch QC" basis by evaluating the QC sample results for groups of samples that were prepared and analyzed together. The data evaluation performed included 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)

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 QA/QC review identifies results with exceeded method holding times. None of the samples were analyzed outside of method holding times.

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. None of the method blanks had detections of target analytes.

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. The trip blanks did not have detections of any target analytes, indicating no evidence of contamination during shipment of the laboratory samples.

Matrix Spikes and Laboratory Control Samples

Matrix spikes (MS), matrix spike duplicates (MSD), laboratory control samples (LCS), laboratory control sample duplicates (LCSD), blank spikes (BS) and blank spike duplicates (BSD) 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, LCSD, BS and BSD 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, LCSD, BS and BSD 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.

Laboratory Duplicate Analyses

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

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

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

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

Field Duplicate Analyses

Field duplicate samples are collected in the field and analyzed to evaluate the heterogeneity of the matrices. One duplicate sample (MW-X) was collected during this sampling event.

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.

EXPLANATION OF ANALYTICAL DATA QUALIFIERS

The analytical data were reviewed and qualified following USEPA guidelines for organic data review (USEPA, 1999). 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 "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.

SUMMARY OF QA/QC REVIEW FINDINGS

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

The field and duplicate samples results for toluene were qualified with a J because the RPDs between the field sample and the field duplicate sample was greater than 30 percent, indicating that the sample matrix was homogeneous.

The preservation requirements for TPH-GRO for sample MW-X were not met because the vial submitted for volatile analysis did not have a pH less than 2 at the time of analysis. Due to the volatile nature of the analytes, the laboratory did not adjust the pH at the time of sample receipt and the pH at the time of analysis was 6. The TPH-GRO detection in sample MW-X Grab Sample was qualified with a J.

The nitrate nitrogen results for samples MW-3 Grab Water, MW-4 Grab Water, MW-9 Grab Water, and MW-1 Grab Water were originally analyzed within the method-specific 48-hour holding time, however, the continuing calibration standard bracketing for the samples were not within specification. The analysis was repeated between 4/7 and 4/9, respectively for the different samples, and the results were within specification. The continuing trials were repeated at a higher dilution, which was within the calibration range. Lancaster Laboratory chose to report the initial result because it was analyzed within the holding time. Based on the CCV noncompliance of the results reported, the nitrate nitrogen detections in samples MW-3 Grab Water, MW-4 Grab Water, MW-9 Grab Water, and MW-1 Grab Water were qualified with a J.

All reported laboratory control sample (LCS), matrix control sample (MS) and surrogate spike recoveries were within laboratory QC limits, with the exception of the following:

- High RPD and DUP RPD recovery was observed for ferrous iron in batch 09091834401A. The ferrous iron detections in samples MW-2 Grab Water, MW-8 Grab Water, MW-10 Grab Water, and MW-11 Grab Water were qualified with a J.

Chain-of-custody documentation is complete and consistent. Samples were preserved as required per method specifications, except where noted above. All samples were analyzed within method specified holding times, except where noted above. 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.

The field activities conducted on March 27 and March 31, 2009, included assessing the groundwater conditions at the Site and measuring the fluid levels and collecting analytical samples from groundwater monitoring wells MW-1 through MW-4 and MW-9 through MW-11. The findings are as follows:

- Free product was not observed in any of the monitoring wells during the first quarter 2009 groundwater monitoring activities.
- Due to seasonal precipitation, the water table elevation increased since the last sampling event in December 2008, hydraulically reconnecting all wells screened within the unconfined water-bearing zone.
- The MW-1 sample contained TPH-GRO at 3,700 µg/L, toluene at 1 µg/L, ethylbenzene at 1 µg/L, and total xylenes at 44 µg/L.
- The MW-8 sample contained TPH-GRO at 29,000 µg/L, benzene at 1,500 µg/L, toluene at 7,200 µg/L, ethylbenzene at 1,200 µg/L, and total xylenes at 4,700 µg/L.
- The MW-9 sample contained TPH-GRO at 20,000 µg/L, benzene at 3 µg/L, toluene at 100 µg/L, ethylbenzene at 460 µg/L, and total xylenes at 3,200 µg/L.
- The MW-10 sample contained TPH-GRO at 52 µg/L and toluene at 0.7 µg/L. No ESLs were exceeded.
- The surface water sample collected from the very small stream continues to be below laboratory reporting limits for all constituents.
- The groundwater samples collected from MW-2, MW-3, MW-4, MW-10, and MW-11 were below the most stringent ESLs for all constituents analyzed. The surface water sample was also below the respective ESLs. The sample collected from MW-1 exceeded the ESLs for TPH-GRO and total xylenes. The samples from MW-8 and MW-9 exceeded the ESLs for all constituents analyzed.
- The updated SVE system was restarted on December 22, 2008 and ran continuously until February 17, 2009. During this time, the system removed an estimated total of 2,329 pounds of gasoline (approximately 382 gallons). The system mass removal rates decreased during the third operational period.

Based on the March 27 and March 31, 2009 field observations and analytical results URS makes the following recommendations:

- Continue quarterly groundwater monitoring to further assess the effect of seasonal groundwater fluctuations on groundwater behavior and contaminant transport within the unconfined water-bearing zone.
- Removal of sorbent booms will take place once the existing booms have expired. URS will monitor MW-1 and MW-9 monthly to assess the need for continued use of sorbent booms
- The SVE system was restarted on April 30, 2009. Based on the SVE results presented in this report, URS recommends the disconnection and abandonment of SVE wells SVE 1D, SVE-2S, SVE-4S, and SVE-8 due to low mass removal rates. The data collected from December 22, 2008 through February 17, 2009 indicate very low levels of hydrocarbon constituents at these SVE well locations. SVE wells, if ACEH approves, would be abandoned according to Alameda County Zone 7 water district standards.

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. Because 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 CPL's use, and reliance on this report by third parties will be at such party's sole risk.

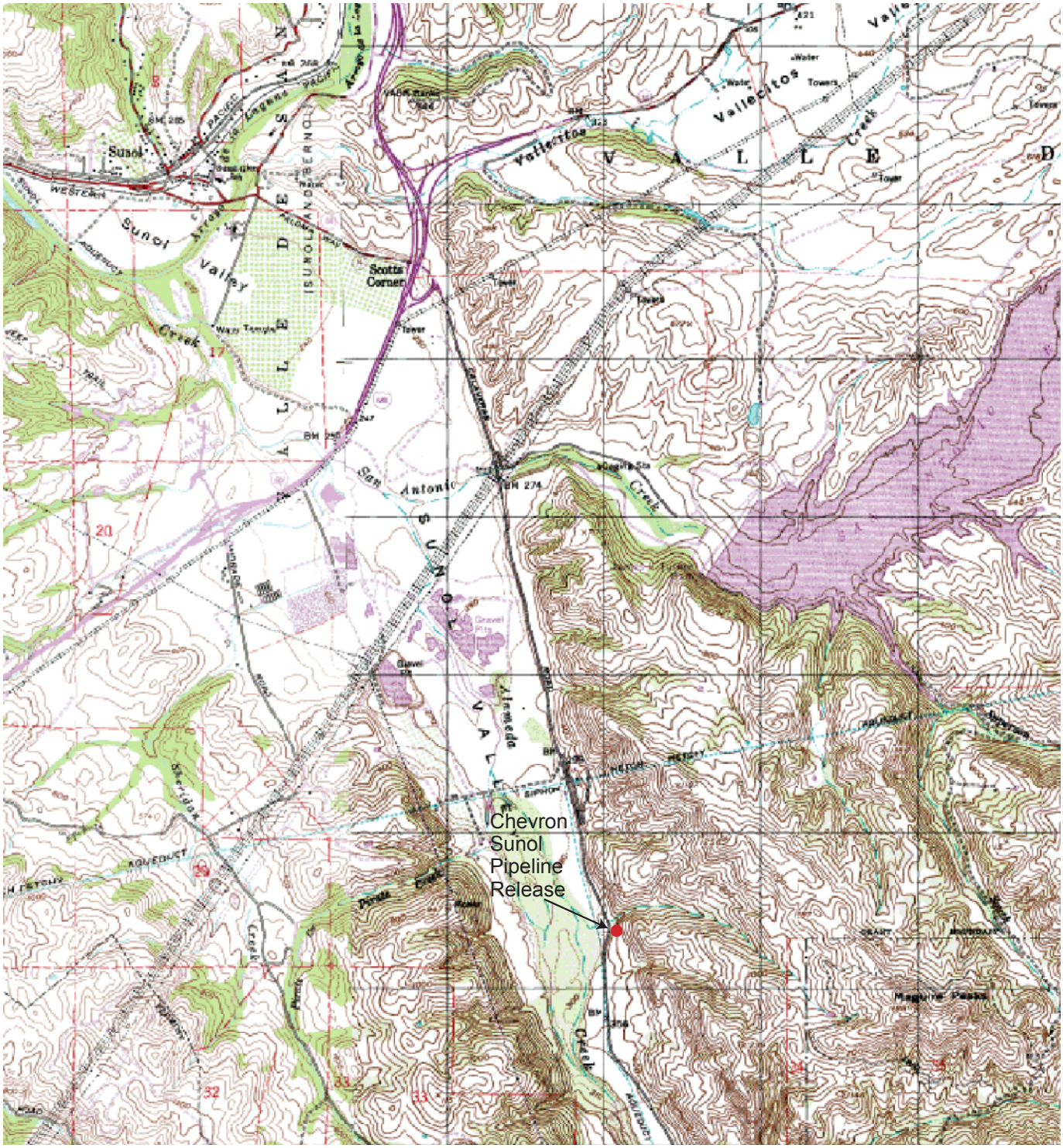


Image obtained from topozone.com

N

0 0.6 1.2 1.8 2.4 3 km

0 0.4 0.8 1.2 1.6 2 mi

MAP REFERENCE:

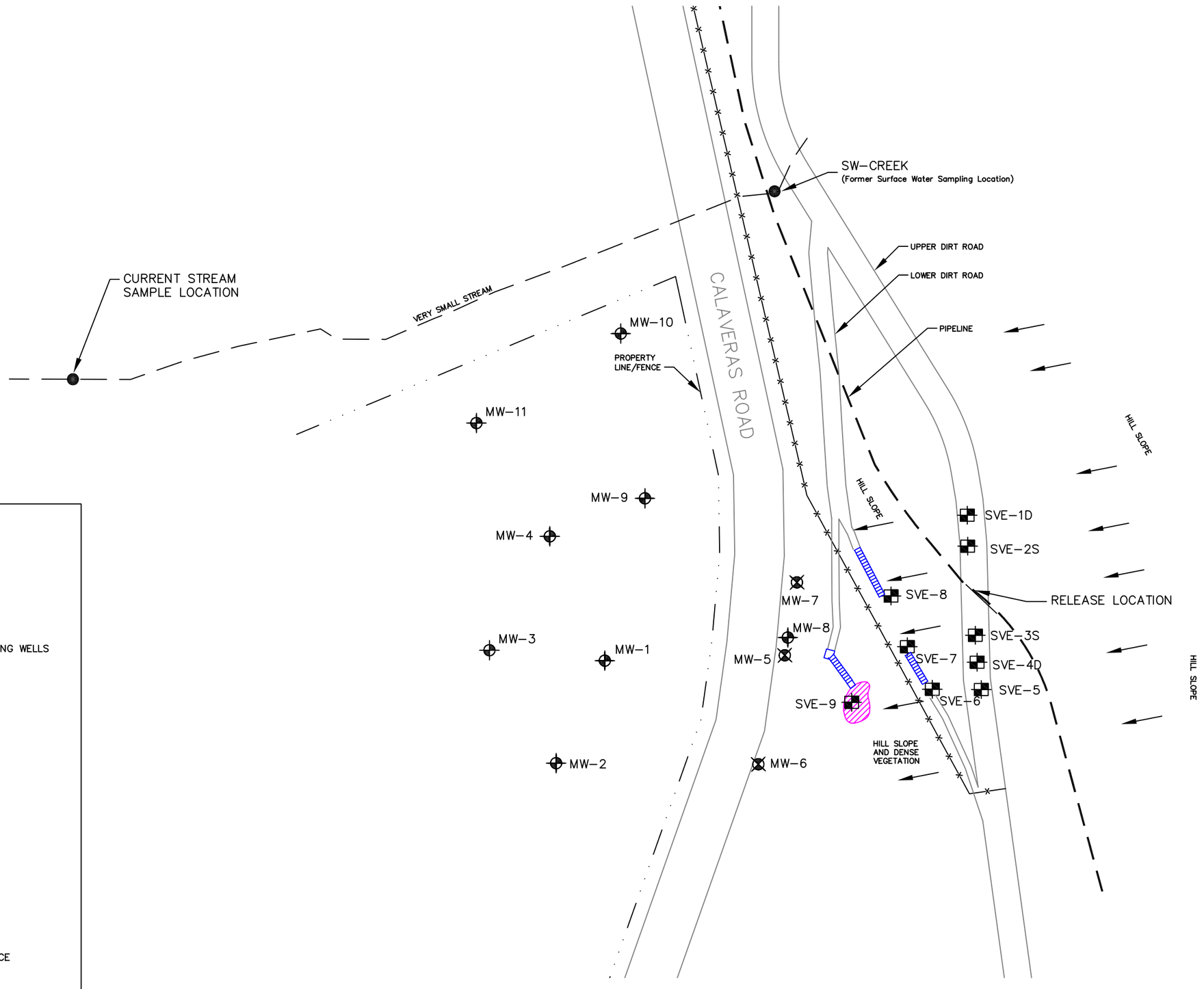
PORTION OF U.S.G.S. QUANDRANGLE MAP
7 1/2 MINUTE SERIES (TOPOGRAPHIC)
LA COSTA VALLEY QUADRANGLE

URS	Chevron Pipeline Company Project No. 26815217	SITE VICINITY MAP CHEVRON SUNOL PIPELINE SUNOL, CALIFORNIA	Figure 1

NORTH

0 50 100

SCALE IN FEET

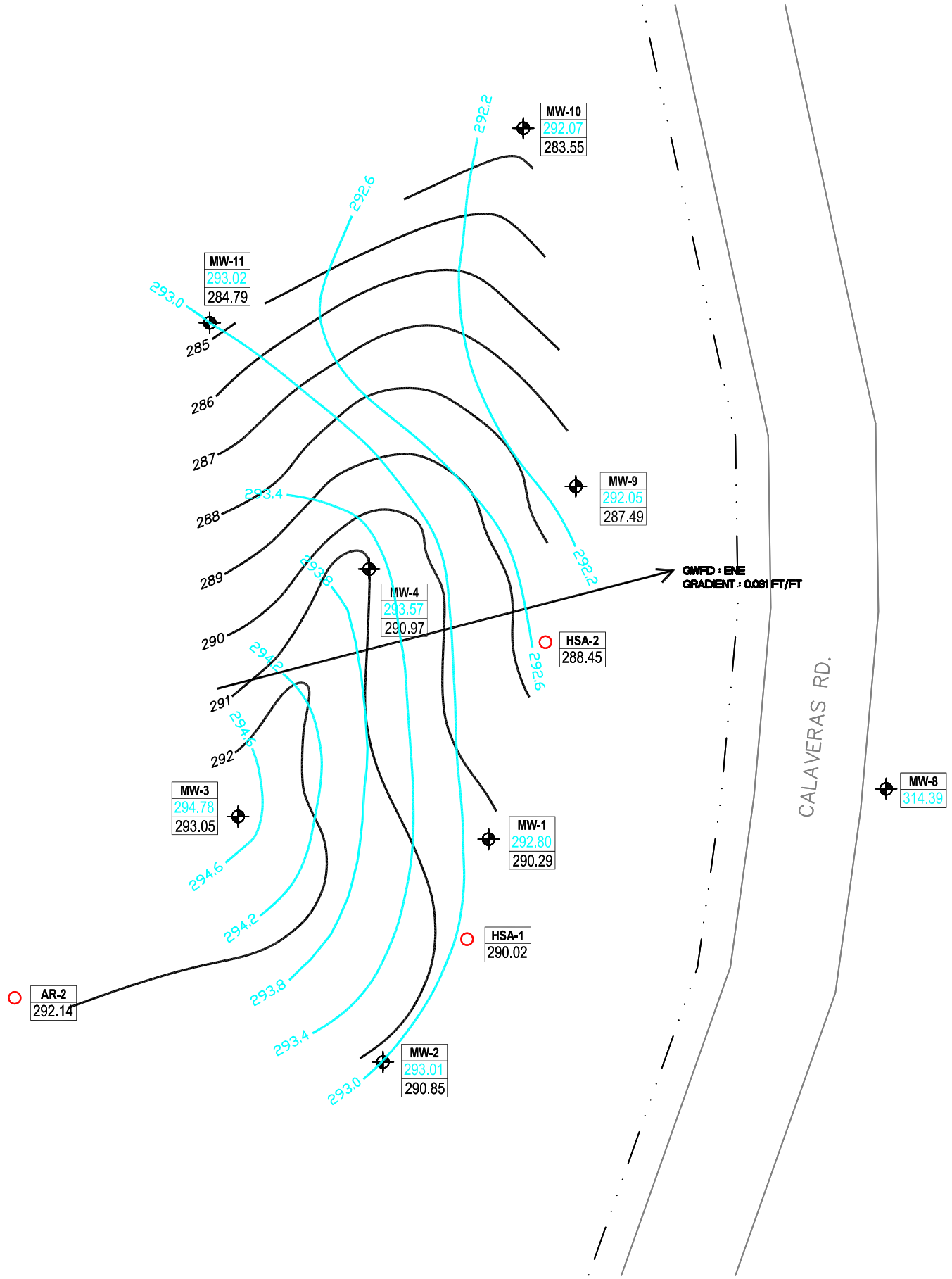


LEGEND:

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

URS	CHEVRON PIPELINE COMPANY Project No. 26815217	SVE AND GROUNDWATER MONITORING WELL LOCATIONS CHEVRON SUNOL PIPELINE	Figure 2

Jul 16, 2008 – 4:49pm
X:\x_env_waste\Chevron Pipeline Company\Sunol Spill\Site Figures\Current CADD\FIGURE 2.dwg



LEGEND:

- MONITORING WELL
- MW-11 / 293.02 / 284.79 — MONITORING WELL LABEL / GROUNDWATER ELEVATION / BEDROCK CONTACT ELEVATION
- SOIL BORING
- HSA-2 / 288.45 — SOIL BORING LABEL / BEDROCK CONTACT ELEVATION
- 293.00 — INFERRED GROUNDWATER CONTOUR
- 285 — BEDROCK SURFACE ELVATION
- GWFD — GROUNDWATER FLOW DIRECTION

NOTES:

1. ELEVATIONS IN FEET ABOVE AVERAGE MEAN SEA LEVEL (msl).
2. GROUNDWATER ELEVATIONS FOR MW-1 THROUGH MW-4 AND MW-9 THROUGH MW-11, AS MEASURED ON MARCH 27, 2009.
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 = 0.031 ft/ft.

NORTH

0 30' 60'

SCALE 1"= 30'

URS	CHEVRON PIPELINE COMPANY Project No. 26815217	UNCONFINED WATER-BEARING ZONE GROUNDWATER AND BEDROCK ELEVATIONS MAP CHEVRON SUNOL PIPLINE	Figure 3

May 08, 2009 - 1:45pm
X:\x_env_waste\Chevron Pipeline Company\Sunol Spill\Quarterly Groundwater Report\102009\Report\Figures\FIGURE 3_050109.dwg

TABLE 1
Monitoring Well Groundwater Levels
First Quarter 2009 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Screen Interval (feet bgs)[1]	Date	Depth to Groundwater (feet TOC-N)[2]	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-1	29.3-39.3	2/21/2006	36.34	--	--
		6/7/2006	34.28	--	--
		8/22/2006	37.11	37.08	0.03
		11/14/2006	37.05	--	--
		2/20/2007	36.14	--	--
		6/5/2007	37.21	--	--
		9/12/2007	37.67	37.55	0.12
		12/11/2007	37.49	37.46	0.03
		3/19/2008	35.94	--	--
		5/20/2008	35.51	--	--
		6/5/2008	35.69	--	--
		9/18/2008	37.62	37.61	0.01
		12/15/2008	37.53	37.52	0.01
		3/27/2009	35.24	--	--
MW-2	23.3-38.3	2/21/2006	32.19	--	--
		6/7/2006	30.23	--	--
		8/22/2006	33.11	--	--
		11/14/2006	33.01	--	--
		2/20/2007	31.93	--	--
		6/5/2007	33.23	--	--
		9/12/2007	33.62	--	--
		12/5/2007	33.52	--	--
		3/19/2008	31.76	--	--
		5/20/2008	31.41	--	--
		6/5/2008	31.56	--	--
		9/18/2008	33.65	--	--
		12/15/2008	33.59	--	--
		3/27/2009	31.14	--	--
MW-3	21.3-36.3	2/21/2006	31.97	--	--
		6/7/2006	30.91	--	--
		8/22/2006	34.66	--	--
		11/14/2006	34.71	--	--
		2/20/2007	31.66	--	--
		6/5/2007	34.63	--	--
		9/12/2007	34.71	--	--
		12/11/2007	34.77	--	--
		3/19/2008	31.64	--	--
		5/20/2008	31.26	--	--
		6/5/2008	31.45	--	--
		9/18/2008	34.81	--	--
		12/15/2008	34.79	--	--
		3/27/2009	30.87	--	--
MW-4	30.7-40.7	2/21/2006	36.72	--	--
		6/7/2006	35.76	--	--
		8/22/2006	38.79	--	--
		11/14/2006	38.84	--	--
		2/20/2007	36.54	--	--
		6/5/2007	38.77	--	--
		9/12/2007	38.93	--	--
		12/11/2008	39.00	--	--
		3/19/2008	36.29	--	--
		5/20/2008	36.27	--	--
		6/5/2008	36.38	--	--
		9/18/2008	39.03	--	--
		12/15/2008	39.03	--	--
		3/27/2009	36.10	--	--

TABLE 1
Monitoring Well Groundwater Levels
First Quarter 2009 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-8	14.5-24.5	8/22/2006	18.71	--	--
		11/14/2006	18.73	--	--
		2/20/2007	19.23	--	--
		6/5/2007	20.48	--	--
		9/12/2007	21.47	--	--
		12/11/2007	19.58	--	--
		Q1 2008	NM	--	--
		Q2 2008	NM	--	--
		9/18/2008	21.67	--	--
		12/15/2008	20.73	--	--
		3/27/2009	19.54	--	--
MW-9	36.0-46.0	8/22/2006	42.59	42.55	0.04
		11/14/2006	42.62	42.54	0.08
		2/20/2007	41.91	41.86	0.05
		6/5/2007	42.71	42.69	0.02
		9/12/2007	43.09	43.01	0.08
		12/11/2007	42.91	--	--
		3/20/2007	41.76	41.75	0.01
		12/11/2007	42.91	--	--
		5/20/2008	41.33	--	--
		6/5/2008	41.57	--	--
		9/18/2008	43.07	--	--
		12/15/2008	43.00	--	--
		3/27/2009	41.02	--	--
MW-10	40.3-55.3	9/5/2007	54.86	--	--
		12/12/2007	46.84	--	--
		3/20/2008	44.41	--	--
		5/20/2008	44.09	--	--
		6/5/2008	43.67	--	--
		9/18/2008	45.89	--	--
		12/15/2008	45.91	--	--
		3/27/2009	43.82	--	--
MW-11	37.0-47.0	9/6/2007	Dry	--	--
		12/12/2007	42.73	--	--
		3/20/2008	37.29	--	--
		5/20/2008	37.06	--	--
		6/4/2008	37.18	--	--
		9/18/2008	38.97	--	--
		12/15/2008	39.36	--	--
		3/27/2009	36.87	--	--

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 2
Monitoring Well Groundwater Elevations
First Quarter 2009 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	2/21/2006	291.70	--	--
				6/7/2006	293.76	--	--
				8/22/2006	290.93	290.96	0.03
				11/14/2006	290.99	--	--
				2/20/2007	291.90	--	--
				6/5/2007	290.83	--	--
				9/12/2007	290.37	--	--
				12/11/2007	290.55	290.58	0.03
				3/19/2008	292.10	--	--
				5/20/2008	292.53	--	--
				6/5/2008	292.35	--	--
				9/18/2008	290.42	290.43	0.01
				12/15/2008	290.51	290.52	0.01
				3/27/2009	292.80	--	--
MW-2	10/21/2005	324.85	324.15	2/21/2006	291.96	--	--
				6/7/2006	293.92	--	--
				8/22/2006	291.04	--	--
				11/14/2006	291.14	--	--
				2/20/2007	292.22	--	--
				6/5/2007	290.92	--	--
				9/12/2007	290.53	--	--
				12/5/2007	290.63	--	--
				3/19/2008	292.39	--	--
				5/20/2008	292.74	--	--
				6/5/2008	292.59	--	--
				9/18/2008	290.50	--	--
				12/15/2008	290.56	--	--
				3/27/2009	293.01	--	--
MW-3	10/21/2005	326.05	325.65	2/21/2006	293.68	--	--
				6/7/2006	294.74	--	--
				8/22/2006	290.99	--	--
				11/14/2006	290.94	--	--
				2/20/2007	293.99	--	--
				6/5/2007	291.02	--	--
				9/12/2007	290.94	--	--
				12/11/2007	290.88	--	--
				3/19/2008	294.01	--	--
				5/20/2008	294.39	--	--
				6/5/2008	294.20	--	--
				9/18/2008	290.84	--	--
				12/15/2008	290.86	--	--
				3/27/2009	294.78	--	--
MW-4	1/31/2006	329.97	329.67	2/21/2006	292.95	--	--
				6/7/2006	293.91	--	--
				8/22/2006	290.88	--	--
				11/14/2006	290.83	--	--
				2/20/2007	293.13	--	--
				6/5/2007	290.90	--	--
				9/12/2007	290.74	--	--
				12/11/2007	290.67	--	--
				3/19/2008	293.38	--	--
				5/20/2008	293.40	--	--
				6/5/2008	293.29	--	--
				9/18/2008	290.64	--	--
				12/15/2008	290.64	--	--
				3/27/2009	293.57	--	--

TABLE 2
Monitoring Well Groundwater Elevations
First Quarter 2009 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-8	8/15/2006	335.23	333.93	8/22/2006	315.22	--	--
				11/14/2006	315.20	--	--
				2/20/2007	314.70	--	--
				6/5/2007	313.45	--	--
				9/12/2007	312.46	--	--
				12/11/2007	314.35	--	--
				Q1 2008	NM	--	--
				Q2 2008	NM	--	--
				9/18/2008	312.26	--	--
				12/15/2008	313.20	--	--
				3/27/2009	314.39	--	--
MW-9	8/16/2006	333.49	333.07	8/22/2006	290.48	290.52	0.04
				11/14/2006	290.45	290.53	0.08
				2/20/2007	291.16	291.21	0.05
				6/5/2007	290.36	290.38	0.02
				9/12/2007	289.98	290.06	0.08
				12/11/2007	290.16	--	--
				3/20/2007	291.31	--	--
				12/11/2007	290.16	--	--
				5/20/2008	291.74	--	--
				6/5/2008	291.50	--	--
				9/18/2008	290.00	--	--
				12/15/2008	290.07	--	--
				3/27/2009	292.05	--	--
MW-10	9/5/2007	336.55	335.89	9/12/2007	281.03	--	--
				12/12/2007	289.05	--	--
				3/20/2008	291.48	--	--
				5/20/2008	291.80	--	--
				6/5/2008	292.22	--	--
				9/18/2008	290.00	--	--
				12/15/2008	289.98	--	--
				3/27/2009	292.07	--	--
MW-11	9/6/2007	330.29	329.89	9/12/2007	Dry	--	--
				12/12/2007	287.16	--	--
				3/20/2008	292.60	--	--
				5/20/2008	292.83	--	--
				6/5/2008	292.71	--	--
				9/18/2008	290.92	--	--
				12/15/2008	290.53	--	--
				3/27/2009	293.02	--	--

Notes:
NM - Not measured
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 3
Summary of Groundwater Analytical Results
Gasoline Compounds
First Quarter 2009 Groundwater Monitoring Report
Chevron Sunol Pipeline

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[3)]	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[3)]	NS	NS	NS	NS	NS
	Q4 2007[3)]	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[4)]	NS	NS	NS	NS	NS
	Q4 2008[4)]	NS	NS	NS	NS	NS
	3/31/2009	**3,700**	<0.5	**1**	**1**	**44**
MW-2	2/21/2006[2)]	<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[4)]	NS	NS	NS	NS	NS
	Q4 2007[4)]	NS	NS	NS	NS	NS
	3/19/2008	<50	<0.5	<0.5	<0.5	<0.5
	6/5/2008 [2)]	<50 / <50	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5	<0.5 / <0.5
	Q3 2008[4)]	NS	NS	NS	NS	NS
	Q4 2008[4)]	NS	NS	NS	NS	NS
	3/27/2009	<50	<0.5	<0.5	<0.5	<0.5
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[4)]	NS	NS	NS	NS	NS
	Q3 2007[4)]	NS	NS	NS	NS	NS
	Q4 2007[4)]	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[4)]	NS	NS	NS	NS	NS
	Q4 2008[4)]	NS	NS	NS	NS	NS
	3/31/2009	<50	<0.5	<0.5	<0.5	<0.5
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[4)]	NS	NS	NS	NS	NS
	Q3 2007[4)]	NS	NS	NS	NS	NS
	Q4 2007[4)]	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[4)]	NS	NS	NS	NS	NS
	Q4 2008[4)]	NS	NS	NS	NS	NS
	3/31/2009	<50	<0.5	<0.5	<0.5	<0.5

TABLE 3
Summary of Groundwater Analytical Results
Gasoline Compounds
First Quarter 2009 Groundwater Monitoring Report
Chevron Sunol Pipeline

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-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[5)]	NS	NS	NS	NS	NS
	Q2 2008[5)]	NS	NS	NS	NS	NS
	9/18/2008[2)]	**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**
MW-9	Q3 2006[3)]	NS	NS	NS	NS	NS
	11/15/2006	**74,000**	**480**	**12,000**	**2,200**	**17,000**
	Q1 2007[3)]	NS	NS	NS	NS	NS
	Q2 2007[3)]	NS	NS	NS	NS	NS
	Q3 2007[3)]	NS	NS	NS	NS	NS
	12/11/2007	**48,000**	**62**	**5,400**	**1,700**	**12,000**
	Q1 2008[3)]	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**
MW-10	Q3 2007[4)]	NS	NS	NS	NS	NS
	12/14/2007	<50	<0.5	<0.5	<0.5	<0.5
	3/20/2008	<50	**0.9**	<0.5	<0.5	<0.5
	6/6/2008	<50	<0.5	<0.5	<0.5	<0.5
	9/18/2008	<50	<0.5	<0.5	<0.5	<0.5
	12/15/2008	<50	<0.5	<0.5	<0.5	<0.5
	3/27/2009	**52**	<0.5	**0.7**	<0.5	<0.5
MW-11	Q3 2007[4)]	NS	NS	NS	NS	NS
	12/14/2007	<50	<0.5	<0.5	<0.5	<0.5
	3/20/2008[2)]	<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
	9/18/2008	<50	<0.5	<0.5	<0.5	<0.5
	12/15/2008	<50	<0.5	<0.5	<0.5	<0.5
	3/27/2009	<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

TABLE 3
Summary of Groundwater Analytical Results
Gasoline Compounds
First Quarter 2009 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date	Gasoline Compounds				
		TPH-GRO	Benzene	Toluene	Ethylbenzene	Xylenes
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
ESL[1)]		100	1	40	30	20

Notes:
Bold values exceed laboratory reporting limits.
J qualifier - 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) Environmental Screening Levels (ESLs) for groundwater as a current or potential source of drinking water were obtained from the San Francisco Regional Water Quality Control Board (RWQCB) Interim Final: Table A, May 2008.
2) Both sample and duplicate concentrations from well location are displayed.
3) Sample not collected during quarterly monitoring due to the presence of measurable free product.
4) Sample not collected during quarterly monitoring because well is not hydraulically connected to unconfined water-bearing zone.
5) Sample not collected due to extreme overhead hazards posed by dead trees on the 80-90% grade directly uphill from the sampling location.

TABLE 4
Summary of Groundwater Analytical Results
Geochemical Indicators and Other Parameters
First Quarter 2009 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-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
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
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	6.60	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
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
MW-5	6/8/2006	0.19	12.05	<0.25	0.029	0.12	<0.052	71.3	0.004	7.24	502	313	2.6
	8/24/2006	NR[3]	-151.92	<0.25	0.021	0.28	<0.052	72.2	0.0054 J	7.32	506	320	<0.46
	11/16/2006	0.08	-48.11	<0.25	0.02 J	0.28	<0.052	73.8 J	0.005	7.45	513	320	<0.46
	Q1 2009	Monitoring well destroyed 6/23/09											
MW-6	6/7/2006	NM[2]	NM[2]	<0.25	0.599	12.6	<0.052	41.6	<0.002	NM[2]	531	364	3.7
	8/22/2006	NM[2]	NM[2]	<0.25	0.6	5.5	<0.052	36.9	5.8	NM[2]	553	375	<0.46
	11/16/2006	0.04	-71	<0.25	0.203 J	0.7	<0.052	38.3 J	5.7	7.92	541	366	<0.46
	Q1 2009	Monitoring well destroyed 6/23/09											
MW-7	6/8/2006	NM[2]	NM[2]	<0.25	0.706	13.4	<0.052	70.4	0.022	NM[2]	542	310	5.9
	8/22/2006	NM[2]	NM[2]	<0.25	0.16	0.91	<0.052	75.7	0.094	NM[2]	534	335	<0.46
	11/16/2006	0.06	-24	<0.25	0.376	5.8	<0.052	77.6 J	0.061	7.42	533	358	<0.46
	Q1 2009	Monitoring well destroyed 6/23/09											
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
MW-9	Q3 2006	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]	NM[4]
	11/15/2006	3.01[6]	4	<0.25 UJ	4.41	1.2	0.496	29.5	0.009	6.92	836	657	<0.46
	3/31/2009	3.35	-179	0.39J	3.2	0.099	<0.052	60.5	0.012	6.59	632	419	<0.46
MW-10	3/27/2009	3.65	48	8.2	0.367	0.21J	<0.052	155	0.28	6.69	1,200	645	<0.46
MW-11	3/27/2009	5.86	53	15.3	0.114	0.058J	<0.052	134	0.064	6.61	742	365	<0.46

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

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 loaction.
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-paramter meter from a bailer.

Appendix A
Groundwater Sampling Forms

URS

Horriba
03/31/09

Low-Flow System
ISI Low-Flow Log

Project Information:

Operator Name	Rachel Naccarati/ Jacob Henry
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	ES90 Purger - Whaler
Tubing Type	
Tubing Diameter	0.38 [in]
Tubing Length	41.3 [ft]
Pump placement from TOC	38.3 [ft]

Well Information:

Well Id	MW-1
Well diameter	4 [in]
Well total depth	39.3 [ft]
Depth to top of screen	29.3 [ft]
Screen length	10 [ft]
Depth to Water	35.24 [ft]

Pumping information:

Final pumping rate	250 mL/min
Flowcell volume	NM
Calculated Sample Rate	NM
Sample rate	NM
Stabilized drawdown	NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Readings	13:56	18.5	6.84	1.14	0.0	3.52	-140
	13:59	18.2	6.70	1.13	0.0	2.89	-164
	14:02	18.1	6.66	1.14	0.0	2.75	-173
	14:05	18.1	6.64	1.12	0.0	2.62	-167
	14:08	18.2	6.63	1.11	0.0	2.62	-164
	14:11	18.2	6.62	1.10	0.0	2.52	-156
	14:14	18.3	6.62	1.10	0.0	2.49	-152
	14:17	18.4	6.61	1.10	0.0	2.45	-147
	14:20	Sample MW-1					
Variance in last 3 readings		0.00	-0.01	-0.01	0.00	-0.10	8.00
		0.10	0.00	0.00	0.00	-0.03	4.00
		0.10	-0.01	0.00	0.00	-0.04	5.00

Notes:

Start pumping at 1353
Initial depth to water = 35.24 ft
Total Volume Purged = 2.5 gallons
Sample collected at 1420
Odor
Turbidity function not properly operating

URS

Horriba
03/27/09

Low-Flow System
ISI Low-Flow Log

Project Information:

Operator Name	Rachel Naccarati/ Jacob Henry
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	ES90 Purger - Whaler
Tubing Type	
Tubing Diameter	0.38 [in]
Tubing Length	31.3 [ft]
Pump placement from TOC	27.3 [ft]

Well Information:

Well Id	MW-2
Well diameter	4 [in]
Well total depth	28.3 [ft]
Depth to top of screen	23.3 [ft]
Screen length	15 [ft]
Depth to Water	31.14 [ft]

Pumping information:

Final pumping rate	250 mL/min
Flowcell volume	NM
Calculated Sample Rate	NM
Sample rate	NM
Stabilized drawdown	NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Readings	14:05	19.0	6.96	1.25	32.9	0.00	-135
	14:08	17.9	6.91	1.26	27.6	7.20	-154
	14:11	17.6	6.89	1.25	0.0	5.63	-152
	14:14	17.7	6.78	1.18	0.0	5.17	-130
	14:17	17.8	6.71	1.16	23.8	5.05	-124
	14:20	17.9	6.68	1.13	75.3	4.60	-116
	14:23	17.9	6.64	1.14	128.0	5.22	-106
	14:26	18.0	6.63	1.13	123.0	5.32	-102
	14:29	18.3	6.62	1.12	120.0	5.42	-94
	14:32	18.8	6.62	1.11	113.0	5.47	-86
	14:35	Sampled MW-2					
Variance in last 3 readings		0.1	-0.01	-0.01	-5.0	0.10	4
		0.3	-0.01	-0.01	-3.0	0.10	8
		0.5	0.00	-0.01	-7.0	0.05	8

Notes:
Start pumping at 1400
Initial depth to water = 31.14 ft
Total Volume Purged = 3.5 gallons
Sample collected at 1435
Turbidity function not properly operating

URS

Horriba 03/31/09

Low-Flow System
ISI Low-Flow Log

Project Information:

Operator Name	Rachel Naccarati/ Jacob Henry
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	ES90 Purger - Whaler
Tubing Type	
Tubing Diameter	0.38 [in]
Tubing Length	39.3 [ft]
Pump placement from TOC	35.3 [ft]

Well Information:

Well Id	MW-3
Well diameter	4 [in]
Well total depth	36.3 [ft]
Depth to top of screen	21.3 [ft]
Screen length	15 [ft]
Depth to Water	30.87 [ft]

Pumping information:

Final pumping rate	500 mL/min
Flowcell volume	
Calculated Sample Rate	
Sample rate	
Stabilized drawdown	

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Last 5 Readings	10:05	14.9	6.98	0.932	51.1	0.0	54
	10:08	14.9	6.86	0.932	53.4	0.0	55
	10:11	14.9	6.76	0.932	46.8	0.0	53
	10:14	14.8	6.74	0.931	61.8	0.0	51
	10:17	14.8	6.75	0.930	75.5	0.0	50
	10:20	14.7	6.73	0.931	77.5	0.0	49
	10:23	14.7	6.75	0.930	72.1	0.0	48
	10:26	Sampled MW-3					
Variance in last 3 readings		0.0	0.01	0.00	13.7	0.0	-1
		-0.1	-0.02	0.00	2.0	0.0	-1
		0.0	0.02	0.00	-5.4	0.0	-1

Notes:
Starting pumping at 1003
Initial depth to water = 30.87
Total Volume Purged = 5 gallons
Sample collected at 1026
Turbidity function not properly operating

URS

Horriba
03/31/09

Low-Flow System
ISI Low-Flow Log

Project Information:

Operator Name	Rachel Naccarati/ Jacob Henry
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	ES90 Purger - Whaler
Tubing Type	
Tubing Diameter	0.38 [in]
Tubing Length	42.7 [ft]
Pump placement from TOC	39.7 [ft]

Well Information:

Well Id	MW-4
Well diameter	4 [in]
Well total depth	40.7 [ft]
Depth to top of screen	30.7 [ft]
Screen length	10 [ft]
Depth to Water	36.10 [ft]

Pumping information:

Final pumping rate	400 mL/min
Flowcell volume	NM
Calculated Sample Rate	NM
Sample rate	NM
Stabilized drawdown	NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Readings	10:52	16.3	6.82	1.19	0.0	6.00	-6
	10:55	16.5	6.70	1.20	0.0	4.95	-15
	10:58	16.8	6.66	1.20	71.7	4.51	-13
	11:01	16.8	6.65	1.20	75.5	4.21	-8
	11:04	16.8	6.64	1.19	87.3	4.09	-5
	11:07	16.9	6.64	1.17	95.4	4.00	-1
	11:10	16.9	6.64	1.15	102.0	3.96	5
	11:15	Sampled MW-4					
Variance in last 3 readings		0.0	-0.01	-0.01	11.8	-0.12	3
		0.1	0.00	-0.02	8.1	-0.09	4
		0.0	0.00	-0.02	6.6	-0.04	6

Notes:
Starting pumping at 1045
Initial depth to water = 36.10 ft
Total Volume Purged = 3.5 gallons
Sample collected at 1115
Turbidity function not operating properly

URS

Bailer

03/27/09 ISI Low-Flow Log

Project Information:		**Pump Information:**	
Operator Name	Rachel Naccarati/ Jacob Henry	Pump Model/Type	Bailer
Company Name	URS	Tubing Type	NA
Project Name	Chevron Sunol Pipeline	Tubing Diameter	NA
Site Name	Sunol	Tubing Length	NA
		Pump placement from TOC	NA

Well Information:		**Pumping information:**	
Well Id	MW-8	Final pumping rate	NA
Well diameter	2 [in]	Flowcell volume	NA
Well total depth	24.5 [ft]	Calculated Sample Rate	NA
Depth to top of screen	14.5 [ft]	Sample rate	NA
Screen length	10 [ft]	Stabilized drawdown	NA
Depth to Water	19.54 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Readings	1 gallon (10:52)	19.2	6.20	0.859	160	5.33	-124
	2 gallons (10:56)	19.4	6.58	0.851	422	7.11	-116
	3 gallons (10:59)	19.2	6.74	0.850	616	6.88	-113
	13:10	Sampled MW-8					
	13:15	Sampled MW-X					
Variance in last 3 readings		0.20	0.38	-0.008	262	1.78	8
		-0.20	0.16	-0.001	194	-0.23	3

Notes:
Starting bailing at 1050
Initial depth to water = 19.54 ft
Total Volume Purged = 5 gallons
Sample collected at 1310
Let the well recharge after bailing 3 well volumes
Odor
Dary gray tint to water/high turbidity
Turbidity function not properly operating

URS

Horriba 03/31/09

Low-Flow System
ISI Low-Flow Log

Project Information:

Operator Name	Rachel Naccarati/ Jacob Henry
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	ES90 Purger - Whaler
Tubing Type	
Tubing Diameter	0.38 [in]
Tubing Length	48.0 [ft]
Pump placement from TOC	45.0 [ft]

Well Information:

Well Id	MW-9
Well diameter	2 [in]
Well total depth	46.0 [ft]
Depth to top of screen	36.0 [ft]
Screen length	10 [ft]
Depth to Water	41.02 [ft]

Pumping information:

Final pumping rate	500 mL/min
Flowcell volume	NM
Calculated Sample Rate	NM
Sample rate	NM
Stabilized drawdown	NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Last 5 Readings	12:50	18.3	6.65	1.08	0	7.18	196
	12:53	18.5	6.60	1.07	17.6	6.67	-195
	12:56	18.4	6.58	1.05	105.0	6.11	-194
	12:59	18.3	6.58	1.06	118.1	5.95	-194
	13:02	18.3	6.58	1.05	111.0	5.58	-192
	13:05	18.3	6.59	1.05	114.0	5.12	-190
	13:08	18.2	6.58	1.05	116.0	4.86	-189
	13:11	18.3	6.59	1.05	98.2	4.66	-187
	13:14	18.3	6.59	1.06	101.0	4.23	-185
	13:17	18.3	6.59	1.06	91.5	4.03	-184
	13:20	18.3	6.59	1.06	83.4	3.72	-182
	13:23	18.3	6.59	1.06	69.2	3.52	-180
	13:26	18.3	6.59	1.06	60.0	3.35	-179
	13:30	Sample MW-9					
Variance in last 3 readings		0.0	0.00	0.00	-8.1	-0.31	2
		0.0	0.00	0.00	-14.2	-0.20	2
		0.0	0.00	0.00	-9.2	-0.17	1

Notes:

Starting pumping at 1247
Initial depth to water = 41.02 ft
Total Volume Purged = 6 gallons
Sample collected at 1330
Odor
Turbidity function not properly operating

URS

Horriba 03/27/09

Low-Flow System
ISI Low-Flow Log

Project Information:

Operator Name	Rachel Naccarati/ Jacob Henry
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	ES90 Purger - Whaler
Tubing Type	
Tubing Diameter	0.38 [in]
Tubing Length	57.3 [ft]
Pump placement from TOC	54.3 [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	43.82 [ft]

Pumping information:

Final pumping rate	400 mL/min
Flowcell volume	NM
Calculated Sample Rate	NM
Sample rate	NM
Stabilized drawdown	NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Last 5 Readings	12:25	19.0	6.40	2.08	0.0	4.11	69
	12:28	18.3	6.60	2.07	20.0	3.78	46
	12:31	18.1	6.68	2.07	32.5	3.78	39
	12:34	18.1	6.72	2.06	45.3	3.91	37
	12:37	18.1	6.72	2.06	51.8	3.92	36
	12:40	18.3	6.73	2.04	69.7	3.74	37
	12:43	18.2	6.71	1.98	89.7	3.66	43
	12:46	18.2	6.69	1.96	100.0	3.67	47
	12:49	18.2	6.69	1.96	87.9	3.65	48
	12:52	Sampled MW-10					
Variance in last 3 readings		-0.1	-0.02	-0.06	20.0	-0.08	6
		0.0	-0.02	-0.02	10.3	0.01	4
		0.0	0.00	0.00	-12.1	-0.02	1

Notes:
Starting pumping at 1223
Initial depth to water = 43.82 ft
Total Volume Purged = 2.5 gallons
Sample collected at 1252
Turbidity function not properly operating

URS

Horriba
03/27/09

Low-Flow System
ISI Low-Flow Log

Project Information:

Operator Name	Rachel Naccarati/ Jacob Henry
Company Name	URS
Project Name	Chevron Sunol Pipeline
Site Name	Sunol

Pump Information:

Pump Model/Type	ES90 Purger - Whaler
Tubing Type	
Tubing Diameter	0.38 [in]
Tubing Length	49.0 [ft]
Pump placement from TOC	46.0 [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	36.87 [ft]

Pumping information:

Final pumping rate	250 mL/min
Flowcell volume	NM
Calculated Sample Rate	NM
Sample rate	NM
Stabilized drawdown	NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Last 5 Readings	11:25	18.0	6.78	2.34	252.0	4.43	-9
	11:28	17.9	6.73	2.32	145.0	4.15	1
	11:31	17.8	6.68	2.09	62.8	4.02	26
	11:34	17.7	6.65	1.43	89.3	5.40	47
	11:37	17.9	6.61	1.24	42.3	5.93	51
	11:40	18.3	6.60	1.20	35.2	6.05	52
	11:43	18.4	6.60	1.20	37.2	6.02	52
	11:46	18.4	6.60	1.21	34.2	5.99	53
	11:49	18.5	6.61	1.21	13.2	5.86	53
	11:50	Sample MW-11					
Variance in last 3 readings		0.1	0.00	0.00	2.0	-0.03	0
		0.0	0.00	0.01	-3.0	-0.03	1
		0.1	0.01	0.00	-21.0	-0.13	0

Notes:
Initial depth to water = 36.87 ft
Total Volume Purged = 4.5 gallons
Sample collected at 1150
Turbidity function not properly operating

Appendix B
Laboratory Analytical Results

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

713-432-3335

Prepared by:

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

April 09, 2009

SAMPLE GROUP

The sample group for this submittal is 1138123. Samples arrived at the laboratory on Saturday, March 28, 2009. The PO# for this group is 0015013514 and the release number is COSGRAY.

Client Description	Lancaster Labs Number
MW-2 Grab Water	5634662
MW-2_Filtered Grab Water	5634663
MW-8 Grab Water	5634664
MW-8_Filtered Grab Water	5634665
MW-10 Grab Water	5634666
MW-10_Filtered Grab Water	5634667
MW-11 Grab Water	5634668
MW-11_Filtered Grab Water	5634669
MW-X Grab Water	5634670
Trip_Blank NA Water	5634672

ELECTRONIC COPY TO	URS	Attn: Joe Morgan
ELECTRONIC COPY TO	URS	Attn: Rachel Naccarati
ELECTRONIC COPY TO	URS	Attn: Jacob Henry

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Analysis Report

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,

Michele M. Turner

Michele M. Turner
Director

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5634662 **Group No. 1138123**
CA

MW-2 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-2

Collected: 03/27/2009 14:35 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	N.D.	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
SW-846 8015B modified	**GC Miscellaneous**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	N.D.	10	1
	Due to interfering peaks on the chromatogram, the value reported for methane represents the lowest reporting limits attainable.				
SW-846 6010B	**Metals**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	17.2	0.84	1
EPA 300.0	**Wet Chemistry**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	18,200	500	10
00228	Sulfate	14808-79-8	65,000	1,500	5
SM20 2320 B	**Wet Chemistry**		**ug/l as CaCO3**	**ug/l as CaCO3**	
00202	Alkalinity to pH 4.5	n.a.	347,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 2540 C	**Wet Chemistry**		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	642,000	19,400	1
SM20 3500 Fe B modified	**Wet Chemistry**		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	36	10	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090971AA	04/07/2009 17:24	Ginelle L Feister	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634662

Group No. 1138123
CA

MW-2 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-2

Collected: 03/27/2009 14:35 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN02

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090971AA	04/07/2009 17:24	Ginelle L Feister	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09090B20A	04/01/2009 22:13	Jennifer B Werner	1
01146	GC VOA Water Prep	SW-846 5030B	1	09090B20A	04/01/2009 22:13	Jennifer B Werner	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	090900000A	04/02/2009 09:37	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	090931848004	04/06/2009 22:26	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848004	04/03/2009 20:20	Mirit S Shenouda	1
00368	Nitrate Nitrogen	EPA 300.0	1	09087196102B	03/29/2009 12:50	Ashley M Heckman	10
00228	Sulfate	EPA 300.0	1	09087196102B	03/28/2009 23:08	Ashley M Heckman	5
00202	Alkalinity to pH 4.5	SM20 2320 B	1	09091020201A	04/01/2009 17:54	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	09091020201A	04/01/2009 17:54	Geraldine C Smith	1
00212	Total Dissolved Solids	SM20 2540 C	1	09092021201A	04/02/2009 09:36	Susan E Hibner	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	09091834401A	04/01/2009 09:30	Michelle L Lalli	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634663

Group No. 1138123
CA

MW-2_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-2

Collected: 03/27/2009 14:35 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 6010B	**Metals Dissolved**		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	52.2	1

General Sample Comments

State of California Lab Certification No. 2116
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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	090931848004	04/06/2009 23:35	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848004	04/03/2009 20:20	Mirit S Shenouda	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634664 **Group No. 1138123**
CA

MW-8 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-8

Collected: 03/27/2009 13:10 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	1,500	5	10
06053	Ethylbenzene	100-41-4	1,200	5	10
06053	Toluene	108-88-3	7,200	50	100
06053	Xylene (Total)	1330-20-7	4,700	5	10
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	29,000	500	10
SW-846 8015B modified	**GC Miscellaneous**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	130	10	1
	Due to interfering peaks on the chromatogram, the value reported for methane represents the lowest reporting limits attainable.				
SW-846 6010B	**Metals**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	553	0.84	1
EPA 300.0	**Wet Chemistry**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	270	250	5
00228	Sulfate	14808-79-8	15,500	1,500	5
SM20 2320 B	**Wet Chemistry**		**ug/l as CaCO3**	**ug/l as CaCO3**	
00202	Alkalinity to pH 4.5	n.a.	467,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 2540 C	**Wet Chemistry**		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	639,000	19,400	1
SM20 3500 Fe B modified	**Wet Chemistry**		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	2,500	100	10

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090971AA	04/07/2009 17:49	Ginelle L Feister	10

Lancaster Laboratories Sample No. WW 5634664

Group No. 1138123
CA

MW-8 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-8

Collected: 03/27/2009 13:10 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN08

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090971AA	04/07/2009 18:13	Ginelle L Feister	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090971AA	04/07/2009 17:49	Ginelle L Feister	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D090971AA	04/07/2009 18:13	Ginelle L Feister	100
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09090B20A	04/01/2009 23:57	Jennifer B Werner	10
01146	GC VOA Water Prep	SW-846 5030B	1	09090B20A	04/01/2009 23:57	Jennifer B Werner	10
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	090900000A	04/02/2009 09:49	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	090931848004	04/06/2009 23:40	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848004	04/03/2009 20:20	Mirit S Shenouda	1
00368	Nitrate Nitrogen	EPA 300.0	1	09087196102B	03/28/2009 23:21	Ashley M Heckman	5
00228	Sulfate	EPA 300.0	1	09087196102B	03/28/2009 23:21	Ashley M Heckman	5
00202	Alkalinity to pH 4.5	SM20 2320 B	1	09091020201A	04/01/2009 17:54	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	09091020201A	04/01/2009 17:54	Geraldine C Smith	1
00212	Total Dissolved Solids	SM20 2540 C	1	09092021201A	04/02/2009 09:36	Susan E Hibner	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	09091834401A	04/01/2009 09:30	Michelle L Lalli	10

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Analysis Report

Lancaster Laboratories Sample No. WW 5634665

Group No. 1138123
CA

MW-8_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-8

Collected: 03/27/2009 13:10 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
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CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 6010B	**Metals Dissolved**		**ug/l**	**ug/l**	
01754	Iron	7439-89-6	N.D.	52.2	1

General Sample Comments

State of California Lab Certification No. 2116
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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	090931848004	04/06/2009 23:45	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848004	04/03/2009 20:20	Mirit S Shenouda	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634666 **Group No. 1138123**
CA

MW-10 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-10

Collected: 03/27/2009 12:52 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	0.7	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	52	50	1
SW-846 8015B modified	**GC Miscellaneous**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	280	10	1
	Due to interfering peaks on the chromatogram, the value reported for methane represents the lowest reporting limits attainable.				
SW-846 6010B	**Metals**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	367	0.84	1
EPA 300.0	**Wet Chemistry**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	8,200	250	5
00228	Sulfate	14808-79-8	155,000	6,000	20
SM20 2320 B	**Wet Chemistry**		**ug/l as CaCO3**	**ug/l as CaCO3**	
00202	Alkalinity to pH 4.5	n.a.	645,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 2540 C	**Wet Chemistry**		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	1,200,000	38,800	1
SM20 3500 Fe B modified	**Wet Chemistry**		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	210	10	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090971AA	04/07/2009 18:38	Ginelle L Feister	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634666

Group No. 1138123
CA

MW-10 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-10

Collected: 03/27/2009 12:52 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN10

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090971AA	04/07/2009 18:38	Ginelle L Feister	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09090B20A	04/01/2009 22:56	Jennifer B Werner	1
01146	GC VOA Water Prep	SW-846 5030B	1	09090B20A	04/01/2009 22:56	Jennifer B Werner	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	090900000A	04/02/2009 10:02	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	090931848004	04/06/2009 23:49	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848004	04/03/2009 20:20	Mirit S Shenouda	1
00368	Nitrate Nitrogen	EPA 300.0	1	09087196102B	03/28/2009 23:34	Ashley M Heckman	5
00228	Sulfate	EPA 300.0	1	09087196102B	04/02/2009 06:32	Ashley M Heckman	20
00202	Alkalinity to pH 4.5	SM20 2320 B	1	09091020201A	04/01/2009 17:54	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	09091020201A	04/01/2009 17:54	Geraldine C Smith	1
00212	Total Dissolved Solids	SM20 2540 C	1	09092021201A	04/02/2009 09:36	Susan E Hibner	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	09091834401A	04/01/2009 09:30	Michelle L Lalli	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634667

Group No. 1138123
CA

MW-10_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-10

Collected: 03/27/2009 12:52 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 6010B	**Metals Dissolved**		**ug/l**	**ug/l**	
01754	Iron	7439-89-6	N.D.	52.2	1

General Sample Comments

State of California Lab Certification No. 2116
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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	090931848004	04/06/2009 23:54	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848004	04/03/2009 20:20	Mirit S Shenouda	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634668 **Group No. 1138123**
CA

MW-11 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-11

Collected: 03/27/2009 11:50 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	N.D.	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
SW-846 8015B modified	**GC Miscellaneous**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	64	10	1
	Due to interfering peaks on the chromatogram, the value reported for methane represents the lowest reporting limits attainable.				
SW-846 6010B	**Metals**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	114	0.84	1
EPA 300.0	**Wet Chemistry**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	15,300	500	10
00228	Sulfate	14808-79-8	134,000	3,000	10
SM20 2320 B	**Wet Chemistry**		**ug/l as CaCO3**	**ug/l as CaCO3**	
00202	Alkalinity to pH 4.5	n.a.	365,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 2540 C	**Wet Chemistry**		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	742,000	19,400	1
SM20 3500 Fe B modified	**Wet Chemistry**		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	58	10	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090971AA	04/07/2009 19:02	Ginelle L Feister	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634668

Group No. 1138123
CA

MW-11 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-11

Collected: 03/27/2009 11:50 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN11

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090971AA	04/07/2009 19:02	Ginelle L Feister	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09091A08A	04/01/2009 19:03	Jennifer B Werner	1
01146	GC VOA Water Prep	SW-846 5030B	1	09091A08A	04/01/2009 19:03	Jennifer B Werner	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	090900000A	04/02/2009 10:14	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	090931848004	04/07/2009 00:12	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848004	04/03/2009 20:20	Mirit S Shenouda	1
00368	Nitrate Nitrogen	EPA 300.0	1	09087196102B	03/29/2009 11:27	Ashley M Heckman	10
00228	Sulfate	EPA 300.0	1	09087196102B	04/02/2009 06:46	Ashley M Heckman	10
00202	Alkalinity to pH 4.5	SM20 2320 B	1	09091020201A	04/01/2009 17:54	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	09091020201A	04/01/2009 17:54	Geraldine C Smith	1
00212	Total Dissolved Solids	SM20 2540 C	1	09092021201A	04/02/2009 09:36	Susan E Hibner	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	09091834401A	04/01/2009 09:30	Michelle L Lalli	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634669

Group No. 1138123
CA

MW-11_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-11

Collected: 03/27/2009 11:50 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 6010B	**Metals Dissolved**		**ug/l**	**ug/l**	
01754	Iron	7439-89-6	N.D.	52.2	1

General Sample Comments

State of California Lab Certification No. 2116
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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	090931848004	04/07/2009 00:17	John P Hook	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848004	04/03/2009 20:20	Mirit S Shenouda	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5634670 **Group No. 1138123**
CA

MW-X Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-X

Collected: 03/27/2009 13:15 by JH

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUNFD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	1,200	5	10
06053	Ethylbenzene	100-41-4	1,100	5	10
06053	Toluene	108-88-3	4,500	50	100
06053	Xylene (Total)	1330-20-7	4,100	5	10
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	29,000	500	10

Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 6.

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090971AA	04/07/2009 19:27	Ginelle L Feister	10
06053	BTEX by 8260B	SW-846 8260B	1	D090971AA	04/07/2009 19:51	Ginelle L Feister	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090971AA	04/07/2009 19:27	Ginelle L Feister	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D090971AA	04/07/2009 19:51	Ginelle L Feister	100
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09091A08A	04/01/2009 19:27	Jennifer B Werner	10
01146	GC VOA Water Prep	SW-846 5030B	1	09091A08A	04/01/2009 19:27	Jennifer B Werner	10

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Analysis Report

Lancaster Laboratories Sample No. WW 5634672

Group No. 1138123
CA

Trip_Blank NA Water
NA URSO
Sunol Pipeline SL0600100443 Trip_Blank

Collected: 03/27/2009

Account Number: 11875

Submitted: 03/28/2009 10:00
Reported: 04/09/2009 at 16:49
Discard: 05/10/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUNTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	N.D.	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090971AA	04/07/2009 20:15	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090971AA	04/07/2009 20:15	Ginelle L Feister	1

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Analysis Report

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1138123
Reported: 04/09/09 at 04:49 PM

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D090971AA	Sample number(s): 5634662,5634664,5634666,5634668,5634670,5634672							
Benzene	N.D.	0.5	ug/l	97		80-116		
Ethylbenzene	N.D.	0.5	ug/l	98		80-113		
Toluene	N.D.	0.5	ug/l	98		80-115		
Xylene (Total)	N.D.	0.5	ug/l	98		81-114		
Batch number: 09090B20A	Sample number(s): 5634662,5634664,5634666							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	109	75-135	0	30
Batch number: 09091A08A	Sample number(s): 5634668,5634670							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	118	118	75-135	0	30
Batch number: 090900000A	Sample number(s): 5634662,5634664,5634666,5634668							
Methane	N.D.	10.	ug/l	102		80-120		
Batch number: 090931848004	Sample number(s): 5634662-5634669							
Iron	N.D.	52.2	ug/l	98		90-112		
Manganese	N.D.	0.84	ug/l	102		90-110		
Batch number: 09087196102B	Sample number(s): 5634662,5634664,5634666,5634668							
Nitrate Nitrogen	N.D.	50.	ug/l	104		90-110		
Sulfate	N.D.	300.	ug/l	102		89-110		
Batch number: 09091020201A	Sample number(s): 5634662,5634664,5634666,5634668							
Alkalinity to pH 4.5	N.D.	460.	ug/l as CaCO3	100		98-103		
Batch number: 09091834401A	Sample number(s): 5634662,5634664,5634666,5634668							
Ferrous Iron	N.D.	10.	ug/l	103		92-105		
Batch number: 09092021201A	Sample number(s): 5634662,5634664,5634666,5634668							
Total Dissolved Solids	N.D.	9,700.	ug/l	109		80-120		

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: D090971AA	Sample number(s): 5634662,5634664,5634666,5634668,5634670,5634672 UNSPK: P633877								
Benzene	106	102	80-126	3	30				
Ethylbenzene	108	104	77-125	4	30				

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

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1138123
Reported: 04/09/09 at 04:49 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
Toluene	108	105	80-125	3	30				
Xylene (Total)	106	105	79-125	1	30				
Batch number: 09090B20A	Sample number(s): 5634662,5634664,5634666 UNSPK: P634587								
TPH-GRO N. CA water C6-C12	117		63-154						
Batch number: 09091A08A	Sample number(s): 5634668,5634670 UNSPK: P635579								
TPH-GRO N. CA water C6-C12	118		63-154						
Batch number: 090900000A	Sample number(s): 5634662,5634664,5634666,5634668 UNSPK: P635146								
Methane	100 (2)	267 (2)	35-157	19	20				
Batch number: 090931848004	Sample number(s): 5634662-5634669 UNSPK: 5634662 BKG: 5634662								
Iron	102	103	75-125	1	20	N.D.	N.D.	0 (1)	20
Manganese	101	102	75-125	1	20	17.2	17.0	1 (1)	20
Batch number: 09087196102B	Sample number(s): 5634662,5634664,5634666,5634668 UNSPK: P632489 BKG: P632489								
Nitrate Nitrogen	102		90-110			N.D.	N.D.	0 (1)	20
Sulfate	91		90-110			110,000	109,000	1	20
Batch number: 09091020201A	Sample number(s): 5634662,5634664,5634666,5634668 UNSPK: P633227 BKG: P633227								
Alkalinity to pH 4.5	101	100	64-130	1	2	178,000	179,000	1	4
Alkalinity to pH 8.3						N.D.	N.D.	0 (1)	4
Batch number: 09091834401A	Sample number(s): 5634662,5634664,5634666,5634668 UNSPK: 5634664 BKG: 5634664								
Ferrous Iron	100	87	66-130	8*	6	2,500	2,800	12* (1)	10
Batch number: 09092021201A	Sample number(s): 5634662,5634664,5634666,5634668 UNSPK: P635510 BKG: P635311								
Total Dissolved Solids	101	104	54-143	1	12	1,250,000	1,240,000	1	9

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: Volatile Headspace Hydrocarbon
Batch number: 090900000A

	Propene
5634662	76
5634664	82
5634666	58
5634668	75
Blank	109
LCS	111
MS	74
MSD	61
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.

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1138123
Reported: 04/09/09 at 04:49 PM

Surrogate Quality Control

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09090B20A

	Trifluorotoluene-F
5634662	98
5634664	106
5634666	97
Blank	98
LCS	125
LCSD	126
MS	122
Limits:	63-135

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09091A08A

	Trifluorotoluene-F
5634668	110
5634670	117
Blank	109
LCS	120
LCSD	124
MS	120
Limits:	63-135

Analysis Name: BTEX by 8260B
Batch number: D090971AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5634662	89	98	98	99
5634664	85	96	97	100
5634666	87	97	98	98
5634668	87	98	97	97
5634670	85	95	99	102
5634672	89	100	100	101
Blank	87	96	97	99
LCS	87	98	98	101
MS	90	100	100	104
MSD	89	99	99	104
Limits:	80-116	77-113	80-113	78-113

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

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 11875 Group# 1138123 Sample # 5634662-72

COC # 199868

Please print. Instructions on reverse side correspond with circled numbers. Cooler temp 1.2-2.5°C

For Lab Use Only
FSC:
SCR#:

(1) Client: CPL Acct. #:
Project Name/#: Sunol Spill PWSID #:
Project Manager: Joe Morgan P.O.#:
Sampler: Jacob Henry / Rachel Naccarato Quote #:
Name of state where samples were collected: CA

(4) Matrix (Potable / NPDES — Check if Applicable)

(5) Analyses Requested — Preservation Codes

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

(6) Temperature of samples upon receipt (if requested)

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	Soil	Water	Other	Total # of Containers	TPH-GRO by N. CA LUFT GRO	BTEX by EPA Method 8260B	Nitrate, Sulfate by EPA Method 300.0	Total Manganese & Dissolved Iron 6010B	Ferrous Iron by SM20 Method 3500-FE B Mod	Methane by EPA Method 8015B Mod	Alkalinity, including by breakdown by EPA Method 310.1	TDS by EPA Method 160.1	Remarks
									H	H		N	H				
MW-2	3/27/09	1435	X			X			X	X	X	X	X	X	X	X	
MW-8		1310	X			X			X	X	X	X	X	X	X	X	
MW-10		1252	X			X			X	X	X	X	X	X	X	X	
MW-11		1150	X			X			X	X	X	X	X	X	X	X	
MW-X		1315	X			X			X	X							

(7) **Turnaround Time Requested** (TAT) (please circle): (Normal) Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: Standard
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg) TX TRRP-13
Type II (Tier II) MA MCP CT RCP
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)

SDG Complete? Yes No

Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
	3/27/09	1700	A. Salazar 27MAR09 1700		
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	3/28/09	1000

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

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

< 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.

U.S. EPA data qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

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

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

713-432-3335

Prepared by:

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

April 15, 2009

SAMPLE GROUP

The sample group for this submittal is 1138601. Samples arrived at the laboratory on Wednesday, April 01, 2009. The PO# for this group is 0015013514 and the release number is COSGRAY.

Client Description	Lancaster Labs Number
MW-3 Grab Water	5636816
MW-3_Filtered Grab Water	5636817
MW-4 Grab Water	5636818
MW-4_Filtered Grab Water	5636819
MW-9 Grab Water	5636820
MW-9_Filtered Grab Water	5636821
MW-1 Grab Water	5636822
MW-1_Filtered Grab Water	5636823
Stream Grab Water	5636824
Trip Blank NA Water	5636825

ELECTRONIC COPY TO	URS	Attn: Joe Morgan
ELECTRONIC COPY TO	URS	Attn: Rachel Naccarati
ELECTRONIC COPY TO	URS	Attn: Jacob Henry

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Analysis Report

Questions? Contact your Client Services Representative
Elizabeth A Leonhardt at (510) 232-8894

Respectfully Submitted,

Robert Heisey
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5636816 **Group No. 1138601**
CA

MW-3 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-3

Collected: 03/31/2009 10:26 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN03

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	N.D.	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
SW-846 8015B modified	**GC Miscellaneous**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	N.D.	10	1
	Due to interfering peaks on the chromatogram, the value reported for methane represents the lowest reporting limits attainable.				
SW-846 6010B	**Metals**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	1.7	0.84	1
EPA 300.0	**Wet Chemistry**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	22,200	250	5
	This sample was originally analyzed within the 48 hour holding time for nitrate-nitrogen, however the continuing calibration standard bracketing the sample was not within specification. The analysis was repeated on 04/07/2009. The continuing calibration standard bracketing the sample on the second trial was within specification. This sample was also above calibratiion range when analyzed within holding time. The confirming trial on 04/07/2009 was repeated at a higher dilution which was within calibration range. The initial trial is being reported because it was within holding time. The confirming trial result was 21,400 ug/l.				
00228	Sulfate	14808-79-8	57,700	1,500	5
SM20 2320 B	**Wet Chemistry**		**ug/l as CaCO3**	**ug/l as CaCO3**	
00202	Alkalinity to pH 4.5	n.a.	320,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 2540 C	**Wet Chemistry**		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	688,000	19,400	1
SM20 3500 Fe B modified	**Wet Chemistry**		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	80	10	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636816

Group No. 1138601
CA

MW-3 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-3

Collected: 03/31/2009 10:26 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN03

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090981AA	04/08/2009 16:27	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090981AA	04/08/2009 16:27	Ginelle L Feister	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09092C20A	04/02/2009 22:36	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09092C20A	04/02/2009 22:36	Katrina T Longenecker	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	090920014A	04/03/2009 12:15	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	090931848011	04/07/2009 15:58	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848011	04/06/2009 10:20	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	2	09092196601A	04/02/2009 10:52	Ashley M Heckman	5
00228	Sulfate	EPA 300.0	1	09092196601A	04/02/2009 10:52	Ashley M Heckman	5
00202	Alkalinity to pH 4.5	SM20 2320 B	1	09093020201A	04/03/2009 15:25	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	09093020201A	04/03/2009 15:25	Geraldine C Smith	1
00212	Total Dissolved Solids	SM20 2540 C	1	09093021202A	04/03/2009 09:36	Susan A Engle	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	09093834401A	04/03/2009 08:30	Michelle L Lalli	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636817

Group No. 1138601
CA

MW-3_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-3

Collected: 03/31/2009 10:26 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 6010A	**Metals Dissolved**		**ug/l**	**ug/l**	
01754	Iron	7439-89-6	N.D.	52.2	1

General Sample Comments

State of California Lab Certification No. 2116
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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010A	1	090931848011	04/07/2009 16:03	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848011	04/06/2009 10:20	Denise K Conners	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636818 **Group No. 1138601**
CA

MW-4 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-4

Collected: 03/31/2009 11:15 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	N.D.	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
SW-846 8015B modified	**GC Miscellaneous**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	N.D.	10	1
	Due to interfering peaks on the chromatogram, the value reported for methane represents the lowest reporting limits attainable.				
SW-846 6010B	**Metals**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	40.6	0.84	1
EPA 300.0	**Wet Chemistry**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	19,500	250	5
	This sample was originally analyzed within the 48 hour holding time for nitrate-nitrogen, however the continuing calibration standard bracketing the sample was not within specification. The analysis was repeated on 04/07/2009. The continuing calibration standard bracketing the sample on the second trial was within specification. This sample was also above calibratiion range when analyzed within holding time. The confirming trial on 04/07/2009 was repeated at a higher dilution which was within calibration range. The initial trial is being reported because it was within holding time. The confirming trial result was 18,400 ug/l.				
00228	Sulfate	14808-79-8	83,700	3,000	10
SM20 2320 B	**Wet Chemistry**		**ug/l as CaCO3**	**ug/l as CaCO3**	
00202	Alkalinity to pH 4.5	n.a.	323,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 2540 C	**Wet Chemistry**		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	631,000	19,400	1
SM20 3500 Fe B modified	**Wet Chemistry**		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	140	10	1

Lancaster Laboratories Sample No. WW 5636818

Group No. 1138601
CA

MW-4 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-4

Collected: 03/31/2009 11:15 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN04

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090981AA	04/08/2009 16:51	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090981AA	04/08/2009 16:51	Ginelle L Feister	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09092C20A	04/02/2009 23:19	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09092C20A	04/02/2009 23:19	Katrina T Longenecker	1
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	090920014A	04/03/2009 12:29	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	090931848011	04/07/2009 16:16	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848011	04/06/2009 10:20	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	2	09092196601A	04/02/2009 11:06	Ashley M Heckman	5
00228	Sulfate	EPA 300.0	1	09092196601A	04/07/2009 12:51	Ashley M Heckman	10
00202	Alkalinity to pH 4.5	SM20 2320 B	1	09093020201A	04/03/2009 15:25	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	09093020201A	04/03/2009 15:25	Geraldine C Smith	1
00212	Total Dissolved Solids	SM20 2540 C	1	09093021202A	04/03/2009 09:36	Susan A Engle	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	09093834401A	04/03/2009 08:30	Michelle L Lalli	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636819

Group No. 1138601
CA

MW-4_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-4

Collected: 03/31/2009 11:15 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 6010A	**Metals Dissolved**		**ug/l**	**ug/l**	
01754	Iron	7439-89-6	N.D.	52.2	1

General Sample Comments

State of California Lab Certification No. 2116
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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010A	1	090931848011	04/07/2009 16:21	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848011	04/06/2009 10:20	Denise K Conners	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636820 **Group No. 1138601**
CA

MW-9 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-9

Collected: 03/31/2009 13:30 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	3	3	5
06053	Ethylbenzene	100-41-4	460	3	5
06053	Toluene	108-88-3	100	3	5
06053	Xylene (Total)	1330-20-7	3,200	25	50
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	20,000	500	10
SW-846 8015B modified	**GC Miscellaneous**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	12	10	1
	Due to interfering peaks on the chromatogram, the value reported for methane represents the lowest reporting limits attainable.				
SW-846 6010B	**Metals**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	3,200	0.84	1
EPA 300.0	**Wet Chemistry**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	390	250	5
	This sample was originally analyzed within the 48 hour holding time for nitrate-nitrogen, however the continuing calibration standard bracketing the sample was not within specification. The analysis was repeated on 04/09/2009. The continuing calibration standard bracketing the sample on the second trial was within specification. The first trial result is being reported because it was analyzed within the holding time. The second trial result was ND.				
00228	Sulfate	14808-79-8	60,500	1,500	5
SM20 2320 B	**Wet Chemistry**		**ug/l as CaCO3**	**ug/l as CaCO3**	
00202	Alkalinity to pH 4.5	n.a.	419,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 2540 C	**Wet Chemistry**		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	632,000	19,400	1
SM20 3500 Fe B modified	**Wet Chemistry**		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	99	10	1

General Sample Comments

State of California Lab Certification No. 2116

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

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Analysis Report

Lancaster Laboratories Sample No. WW 5636820

Group No. 1138601
CA

MW-9 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-9

Collected: 03/31/2009 13:30 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN09

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090981AA	04/08/2009 17:16	Ginelle L Feister	5
06053	BTEX by 8260B	SW-846 8260B	1	F091002AA	04/10/2009 15:34	Anita M Dale	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090981AA	04/08/2009 17:16	Ginelle L Feister	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	F091002AA	04/10/2009 15:34	Anita M Dale	50
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09096B07A	04/07/2009 18:08	Katrina T Longenecker	10
01146	GC VOA Water Prep	SW-846 5030B	2	09096B07A	04/07/2009 18:08	Katrina T Longenecker	10
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	090920014A	04/03/2009 12:42	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	090931848011	04/07/2009 16:25	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848011	04/06/2009 10:20	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	09092196601A	04/02/2009 11:21	Ashley M Heckman	5
00228	Sulfate	EPA 300.0	1	09092196601A	04/02/2009 11:21	Ashley M Heckman	5
00202	Alkalinity to pH 4.5	SM20 2320 B	1	09093020201A	04/03/2009 15:25	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	09093020201A	04/03/2009 15:25	Geraldine C Smith	1
00212	Total Dissolved Solids	SM20 2540 C	1	09093021202A	04/03/2009 09:36	Susan A Engle	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	09093834401A	04/03/2009 08:30	Michelle L Lalli	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636821

Group No. 1138601
CA

MW-9_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-9

Collected: 03/31/2009 13:30 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 6010A	**Metals Dissolved**		ug/l	ug/l	
01754	Iron	7439-89-6	N.D.	52.2	1

General Sample Comments

State of California Lab Certification No. 2116
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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010A	1	090931848011	04/07/2009 16:30	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848011	04/06/2009 10:20	Denise K Conners	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636822 **Group No. 1138601**
CA

MW-1 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-1

Collected: 03/31/2009 14:20 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	1	0.5	1
06053	Toluene	108-88-3	1	0.5	1
06053	Xylene (Total)	1330-20-7	44	0.5	1
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	3,700	250	5
SW-846 8015B modified	**GC Miscellaneous**		**ug/l**	**ug/l**	
07105	Methane	74-82-8	51	10	1
	Due to interfering peaks on the chromatogram, the value reported for methane represents the lowest reporting limits attainable.				
SW-846 6010B	**Metals**		**ug/l**	**ug/l**	
07058	Manganese	7439-96-5	534	0.84	1
EPA 300.0	**Wet Chemistry**		**ug/l**	**ug/l**	
00368	Nitrate Nitrogen	14797-55-8	10,300	250	5
	This sample was originally analyzed within the 48 hour holding time for nitrate-nitrogen, however the continuing calibration standard bracketing the sample was not within specification. The analysis was repeated on 04/09/2009. The continuing calibration standard bracketing the sample on the second trial was within specification. The first trial result is being reported because it was analyzed within the holding time. The second trial result was 10,500 ug/l.				
00228	Sulfate	14808-79-8	62,400	1,500	5
SM20 2320 B	**Wet Chemistry**		**ug/l as CaCO3**	**ug/l as CaCO3**	
00202	Alkalinity to pH 4.5	n.a.	343,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 2540 C	**Wet Chemistry**		**ug/l**	**ug/l**	
00212	Total Dissolved Solids	n.a.	650,000	19,400	1
SM20 3500 Fe B modified	**Wet Chemistry**		**ug/l**	**ug/l**	
08344	Ferrous Iron	n.a.	120	10	1

General Sample Comments

State of California Lab Certification No. 2116

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

Lancaster Laboratories Sample No. WW 5636822

Group No. 1138601
CA

MW-1 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-1

Collected: 03/31/2009 14:20 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUN01

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090981AA	04/08/2009 17:40	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090981AA	04/08/2009 17:40	Ginelle L Feister	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09096B07A	04/07/2009 18:33	Katrina T Longenecker	5
01146	GC VOA Water Prep	SW-846 5030B	2	09096B07A	04/07/2009 18:33	Katrina T Longenecker	5
07105	Volatile Headspace Hydrocarbon	SW-846 8015B modified	1	090920014A	04/03/2009 12:55	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	090931848011	04/07/2009 16:35	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848011	04/06/2009 10:20	Denise K Conners	1
00368	Nitrate Nitrogen	EPA 300.0	1	09092196601A	04/02/2009 11:35	Ashley M Heckman	5
00228	Sulfate	EPA 300.0	1	09092196601A	04/02/2009 11:35	Ashley M Heckman	5
00202	Alkalinity to pH 4.5	SM20 2320 B	1	09098020201A	04/08/2009 15:27	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	SM20 2320 B	1	09098020201A	04/08/2009 15:27	Geraldine C Smith	1
00212	Total Dissolved Solids	SM20 2540 C	1	09093021202A	04/03/2009 09:36	Susan A Engle	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	09093834401A	04/03/2009 08:30	Michelle L Lalli	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636823

Group No. 1138601
CA

MW-1_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-1

Collected: 03/31/2009 14:20 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 6010A	**Metals Dissolved**		**ug/l**	**ug/l**	
01754	Iron	7439-89-6	N.D.	52.2	1

General Sample Comments

State of California Lab Certification No. 2116
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 Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010A	1	090931848011	04/07/2009 16:39	Eric L Eby	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	090931848011	04/06/2009 10:20	Denise K Conners	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636824 **Group No. 1138601**
CA

Stream Grab Water
NA URSO
Sunol Pipeline SL0600100443 Stream

Collected: 03/31/2009 09:15 by JH

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUNST

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	N.D.	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1
SW-846 8015B	**GC Volatiles**		**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. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090981AA	04/08/2009 18:05	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090981AA	04/08/2009 18:05	Ginelle L Feister	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09092C20A	04/03/2009 00:25	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	09092C20A	04/03/2009 00:25	Katrina T Longenecker	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5636825

Group No. 1138601
CA

Trip Blank NA Water
NA URSO
Sunol Pipeline SL0600100443 Trip Blank

Collected: 03/31/2009

Account Number: 11875

Submitted: 04/01/2009 09:15
Reported: 04/15/2009 at 10:01
Discard: 05/16/2009

Chevron Pipeline Co.
4800 Fournace Place - E320 D
Bellaire TX 77401

SUNTR

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	N.D.	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	D090981AA	04/08/2009 18:29	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D090981AA	04/08/2009 18:29	Ginelle L Feister	1

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Analysis Report

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1138601
Reported: 04/15/09 at 10:01 AM

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

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D090981AA	Sample number(s): 5636816,5636818,5636820,5636822,5636824-5636825							
Benzene	N.D.	0.5	ug/l	95		80-116		
Ethylbenzene	N.D.	0.5	ug/l	95		80-113		
Toluene	N.D.	0.5	ug/l	96		80-115		
Xylene (Total)	N.D.	0.5	ug/l	96		81-114		
Batch number: F091002AA	Sample number(s): 5636820							
Xylene (Total)	N.D.	0.5	ug/l	96		81-114		
Batch number: 09092C20A	Sample number(s): 5636816,5636818,5636824							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	100	100	75-135	0	30
Batch number: 09096B07A	Sample number(s): 5636820,5636822							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	109	75-135	0	30
Batch number: 090920014A	Sample number(s): 5636816,5636818,5636820,5636822							
Methane	N.D.	10.	ug/l	102		80-120		
Batch number: 090931848011	Sample number(s): 5636816-5636823							
Iron	N.D.	52.2	ug/l	104		90-112		
Manganese	N.D.	0.84	ug/l	101		90-110		
Batch number: 09092196601A	Sample number(s): 5636816,5636818,5636820,5636822							
Nitrate Nitrogen	N.D.	50.	ug/l	95		90-110		
Sulfate	N.D.	300.	ug/l	98		89-110		
Batch number: 09093020201A	Sample number(s): 5636816,5636818,5636820							
Alkalinity to pH 4.5	N.D.	460.	ug/l as CaCO3	101		98-103		
Batch number: 09093021202A	Sample number(s): 5636816,5636818,5636820,5636822							
Total Dissolved Solids	N.D.	9,700.	ug/l	110		80-120		
Batch number: 09093834401A	Sample number(s): 5636816,5636818,5636820,5636822							
Ferrous Iron	N.D.	10.	ug/l	99		92-105		
Batch number: 09098020201A	Sample number(s): 5636822							
Alkalinity to pH 4.5	N.D.	460.	ug/l as CaCO3	99		98-103		

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.

Quality Control Summary

Client Name: Chevron Pipeline Co. Group Number: 1138601
Reported: 04/15/09 at 10:01 AM
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: D090981AA	Sample number(s): 5636816,5636818,5636820,5636822,5636824-5636825 UNSPK: P637474								
Benzene	100	100	80-126	0	30				
Ethylbenzene	102	76*	77-125	8	30				
Toluene	99	101	80-125	2	30				
Xylene (Total)	94	97	79-125	3	30				
Batch number: F091002AA	Sample number(s): 5636820 UNSPK: P639518								
Xylene (Total)	100	99	79-125	0	30				
Batch number: 09092C20A	Sample number(s): 5636816,5636818,5636824 UNSPK: P636648								
TPH-GRO N. CA water C6-C12	109		63-154						
Batch number: 09096B07A	Sample number(s): 5636820,5636822 UNSPK: P638390								
TPH-GRO N. CA water C6-C12	109		63-154						
Batch number: 090920014A	Sample number(s): 5636816,5636818,5636820,5636822 UNSPK: P635520								
Methane	80	78	35-157	2	20				
Batch number: 090931848011	Sample number(s): 5636816-5636823 UNSPK: P637206 BKG: P637206								
Iron	105	101	75-125	3	20	231	217	6 (1)	20
Manganese	100	105	75-125	1	20	1,730	1,760	2	20
Batch number: 09092196601A	Sample number(s): 5636816,5636818,5636820,5636822 UNSPK: P637206 BKG: P637206								
Nitrate Nitrogen	89*		90-110			N.D.	N.D.	0 (1)	20
Sulfate	94		90-110			136,000	138,000	1	20
Batch number: 09093020201A	Sample number(s): 5636816,5636818,5636820 UNSPK: P636789 BKG: P636789								
Alkalinity to pH 4.5	101	101	64-130	0	2	47,900	48,700	2	4
Alkalinity to pH 8.3						N.D.	N.D.	0 (1)	4
Batch number: 09093021202A	Sample number(s): 5636816,5636818,5636820,5636822 UNSPK: P636590 BKG: P636590								
Total Dissolved Solids	115	117	54-143	1	12	2,750,000	3,130,000	13*	9
Batch number: 09093834401A	Sample number(s): 5636816,5636818,5636820,5636822 UNSPK: P637206 BKG: P637206								
Ferrous Iron	104	104	66-130	1	6	34	64	61* (1)	10
Batch number: 09098020201A	Sample number(s): 5636822 UNSPK: P637206 BKG: P637206								
Alkalinity to pH 4.5	98	99	64-130	0	2	234,000	232,000	1	4
Alkalinity to pH 8.3						N.D.	N.D.	0 (1)	4

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: Volatile Headspace Hydrocarbon
Batch number: 090920014A

	Propene
5636816	72
5636818	74

*- 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: 1138601
Reported: 04/15/09 at 10:01 AM

Surrogate Quality Control

5636820	69
5636822	72
Blank	119
LCS	117
MS	89
MSD	87
Limits:	42-131

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09092C20A

	Trifluorotoluene-F
5636816	98
5636818	98
5636824	96
Blank	97
LCS	122
LCSD	122
MS	114
Limits:	63-135

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09096B07A

	Trifluorotoluene-F
5636820	116
5636822	111
Blank	97
LCS	105
LCSD	107
MS	107
Limits:	63-135

Analysis Name: BTEX by 8260B
Batch number: D090981AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5636816	86	98	97	98
5636818	84	96	96	95
5636820	82	94	99	104
5636822	83	94	99	104
5636824	87	99	99	100
5636825	84	95	95	96
Blank	85	95	95	98
LCS	87	99	98	104
MS	86	98	96	103
MSD	88	102	99	105
Limits:	80-116	77-113	80-113	78-113

Analysis Name: 8260 Master Scan (water)
Batch number: F091002AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	86	87	84	90

*- 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: 1138601
Reported: 04/15/09 at 10:01 AM

Surrogate Quality Control

LCS	88	89	85	94
MS	86	88	86	95
MSD	85	86	84	93
Limits:	80-116	77-113	80-113	78-113

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

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only
Acct. # 11875 Group# 1138601 Sample # 5636816-25

COC # 199867

Please print. Instructions on reverse side correspond with circled numbers. cooler temp 5.1°C

(1) Client: CPL Acct. #:
Project Name/#: School Spill PWSID #:
Project Manager: Joe Morgan P.O.#:
Sampler: Jacob Henry / Rachel Paccarazi Quote #:
Name of state where samples were collected: CA

For Lab Use Only
FSC:
SCR#:

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

(2) Sample Identification	Date Collected	Time Collected	(3) Grab	Composite	(4) Matrix: Soil	Water (☐ Potable ☐ NPDES ☐ Applicable)	Other	Total # of Containers	(5) Analyses Requested: TPH-GRO by N. CA LUFT Gild	BTEX by EPA Method 8260B	Nitrate, Sulfate by EPA Method 300.0	Total Manganese, Dissolved Iron by SM3125	Ferrous Iron by SM3500-Fe B Mod	Methane by EPA Method 8015B Mod	Alkalinity by 310.1	TDS by EPA Method 160.1	Remarks
									Preservation Codes: H	H	N	H					
MW-3	3/31/09	1026	X			X		10	X	X	X	X	X	X	X	X	
MW-4		1115	X			X		10									
MW-9		1330	X			X		10									
MW-1		1420	X			X		10									
Stream		915	X			X		3									

(6) Temperature of samples upon receipt (if requested)

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed: Standard
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg)
Type II (Tier II)
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)
TX TRRP-13
MA MCP CT RCP
SDG Complete? Yes No
Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

(9)

Relinquished by:	Date	Time	Received by:	Date	Time
	3/31/09	1900			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	4/1/09	915

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

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

< 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.

U.S. EPA data qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

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