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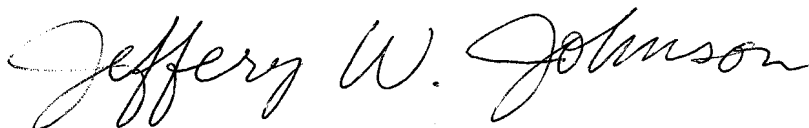
April 12, 2010

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 2010 Groundwater Monitoring Report**" are true and correct to the best of my knowledge at the present time.

Submitted by:



Jeffery Johnson
Chevron Pipe Line Company

R E P O R T

FIRST QUARTER 2010
GROUNDWATER MONITORING
REPORT

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

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

April 2010

URS

URS Corporation
1333 Broadway, Suite 800
Oakland, CA 94612

26815217




This letter report (“**First Quarter 2010 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 2010 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.

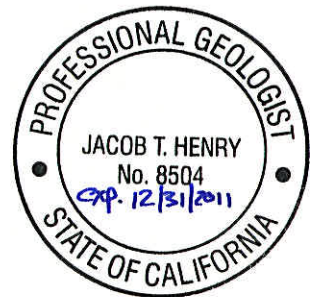
URS Corporation
Approved by:



Joe Morgan III



Jacob Henry, P.G.





April 12, 2010

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 2010 Groundwater Monitoring Report**

Dear Mr. Wickham:

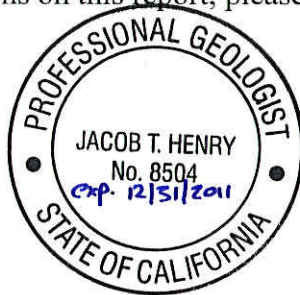
A December 30, 2005 letter provided by the Alameda County Environmental Health staff (ACEH) requested the initiation of a Quarterly Groundwater Monitoring Program for the CPL Sunol site (Site). In response to this request and on behalf of Chevron Pipe Line Company (CPL), URS has prepared this groundwater monitoring report for the Site for the first quarter of 2010.

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

Sincerely yours,

URS Corporation

Jacob Henry, P.G.
Senior Geologist



Joe Morgan III
Senior Project Manager

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

Tables:

- Table 1 – Monitoring Well Groundwater Levels
- Table 2 – Monitoring Well Groundwater Elevations
- Table 3 – Summary of Groundwater Analytical Results – Gasoline Compounds
- Table 4 – Summary of Groundwater Analytical Results – Geochemical Indicators and Other Parameters

Figures:

- Figure 1 – Site Vicinity Map
- Figure 2 – SVE and Groundwater Monitoring Well Locations
- Figure 3 – Unconfined Water-Bearing Zone and Bedrock Elevations Map

Appendices:

- Appendix A – Groundwater Sampling Forms
- Appendix B – Laboratory Analytical Results

On March 9 and 10, 2010, 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 and collected samples for laboratory analysis from groundwater monitoring wells MW-1 through MW-4 and MW-8 through MW-11. URS also collected a surface water sample from the very small stream, located northwest of the release location. Monitoring well and surface water sampling locations are provided on Figure 2. Monitoring wells MW-5 through MW-7 were abandoned on June 23, 2008, and are no longer part of the groundwater monitoring program.

1.1 SITE HYDROGEOLOGY

Prior to collecting groundwater samples, depth to water measurements were recorded from monitoring wells MW-1 through MW-4 and MW-8 through MW-11 from the top of casing using an electronic oil/water interface probe. Product was not detected in any Site wells during the first quarter 2010. Depth to groundwater measurements are presented in Table 1 and calculated groundwater elevations above mean sea level are presented in Table 2.

Unconfined Water Bearing Zone

The groundwater surface elevation increased in all monitoring wells (MW-1 through MW-4 and MW-8 through MW-11) relative to the last sampling event in December 2009. The groundwater surface elevation change resulted in hydraulic connection of all Site monitoring wells. The groundwater elevations for monitoring wells MW-1 through MW-4 and MW-9 through MW-11 were 293.63, 293.79, 295.05, 293.98, 293.10, 293.27 and 293.61 feet above average mean sea level (msl), respectively. The groundwater elevation for MW-8, which is screened in an apparent hillside groundwater recharge source for the Valley Crest Tree Company's (nursery) unconfined water-bearing zone, was 314.96 feet above msl.

Based on water level data from MW-1 through MW-4 and MW-9 through MW-11, the local groundwater flow direction within the nursery's unconfined water-bearing zone is in a northeast direction with a calculated hydraulic gradient of 0.02 feet/feet. The seasonal groundwater recharge from the hillside appears to flow into the unconfined nursery water-bearing zone on a limited basis.

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

2.1 QUARTERLY MONITORING ACTIVITIES

After measuring the fluid levels at each monitoring well, URS conducted groundwater sampling on March 9 and 10, 2010. First quarter sampling efforts were influenced by the known seasonally high groundwater levels which typically occur from January through June. The rationale for the method used at each monitoring well is described below:

- MW-1 through MW-4 and MW-8 through MW-11 were sampled using low-flow methods.
- A surface water sample was collected from the very small stream northwest of the release location.

2.1.1 MW-1 and MW-9 Sorbent Booms

Up until May 2009, URS placed sorbent booms (booms) in MW-1 and MW-9 as an interim remedial measure. The booms were effective in passively collecting and facilitating degradation of petroleum hydrocarbons within the monitoring wells and allowed for quarterly groundwater sample collection. Since May 2009, MW-1 and MW-9 have been gauged monthly, including during the first quarter 2010 groundwater monitoring event, with no measurable product observed. URS will continue to monitor MW-1 and MW-9 during the monthly groundwater gauging events. A boom was re-installed in MW-9 during the third quarter 2009 sampling event after product was observed while purging. Product has not been measured since the boom was re-installed in MW-9.

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

Low-flow purging rates of between 350-500 milliliters per minute (mL/min) were used dependent on the rate of recharge at each monitoring well. The low-flow groundwater sampling forms are included in Appendix A.

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

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

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

2.1.3 Surface Water Sample

The sampling location along the very small stream is located at the base of the alluvial terrace within the Alameda Creek floodplain and is shown on Figure 2. The former sampling point (SW-Creek, sampled prior to the first quarter of 2007) is also provided on Figure 2 for reference. To the west, beyond the current sampling location, the very small stream fans out into the floodplain and surface flow terminates within floodplain grasses. A stream sample was collected on March 9, 2010.

3.1 ANALYTICAL PROGRAM

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

Groundwater samples collected during quarterly sampling activities were analyzed for the following parameters:

Gasoline Compounds

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

Geochemical 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

3.2 GROUNDWATER ANALYTICAL RESULTS DISCUSSION

A tabulated summary of the analytical results for the gasoline compounds and associated environmental screening levels (ESLs), for groundwater as a current or potential source of drinking water, developed by Regional Water Quality Control Board (RWQCB 2008) are presented in Table 3. Complete laboratory analytical results and chain of custody forms are presented as Appendix B.

3.2.1 Unconfined Water-Bearing Zone Monitoring Wells

The unconfined water bearing zone wells sampled during the fourth quarter sampling event included MW-1 through MW-4 and MW-8 through MW-11. The first quarter 2010 groundwater sample results are as follows:

- The MW-1 sample contained TPH-GRO at 3,800 micrograms per liter ($\mu\text{g/L}$) and total xylenes at 4 $\mu\text{g/L}$.
- The MW-2 sample contained total xylenes at 2 $\mu\text{g/L}$.
- The MW-8 sample contained TPH-GRO at 10,000 $\mu\text{g/L}$, benzene at 570 $\mu\text{g/L}$, toluene at 500 $\mu\text{g/L}$, ethylbenzene at 730 $\mu\text{g/L}$, and total xylenes at 1,800 $\mu\text{g/L}$.
- The MW-9 sample contained TPH-GRO at 18,000 $\mu\text{g/L}$, toluene at 17 $\mu\text{g/L}$, ethylbenzene at 250 $\mu\text{g/L}$, and total xylenes at 1,700 $\mu\text{g/L}$.

- The analytical results from MW-3 MW-4, MW-10, and MW-11 were below laboratory method detection limits for TPH-GRO and BTEX.

Groundwater analytical results are presented in Table 3.

3.2.2 Surface Water Sample

A surface water sample was collected on March 9, 2010. TPH-GRO and BTEX were below method detection limits in the sample collected from the stream (Table 3).

3.2.3 Analytical Result Comparison to ESLs

The TPH-GRO analytical results in monitoring wells MW-1, MW-8 and MW-9 exceeded the TPH-GRO ESLs of 100 µg/L at concentrations of 3,800 µg/L, 10,000 µg/L, and 18,000 µg/L, respectively.

Benzene analytical results in the sample collected from monitoring well MW-8 exceeded the benzene ESL of 1 µg/L at concentration of 570 µg/L.

Toluene analytical results in the sample collected from monitoring well MW-8 exceeded the toluene ESL of 40 µg/L at concentrations of 500 µg/L.

Ethylbenzene analytical results in samples collected from monitoring wells MW-8 and MW-9 exceeded the ethylbenzene ESL of 30 µg/L at concentrations of 730 µg/L and 250 µg/L, respectively.

Total xylenes analytical results in samples collected from monitoring wells MW-8 and MW-9 exceeded the total xylenes ESL of 20 µg/L at concentrations of 1,800 µg/L and 1,700 µg/L, respectively.

3.2.4 Geochemical Analytical Results

The groundwater samples collected from MW-1 through MW-4 and MW-8 through MW-11 were also analyzed for geochemical parameters. Overall, the geochemical parameters indicate a low oxygen (anaerobic) environment. A preliminary assessment of the lower sulfate level in monitoring well MW-8 that is currently impacted, indicate a potential for anaerobic biodegradation of the hydrocarbon plume by the sulfate reduction process. URS will continue to collect geochemical parameters when possible from all monitoring wells. The geochemical results are presented in Table 4.

3.3 SUMMARY OF QA/QC REVIEW PARAMETERS

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

- Blanks (laboratory method blanks 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. All samples were analyzed within the appropriate hold 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. Two trip blanks were analyzed during this sampling event. The trip blanks did not have detections of any target analytes, indicating no evidence of contamination during shipment of the laboratory samples.

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:

$$\text{Recovery (\%)} = \frac{\text{spike analysis result} - \text{original sample concentration}}{\text{concentration of spike addition}} \times 100\%$$

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:

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

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 field duplicate sample was collected during this sampling event, and no qualifications were necessary as the RPD was less than 30 percent for all of the analytes.

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. There were no surrogate recoveries outside laboratory control limits in any of the samples.

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.

High nitrate nitrogen RPD recovery was observed in batch 1006919601A. The nitrate nitrogen detections in samples MW-3, MW-4, MW-10, and MW-11 were qualified with a “J”.

High nitrate nitrogen percent recovery was observed in batch 10070196602A. The nitrate nitrogen detections in samples MW-1 and MW-2 were qualified with a “J”.

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

Quarterly groundwater monitoring field activities conducted on March 9 and 10, 2010 included measuring the fluid levels and collecting analytical samples from groundwater monitoring wells MW-1 through MW-4 and MW-8 through MW-11. The findings are as follows:

- Free product was not observed in monitoring wells MW-1 through MW-4, and MW-9 through MW-11 during the first quarter 2010 groundwater monitoring activities.
- The groundwater surface elevation increased in all monitoring wells since the last sampling event in December 2009. The rain received in February is the cause for the increased groundwater levels measured. The groundwater surface elevation change resulted in a hydraulic reconnection of all monitoring wells.
- The MW-1 sample contained TPH-GRO at 3,800 µg/L and total xylenes at 4 µg/L. The sample results for TPH-GRO exceeded the ESL of 100 µg/L. The monitoring well has not been sampled since June 2009, however the March 2010 results were lower than previous sampling events.
- The MW-2 sample contained total xylenes at 2 µg/L. The sample results for all petroleum constituents analyzed exceeded their respective ESL.
- The MW-8 sample contained TPH-GRO at 10,000 µg/L, benzene at 570 µg/L, toluene at 500 µg/L, ethylbenzene at 730 µg/L, and total xylenes at 1,800 µg/L. The sample results for all petroleum constituents analyzed exceeded their respective ESL. However, sample results decreased since the last sampling event in December 2009.
- The MW-9 sample contained TPH-GRO at 18,000 µg/L, toluene at 17 µg/L, ethylbenzene at 250 µg/L, and total xylenes at 1,700 µg/L. The sample results for TPH-GRO, ethylbenzene, and total xylenes exceeded their respective ESL. However, sample results decreased since the last sampling event in December 2009.
- Groundwater samples collected from all monitoring wells have decreased or remained non-detect since the last sampling event in December 2009.
- Other than the initial spray release (August 2005) to the nursery, the release on the hillside has not been in continuous contact with groundwater which is a transportation mechanism for petroleum hydrocarbons to the nursery.

Based on the March 9 and 10, 2010 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; and,
- Develop a Conceptual Site Model to identify any potential data gaps that may require additional data collection.

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.

TABLE 1
Monitoring Well Groundwater Levels
First Quarter 2010 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	--	--
		6/9/2009	37.05	--	--
		9/28/2009	37.61	--	--
		12/9/2009	37.56	--	--
3/9/2010	34.41	--	--		
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	--	--
		6/9/2009	33.08	--	--
		9/28/2009	33.62	--	--
		12/9/2009	33.61	--	--
3/9/2010	30.36	--	--		
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	--	--
		6/9/2009	34.48	--	--
		9/28/2009	34.82	--	--
		12/9/2009	34.83	--	--
3/9/2010	30.60	--	--		

TABLE 1
Monitoring Well Groundwater Levels
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Chevron Sunol Pipeline

Well ID	Screen Interval (feet bgs) ¹	Date	Depth to Groundwater (feet TOC-N) ²	Depth to Product (feet TOC-N)	Product Thickness (feet)		
MW-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	--	--		
		6/9/2009	38.62	--	--		
		9/28/2009	39.04	--	--		
		12/9/2009	39.09	--	--		
3/9/2010	35.69	--	--				
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	--	--		
		6/9/2009	23.31	--	--		
		9/28/2009	22.58	--	--		
		12/9/2009	20.66	20.65	0.01		
		3/9/2010	18.97	--	--		
		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			--	--		
6/9/2009	42.53			--	--		
9/28/2009	43.02			--	--		
12/9/2009	42.99			--	--		
3/9/2010	39.97			--	--		

TABLE 1
Monitoring Well Groundwater Levels
First Quarter 2010 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Screen Interval (feet bgs) ¹	Date	Depth to Groundwater (feet TOC-N) ²	Depth to Product (feet TOC-N)	Product Thickness (feet)
MW-10	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	--	--
		6/9/2009	45.19	--	--
		9/28/2009	45.94	--	--
		12/9/2009	46.02	--	--
		3/9/2010	42.62	--	--
		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			--	--
6/9/2009	38.30			--	--
9/28/2009	39.21			--	--
12/9/2009	39.73			--	--
3/9/2010	36.28			--	--

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 2010 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	--	--
				6/9/2009	290.99	--	--
9/28/2009	290.43	--	--				
12/9/2009	290.48	--	--				
3/9/2010	293.63	--	--				
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	--	--
				6/9/2009	291.07	--	--
9/28/2009	290.53	--	--				
12/9/2009	290.54	--	--				
3/9/2010	293.79	--	--				
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	--	--				

TABLE 2
Monitoring Well Groundwater Elevations
First Quarter 2010 Groundwater Monitoring Report
Chevron Sunol Pipeline

Well ID	Date Completed	Ground Surface Elevation (feet msl) ¹	Top of Casing Elevation (feet msl) ^{1, 2}	Date Measured	Groundwater Elevation (feet msl) ¹	Product Elevation (feet msl) ¹	Product Thickness (feet)
MW-3				6/9/2009	291.17	--	--
				9/28/2009	290.83	--	--
				12/9/2009	290.82	--	--
				3/9/2010	295.05	--	--
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	--	--
				6/9/2009	291.05	--	--
				9/28/2009	290.63	--	--
12/9/2009	290.58	--	--				
3/9/2010	293.98	--	--				
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	--	--
				6/9/2009	310.62	--	--
				9/28/2009	311.35	--	--
				12/9/2009	313.27	313.28	0.01
3/9/2010	314.96	--	--				
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	--	--
				6/9/2009	290.54	--	--

TABLE 2
Monitoring Well Groundwater Elevations
First Quarter 2010 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-9				9/28/2009	290.05	--	--
				12/9/2009	290.08	--	--
				3/9/2010	293.10	--	--
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	--	--
				6/9/2009	290.70	--	--
				9/28/2009	289.95	--	--
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	--	--
				6/9/2009	291.59	--	--
				9/28/2009	290.68	--	--
	12/9/2009	290.16	--	--			
	3/9/2010	293.61	--	--			

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 2010 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
	6/10/2009	5,000	<0.5	<0.5	0.7	13
Q3 2009 ⁴⁾	NS	NS	NS	NS	NS	
Q4 2009 ⁴⁾	NS	NS	NS	NS	NS	
3/10/2010	3,800	<0.5	<0.5	<0.5	4	
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
	Q2 2009 ⁴⁾	NS	NS	NS	NS	NS
	Q3 2009 ⁴⁾	NS	NS	NS	NS	NS
	Q4 2009 ⁴⁾	NS	NS	NS	NS	NS
	3/10/2010	<50	<0.5	<0.5	<0.5	2
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
	Q2 2009 ⁴⁾	NS	NS	NS	NS	NS
	Q3 2009 ⁴⁾	NS	NS	NS	NS	NS
	Q4 2009 ⁴⁾	NS	NS	NS	NS	NS
	3/9/2010	<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	

TABLE 3
Summary of Groundwater Analytical Results
Gasoline Compounds
First Quarter 2010 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)	
ESL¹⁾		100	1	40	30	20	
MW-4	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	
	Q2 2009 ⁴⁾	NS	NS	NS	NS	NS	
	Q3 2009 ⁴⁾	NS	NS	NS	NS	NS	
	Q4 2009 ⁴⁾	NS	NS	NS	NS	NS	
3/9/2010	<50	<0.5	<0.5	<0.5	<0.5		
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	
	Q2 2009 ⁴⁾	NS	NS	NS	NS	NS	
	Q3 2009 ⁴⁾	NS	NS	NS	NS	NS	
	12/10/2009	19,000	930	1,600	1,200	3,800	
	3/10/2010	10,000 / 10,000	570 / 580	500 / 500	730 / 730	1,800 / 1,800	
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	
	6/10/2009	27,000	<3	66	610	4,100	
	Q3 2009 ³⁾	NS	NS	NS	NS	NS	
	12/10/2009	20,000	3	85	460	2,800	
	3/10/2010	18,000	<3	17	250	1,700	
	MW-10/MW-X⁷⁾	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	
6/10/2009		<50	<0.5	1	<0.5	<0.5	
9/28/2009		<50/<50	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	<0.5/<0.5	
12/10/2009		540	1	2	5	23	
3/9/2010		<50	<0.5	<0.5	<0.5	<0.5	
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	
	6/10/2009	59	<0.5	2	<0.5	3	
	9/29/2009	<50	<0.5	<0.5	<0.5	<0.5	
	12/10/2009	66	<0.5	<0.5	<0.5	3	
3/9/2010	<50	<0.5	<0.5	<0.5	<0.5		

TABLE 3
Summary of Groundwater Analytical Results
Gasoline Compounds
First Quarter 2010 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)
ESL¹⁾		100	1	40	30	20
SW-Creek	6/7/2006	<50	<0.5	<0.5	<0.5	<0.5
	8/22/2006	<50	<0.5	<0.5	<0.5	<0.5
	11/15/2006	<50	<0.5	<0.5	<0.5	<0.5
	11/15/2006	<50	<0.5	<0.5	<0.5	<0.5
Stream	2/21/2007	<50	<0.5	<0.5	<0.5	<0.5
	6/5/2007	<50	<0.5	<0.5	<0.5	<0.5
	9/12/2007	<50	<0.5	<0.5	<0.5	<0.5
	1/25/2008	<50	<0.5	<0.5	<0.5	<0.5
	3/20/2008	<50	<0.5	<0.5	<0.5	<0.5
	6/5/2008	<50	<0.5	<0.5	<0.5	<0.5
	9/18/2008	<50	<0.5	<0.5	<0.5	<0.5
	12/15/2008	<50	<0.5	<0.5	<0.5	<0.5
	3/31/2009	<50	<0.5	<0.5	<0.5	<0.5
	6/9/2009	<50	<0.5	<0.5	<0.5	<0.5
	Q3 2009 ⁶⁾	NS	NS	NS	NS	NS
	Q4 2009 ⁶⁾	NS	NS	NS	NS	NS
	3/9/2010	<50	<0.5	<0.5	<0.5	<0.5

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.

6) Sample not collected during quarterly monitoring due to the stream sample location being dry.

7) Duplicate sampled collected from MW-10 during the third quarter 2009 sampling event because MW-8 was not hydraulically connected to the water bearing zone.

TABLE 4
Summary of Groundwater Analytical Results
Geochemical Indicators and Other Parameters
First Quarter 2010 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
	6/10/2009	0.00	-115	0.420	0.576	0.20	<0.052	72.6	<0.005	7.07	614	422	<0.46
	Q4 2009	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾
3/10/2010	0.00	-118	4 J	0.431	<0.01	<0.0522	56.9	0.067	6.79	551	347	<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
	Q2 2009	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾
	Q4 2009	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾
3/10/2010	2.81	38	13 J	0.0182	0.350	<0.0522	54.9	<0.005	6.89	532	322	<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
	Q2 2009	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾
	Q4 2009	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾
3/9/2010	1.75	182	12.6 J	0.0093	0.064	<0.0522	54.4	<0.005	6.78	496	293	<0.46	
MW-4	6/7/2006	0.28	29.57	9.2	0.02	0.059	<0.052	60.2	<0.002	6.65	423	282	<0.46
	8/23/2006	NR ³⁾	-22.49	<0.25	0.226	0.7	<0.052	78.4	0.003	6.62	590	396	<0.46
	11/15/2006	3.46 ⁶⁾	106	0.34 J	0.137	0.47	<0.052	90.3	0.003	6.74	672	490	<0.46
	3/31/2009	3.96	5	19.5J	0.0406	0.14	<0.052	83.7	<0.01	6.64	631	323	<0.46
	Q2 2009	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾
	Q4 2009	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾
3/9/2010	0.05	123	10.5 J	0.0343	0.13	<0.0522	89.8	<0.005	6.74	560	312	<0.46	
MW-8	8/24/2006	NM ²⁾	NM ²⁾	<0.25	0.171	0.14	<0.052	90.2	<0.002 UJ	NM ²⁾	563	362	<0.46
	11/16/2006	0.05	-74	<0.25	0.123	0.8	<0.052	78.6 J	0.002	7.22	564	350	<0.46
	3/27/2009	6.88 ⁶⁾	-113	0.27	0.553	2.5J	<0.052	15.5	0.13	6.74	639	467	<0.46
	Q2 2009	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾	NM ⁷⁾
	12/10/2009	0.04	-165.00	<0.25 UJ	0.549 J	<2.5	0.06	2 J	<0.2	6.94	576	445	<0.46
	3/10/2010	0.00	-85	<0.25	0.334	3	<0.0522	1.7	0.33	6.89	587	453	<0.46
MW-9	Q3 2006	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾	NM ⁴⁾
	11/15/2006	3.01 ⁶⁾	4	<0.25 UJ	4.41	1.2	0.496	29.5	0.009	6.92	836	657	<0.46
	3/31/2009	3.35	-179	0.39J	3.2	0.099	<0.052	60.5	0.012	6.59	632	419	<0.46
	6/10/2009	0.00	-141	<0.25	3.01	1.70	<0.052	46.4	<0.005	6.98	622	468	<0.46
	12/10/2009	1.43	-188	<0.25 UJ	4.39 J	3.300	2.540	4.5 J	<0.2	6.60	734	620	<0.46
	3/10/2010	0.00	-197	<0.25	2.94	1.7	<0.0522	40.9	0.046	6.84	596	448	<0.46
MW-10	3/27/2009	3.65	48	8.2	0.367	0.21J	<0.052	155	0.28	6.69	1,200	645	<0.46
	6/10/2009	0.37	109	<0.25	0.767	0.80	<0.052	133	2.30	7.20	1,100	623	<0.46
	12/10/2009	0.06	-74	0.33 J	0.964 J	10.90	<0.052	640 J	<0.2	6.85	1,580	512	<0.46
	3/9/2010	1.52	105	13.9 J	0.0357	0.054	<0.052	63.6	0.190	6.89	596	349	<0.46
MW-11	3/27/2009	5.86	53	15.3	0.114	0.058J	<0.052	134	0.06	6.61	742	365	<0.46
	6/10/2009	0.37	44	NM	0.415	NM	NM	NM	0.120	7.16	NM	NM	NM
	12/10/2009	1.01	-50	0.48 J	0.804 J	3.600	<0.052	151 J	<0.2	6.84	1720	556	<0.46
	3/9/2010	3.68	133	11.9 J	0.0176	0.087	<0.0522	91.7	0.039	6.73	615	314	<0.46

Notes:

DO = Dissolved oxygen NM = Not measured
 ORP = Oxygen reduction potential NR = Not Reported
 TDS = Total dissolved solids J = Estimated result
 CaCO₃ = Calcium Carbonate UJ = Estimated result

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

- 1) DO, ORP, and pH values were obtained in the field using a flow-through cell and a multi-parameter meter unless otherwise noted.
- 2) Field data was not collected for DO, ORP, and pH because groundwater was removed from the well without using the in-line flow-through cell due to insufficient recharge.
- 3) DO meter did not appear to be functioning correctly.
- 4) The well was not sampled and parameters were not measured due to the presence of free product at this location.
- 5) The well was purged dry and recharge was insufficient to collect groundwater for geochemical analysis.
- 6) DO readings were artificially high because purge water was poured into the multi-parameter meter from a bailer.
- 7) Sample not collected during quarterly monitoring because well is not hydraulically connected to unconfined water-bearing zone.

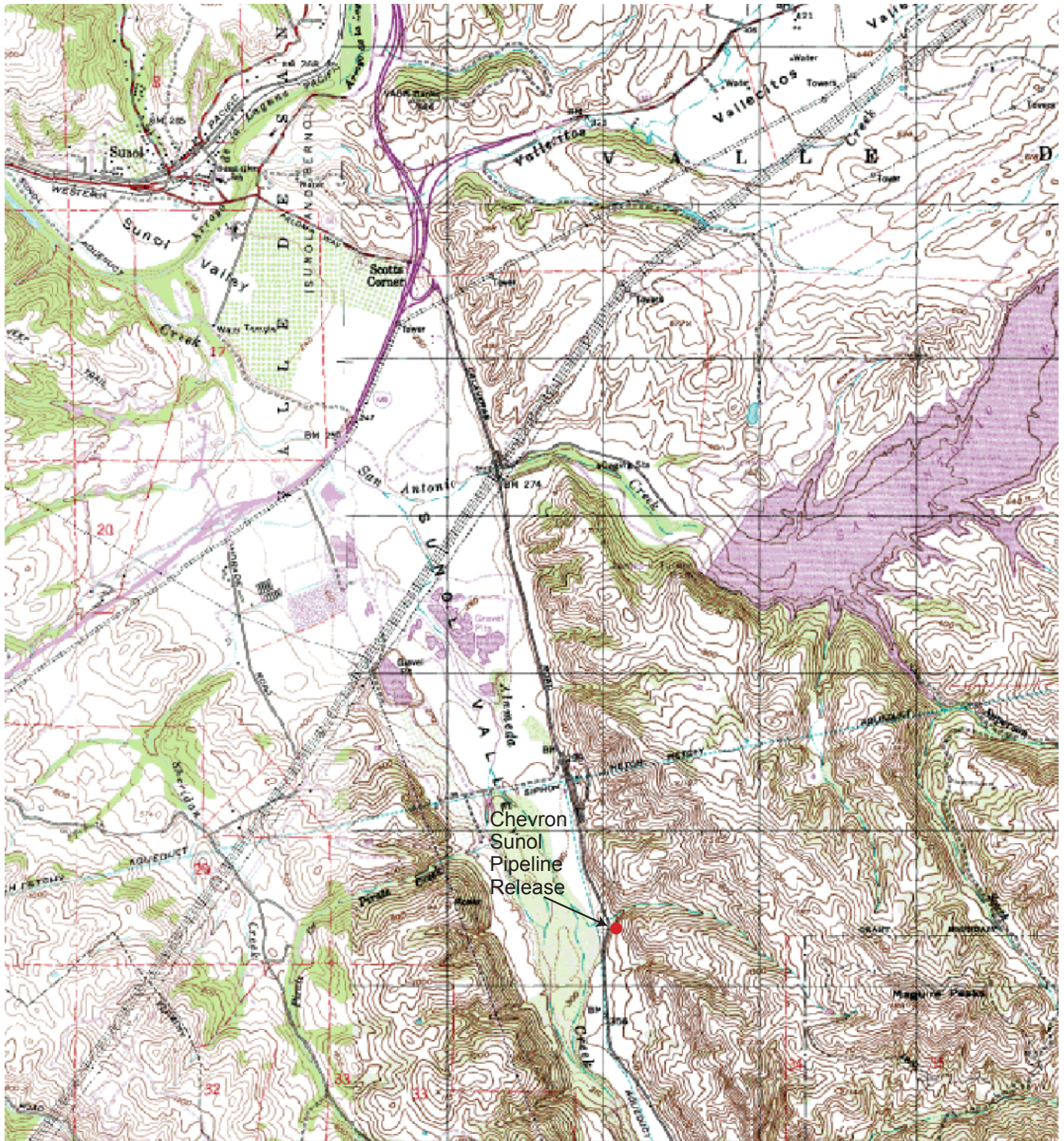
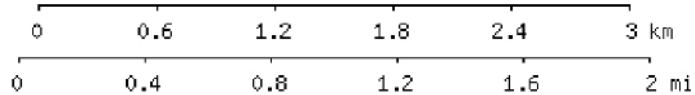


Image obtained from topozone.com



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



Chevron Pipeline Company
 Project No. 26815217

SITE VICINITY MAP
 CHEVRON SUNOL PIPELINE
 SUNOL, CALIFORNIA

Figure
 1



NORTH



SCALE IN FEET

CURRENT STREAM SAMPLE LOCATION

VERY SMALL STREAM

SW-CREEK
(Former Surface Water Sampling Location)

UPPER DIRT ROAD

LOWER DIRT ROAD

PIPELINE

CALAVERAS ROAD

MW-10

PROPERTY LINE/FENCE

MW-11

MW-9

MW-4

SVE-1D

SVE-2S

RELEASE LOCATION

MW-7

SVE-8

SVE-3S

SVE-4D

SVE-5

MW-3

MW-1

MW-5

MW-8

SVE-7

SVE-6

SVE-9

MW-2

MW-6

HILL SLOPE AND DENSE VEGETATION

HILL SLOPE

HILL SLOPE

LEGEND:

● SURFACE WATER SAMPLE LOCATIONS

⊕ MONITORING WELL

⊗ ABANDONED MONITORING WELLS

⊕ SVE WELL

▨ SHELF

▤ STAIRS

—x—x—x—x— FENCE

— — — PIPELINE

- - - SMALL STREAM

- · - · - · - PROPERTY LINE/FENCE

← HILL SLOPE 80-90% GRADE



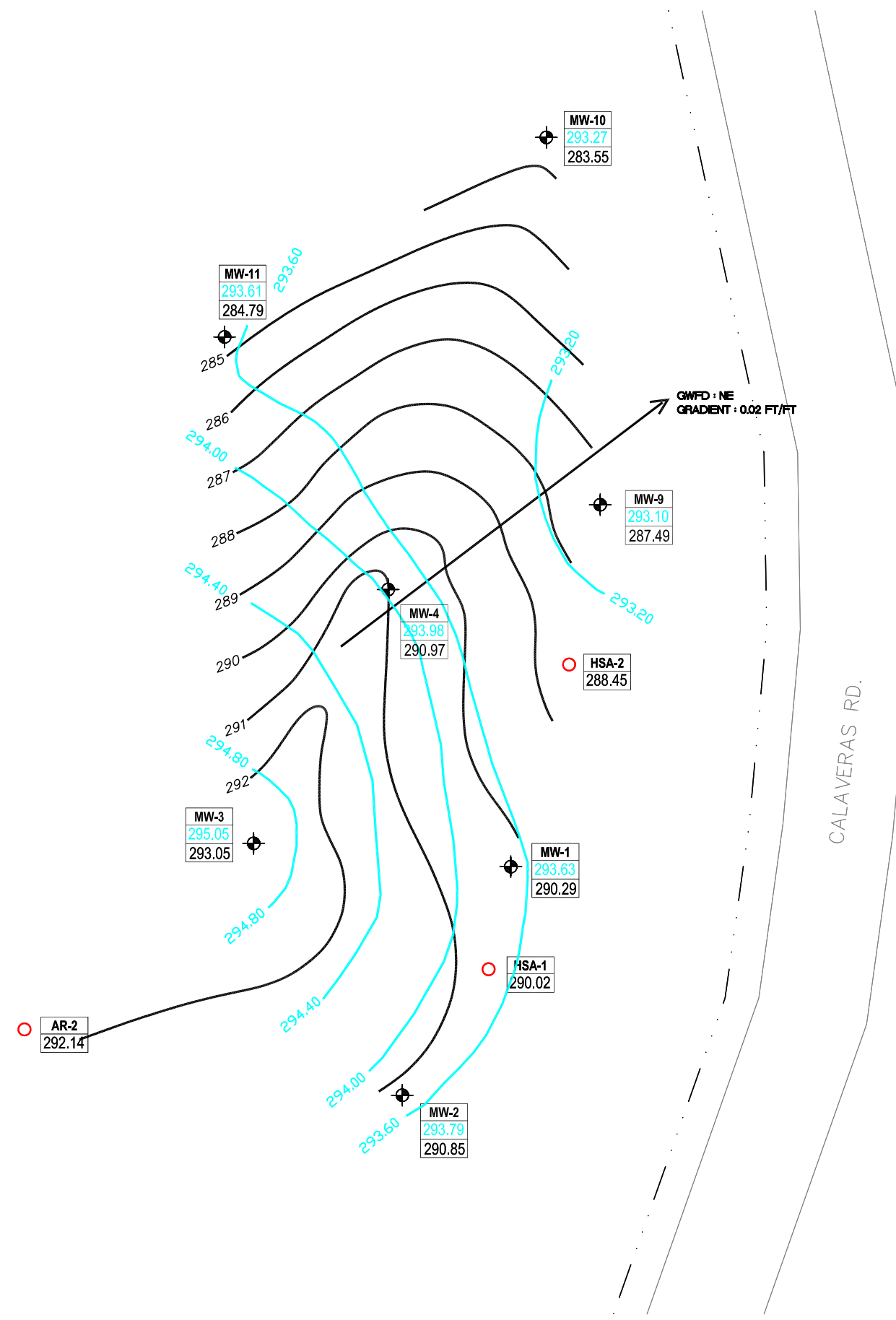
CHEVRON PIPELINE COMPANY

Project No. 26815217

SVE AND GROUNDWATER
MONITORING WELL LOCATIONS
CHEVRON SUNOL PIPELINE

Figure
2

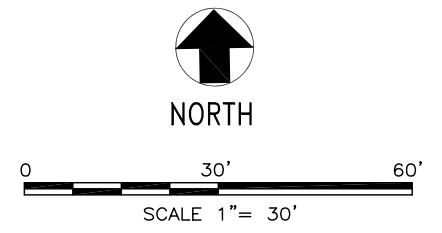
Apr 05, 2010 - 9:15am X:\x_env\waste\Chevron Pipeline Company\Sunol_Spill\Quarterly Groundwater Report\102010\Report\Figures\FIGURE 3_040510.dwg



LEGEND:

- MONITORING WELL
- MONITORING WELL LABEL
- GROUNDWATER ELEVATION
- BEDROCK CONTACT ELEVATION
- SOIL BORING
- SOIL BORING LABEL
- BEDROCK CONTACT ELEVATION
- INFERRED GROUNDWATER CONTOUR
- BEDROCK SURFACE ELEVATION
- GWF D GROUNDWATER FLOW DIRECTION

- NOTES:**
- ELEVATIONS IN FEET ABOVE AVERAGE MEAN SEA LEVEL (msl).
 - GROUNDWATER ELEVATIONS FOR MW-1 THROUGH MW-4 AND MW-9 THROUGH MW-11, AS MEASURED ON MARCH 9, 2010.
 - 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.
 - THE BEDROCK ELEVATIONS SHOWN REPRESENT THE OVERBURDEN CONTACT WITH THE WEATHERED SILTSTONE/CLAYSTONE BEDROCK UNIT (POSSIBLY CRETACEOUS-AGE CLAY SHALE OF THE PANOCHE FORMATION).
 - CALCULATED GROUNDWATER GRADIENT IN NORTHEASTERLY FLOW DIRECTION $dh/dl = 0.02$ ft/ft.
- * GROUNDWATER ELEVATION DATA NOT USED TO CALCULATE GROUNDWATER CONTOURS



Appendix A
Groundwater Sampling Forms



03/10/10

Horiba U-22XD
ISI Low-Flow Log

Project Information:

Operator Name Rachel Naccarati/ Andrew Fowler
 Company Name URS
 Project Name Chevron Sunol Pipeline
 Site Name Sunol

Pump Information:

Pump Model/Type Mega Monsoon
 Tubing Type Polyethylene
 Tubing Diameter 1/2 [in]
 Tubing Length 45 [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 34.41 [ft]

Pumping information:

Final pumping rate 400 mL/min
 Flowcell volume 1000 mL
 Calculated Sample Rate NM
 Sample rate NM
 Stabilized drawdown NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Multi-parameter Readings	10:52	16.6	6.59	112	96.6	1.03	-88
	10:55	17	6.64	108	46.1	0.01	-105
	10:58	17.1	6.69	107	42.3	0.00	-109
	11:01	17.2	6.71	106	38.6	0.00	-112
	11:04	17.3	6.77	104	33.5	0.00	-118
	11:07	17.4	6.79	102	29.1	0.00	-118
	Sample collected from MW-1 at 11:10 on 3/10/10						
Variance in last 4 readings		0.1	0.02	-1	-3.7	0.0	-3.0
		0.1	0.06	-2	-5.1	0.0	-6.0
		0.1	0.02	-2	-4.4	0.0	0.0

Notes:

Starting Pumping at 10:52
 Initial Depth to Water = 34.41 ft
 Total Volume Purged = 2.25 gallons
 Final Depth to Water: 35.52
 Sample collected at 11:10 on 3/10/10



03/10/10

Horiba U-22XD
ISI Low-Flow Log

Project Information:

Operator Name Rachel Naccarati/ Andrew Fowler
 Company Name URS
 Project Name Chevron Sunol Pipeline
 Site Name Sunol

Pump Information:

Pump Model/Type Mega Monsoon
 Tubing Type Polyethylene
 Tubing Diameter 1/2 [in]
 Tubing Length 45 [ft]
 Pump placement from TOC 37.3 [ft]

Well Information:

Well Id MW-2
 Well diameter 4 [in]
 Well total depth 38.3 [ft]
 Depth to top of screen 23.5 [ft]
 Screen length 15 [ft]
 Depth to Water 31.03 [ft]

Pumping information:

Final pumping rate 400 mL/min
 Flowcell volume 1000 mL
 Calculated Sample Rate NM
 Sample rate NM
 Stabilized drawdown NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Multi-parameter Readings	9:40	15.5	6.88	127	35.5	0.75	-9
	9:43	15.5	6.94	125	48.0	0.56	-11
	9:46	15.6	6.98	120	59.6	0.76	-9
	9:49	15.7	7.00	115	68.7	1.18	-1
	9:52	15.8	6.98	113	67.5	1.36	5
	9:55	15.8	6.97	109	52.0	2.00	17
	9:58	15.8	6.92	105	45.5	2.23	23
	10:01	15.7	6.89	101	40.1	2.65	31
	10:04	15.7	6.89	100	37.3	2.74	34
	10:07	15.8	6.89	99	38.8	2.81	38
Sample collected from MW-2 at 10:10 on 3/10/10							
Variance in last 4 readings		-0.1	-0.03	-4	-5.4	0.42	8
		0.0	0.00	-1	-2.8	0.09	3
		0.1	0.00	-1	1.5	0.07	4

Notes:

Starting Pumping at 09:40
 Initial Depth to Water = 31.03 ft
 Total Volume Purged = 4 gallons
 Final Depth to Water: 30.44
 Sample collected at 10:10 on 3/10/10



03/09/10

Horiba U-22XD
ISI Low-Flow Log

Project Information:

Operator Name Rachel Naccarati/ Andrew Fowler
 Company Name URS
 Project Name Chevron Sunol Pipeline
 Site Name Sunol

Pump Information:

Pump Model/Type Mega Monsoon
 Tubing Type Polyethylene
 Tubing Diameter 1/2 [in]
 Tubing Length 40 [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 30.60 [ft]

Pumping information:

Final pumping rate 400 mL/min
 Flowcell volume 1000 mL
 Calculated Sample Rate NM
 Sample rate NM
 Stabilized drawdown NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Multi-parameter Readings	14:09	15	6.45	92	18.8	2.77	217
	14:12	15.1	6.43	92	59.9	2.16	210
	14:15	15.3	6.58	92	64.6	1.92	198
	14:18	15.4	6.70	92	60.5	1.82	189
	14:21	15.5	6.76	92	82.8	1.76	184
	14:24	15.5	6.78	92	99.7	1.75	182
	Sample collected from MW-3 at 14:30 on 3/9/10						
Variance in last 4 readings		0.1	0.12	0	-4.1	-0.10	-9
		0.1	0.06	0	22.3	-0.06	-5
		0.0	0.02	0	16.9	-0.01	-2

Notes:

Starting Pumping at 14:30
 Initial Depth to Water = 30.60 ft
 Total Volume Purged = 2.5 gallons
 Final Depth to Water: NM
 Sample collected at 14:30 on 3/9/10



03/09/10

Horiba U-22XD
ISI Low-Flow Log

Project Information:

Operator Name Rachel Naccarati/ Andrew Fowler
 Company Name URS
 Project Name Chevron Sunol Pipeline
 Site Name Sunol

Pump Information:

Pump Model/Type Mega Monsoon
 Tubing Type Polyethylene
 Tubing Diameter 1/4 [in]
 Tubing Length 43 [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 35.69 [ft]

Pumping information:

Final pumping rate 300 mL/min
 Flowcell volume 1000 mL
 Calculated Sample Rate NM
 Sample rate NM
 Stabilized drawdown NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Multi-parameter Readings	13:20	16.3	6.53	119	8.3	0.58	199
	13:23	16.2	6.38	117	14.2	0.00	174
	13:26	16.2	6.49	113	14.4	0.00	148
	13:29	16.2	6.62	110	12.6	0.00	134
	13:32	16.3	6.65	108	11.4	0.00	129
	13:35	16.3	6.70	107	6.9	0.00	125
	13:38	16.3	6.74	104	8.1	0.05	123
	Sample collected from MW-4 at 13:40 on 3/9/10						
Variance in last 4 readings		0.1	0.03	-2	-1.2	0.00	-5
		0.0	0.05	-1	-4.5	0.00	-4
		0.0	0.04	-3	1.2	0.05	-2

Notes:

Starting Pumping at 13:20
 Initial Depth to Water = 35.69 ft
 Total Volume Purged = 3.5 gallons
 Final Depth to Water: 35.69
 Sample collected at 13:40 on 3/9/10



03/10/10

Horiba U-22XD
ISI Low-Flow Log

Project Information:

Operator Name Rachel Naccarati/ Andrew Fowler
 Company Name URS
 Project Name Chevron Sunol Pipeline
 Site Name Sunol

Pump Information:

Pump Model/Type Mega Monsoon
 Tubing Type Polyethylene
 Tubing Diameter 1/2 [in]
 Tubing Length 25 [ft]
 Pump placement from TOC 23.5 [ft]

Well Information:

Well Id MW-8
 Well diameter 2 [in]
 Well total depth 24.5 [ft]
 Depth to top of screen 14.5 [ft]
 Screen length 10 [ft]
 Depth to Water 18.97 [ft]

Pumping information:

Final pumping rate 300 mL/min
 Flowcell volume 1000 mL
 Calculated Sample Rate NM
 Sample rate NM
 Stabilized drawdown NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Multi-parameter Readings	12:37	19.7	6.73	104	38.2	1.47	-45
	12:40	19.9	6.60	104	21.4	1.08	-55
	12:43	20.1	6.66	103	12.4	0.59	-64
	12:46	20.2	6.77	104	9.2	0.21	-73
	12:49	20.2	6.85	104	7.2	0.02	-79
	12:52	20.3	6.89	105	6.4	0.00	-85
	Sample collected from MW-8 at 12:55 on 3/10/10						
Variance in last 4 readings		0.1	0.11	-1	-3.2	-0.38	-9
		0.0	0.08	0	-2.0	-0.19	-6
		0.1	0.04	-1	-0.8	-0.02	-6

Notes:

Starting Pumping at 12:35
 Initial Depth to Water = 18.97 ft
 Total Volume Purged = 3 gallons
 Final Depth to Water: 21.54
 Sample collected at 12:55 on 3/10/10
 MW-X Collected at 13:00



03/10/10

Horiba U-22XD
ISI Low-Flow Log

Project Information:

Operator Name Rachel Naccarati/ Andrew Fowler
 Company Name URS
 Project Name Chevron Sunol Pipeline
 Site Name Sunol

Pump Information:

Pump Model/Type Mega Monsoon
 Tubing Type Polyethylene
 Tubing Diameter 1/2 [in]
 Tubing Length 50.0 [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 39.97 [ft]

Pumping information:

Final pumping rate 300 mL/min
 Flowcell volume 1000 mL
 Calculated Sample Rate NM
 Sample rate NM
 Stabilized drawdown NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Multi-parameter Readings	8:40	16.0	6.74	117	295.0	0.00	-159
	8:43	16.6	6.85	116	230.0	0.00	-172
	8:46	16.9	6.85	115	116.0	0.00	-185
	8:49	17.0	6.84	114	74.9	0.00	-188
	8:52	17.3	6.83	112	55.9	0.00	-192
	8:55	17.6	6.83	112	32.9	0.00	-196
	8:58	17.7	6.84	112	24.7	0.00	-197
	Sample collected from MW-9 at 09:00 on 3/9/10						
Variance in last 4 readings		0.30	-0.01	-2	-19.0	0.00	-4
		0.30	0.00	0	-23.0	0.00	-4
		0.10	0.01	0	-8.2	0.00	-1

Notes:

Starting Pumping at 08:40
 Initial Depth to Water = 39.97 ft
 Total Volume Purged = 2.5 gallons
 Sample collected at 09:00
 Final Depth to Water = 40.08 ft
 Sheen on purged water
 Slight odor observed
 Water dark color



03/09/10

Horiba U-22XD
ISI Low-Flow Log

Project Information:

Operator Name Rachel Naccarati/ Andrew Fowler
 Company Name URS
 Project Name Chevron Sunol Pipeline
 Site Name Sunol

Pump Information:

Pump Model/Type Mega Monsoon
 Tubing Type Polyethylene
 Tubing Diameter 1/2 [in]
 Tubing Length 56 [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 42.62 [ft]

Pumping information:

Final pumping rate 400 mL/min
 Flowcell volume 1000 mL
 Calculated Sample Rate NM
 Sample rate NM
 Stabilized drawdown NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Multi-parameter Readings	11:25	17.1	6.69	219	40.3	0.00	-13
	11:28	17.6	6.65	210	63.5	0.00	-3
	11:31	17.7	6.71	202	80.3	0.00	20
	11:34	17.7	6.72	189	70.4	0.00	40
	11:37	17.8	6.79	154	71.9	0.51	59
	11:40	17.8	6.76	134	39.2	1.25	81
	11:43	17.7	6.79	119	22.9	1.51	92
	11:46	17.7	6.82	113	12.9	1.55	98
	11:49	17.7	6.84	111	14.1	1.56	99
	11:52	17.7	6.89	110	10.9	1.52	105
	Sample collected from MW-10 at 11:55 on 3/9/10						
Variance in last 4 readings		0.0	0.03	-6	-10.0	0.04	6
		0.0	0.02	-2	1.2	0.01	1
		0.0	0.05	-1	-3.2	-0.04	6

Notes:

Starting Pumping at 11:20
 Initial Depth to Water = 42.62 ft
 Total Volume Purged = 5 gallons
 Sample collected at 11:55 on 3/9/10
 Final Depth to Water: 42.62



03/09/10

Horiba U-22XD
ISI Low-Flow Log

Project Information:

Operator Name Rachel Naccarati/ Andrew Fowler
 Company Name URS
 Project Name Chevron Sunol Pipeline
 Site Name Sunol

Pump Information:

Pump Model/Type Mega Monsoon
 Tubing Type Polyethylene
 Tubing Diameter 1/2 [in]
 Tubing Length 50 [ft]
 Pump placement from TOC 46 [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 36.78[ft]

Pumping information:

Final pumping rate 400 mL/min
 Flowcell volume 1000 mL
 Calculated Sample Rate NM
 Sample rate NM
 Stabilized drawdown NM

Low-Flow Sampling Stabilization Summary

	Time	Temp [C]	pH [pH]	Cond. [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-3%	+/-1	+/-0.2	+/-20
Multi-parameter Readings	10:05	16.5	6.64	249	46.3	0.95	-125
	10:08	17.2	6.60	227	31.8	0.00	-124
	10:11	17.4	6.74	129	31.2	2.78	28
	10:14	17.7	6.74	118	17.1	3.30	73
	10:17	17.9	6.74	115	11.1	3.52	89
	10:20	17.9	6.71	113	6.2	3.66	98
	10:23	18.1	6.74	111	3.8	3.62	113
	10:26	18.1	6.72	111	7.9	3.66	123
	10:29	18.2	6.73	111	11.6	3.68	133
	Sample collected from MW-11 at 10:35 on 3/9/10						
Variance in last 4 readings		0.2	0.03	-2	-2.4	-0.04	15
		0.0	-0.02	0	4.1	0.04	10
		0.1	0.01	0	3.7	0.02	10

Notes:

Starting Pumping at 10:00
 Initial Depth to Water = 36.78 ft
 Total Volume Purged = 4 gallons
 Final Depth to water = 36.29
 Sample collected at 10:35 on 3/9/10
 Sulfur odor on purge water

Appendix B
Laboratory Analytical Results

ANALYTICAL RESULTS

Prepared for:

Chevron Pipeline Co.
100 Northpark Blvd
Covington LA 70433

713-432-3267

Prepared by:

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

March 17, 2010

Project: MP 2.7

Samples arrived at the laboratory on Wednesday, March 10, 2010. The PO# for this group is 0015041168 and the release number is JOHNSON. The group number for this submittal is 1185429.

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-3 Grab Water	5923561
MW-3_Filtered Grab Water	5923562
MW-4 Grab Water	5923563
MW-4_Filtered Grab Water	5923564
MW-10 Grab Water	5923565
MW-10_Filtered Grab Water	5923566
MW-11 Grab Water	5923567
MW-11_Filtered Grab Water	5923568
Stream Grab Water	5923569
TB-1 NA Water	5923570

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

ELECTRONIC URS
COPY TO
ELECTRONIC URS
COPY TO
ELECTRONIC URS
COPY TO

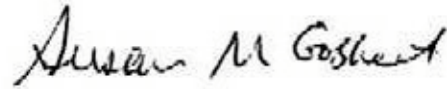
Attn: Joe Morgan

Attn: Rachel Naccarati

Attn: Jacob Henry

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

Respectfully Submitted,



Susan M. Goshert
Group Leader



Analysis Report

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

Sample Description: MW-3 Grab Water
 NA URSO
 Sunol Pipeline SL0600100443 MW-3

LLI Sample # WW 5923561
LLI Group # 1185429
 CA

Project Name: MP 2.7

Collected: 03/09/2010 14:30 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

SUN-3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l ug/l					
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
GC Volatiles SW-846 8015B ug/l ug/l					
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
GC Miscellaneous SW-846 8015B modified ug/l ug/l					
07105	Methane	74-82-8	N.D.	5.0	1
Metals SW-846 6010B ug/l ug/l					
07058	Manganese	7439-96-5	9.3	0.84	1
Wet Chemistry EPA 300.0 ug/l ug/l					
00368	Nitrate Nitrogen	14797-55-8	12,600	250	5
00228	Sulfate	14808-79-8	54,400	1,500	5
EPA 160.1 ug/l ug/l					
00212	Total Dissolved Solids	n.a.	496,000	9,700	1
EPA 310.1 ug/l as CaCO3 ug/l as CaCO3					
00202	Alkalinity to pH 4.5	n.a.	293,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 3500 Fe B modified ug/l ug/l					
08344	Ferrous Iron	n.a.	64	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	F100712AA	03/12/2010 13:56	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F100712AA	03/12/2010 13:56	Anita M Dale	1



Analysis Report

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

Sample Description: MW-3 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-3

LLI Sample # WW 5923561
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 14:30 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

SUN-3

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071B07A	03/15/2010 18:08	Butch A Sokolowski	1
01146	GC VOA Water Prep	SW-846 5030B	1	10071B07A	03/15/2010 18:08	Butch A Sokolowski	1
07105	Methane - VHH	SW-846 8015B modified	1	100700013A	03/11/2010 15:02	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	100701848003	03/16/2010 21:28	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100701848003	03/11/2010 20:20	Mirit S Shenouda	1
00368	Nitrate Nitrogen	EPA 300.0	1	10069196601A	03/10/2010 16:11	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10069196601A	03/10/2010 16:11	Ashley M Adams	5
00212	Total Dissolved Solids	EPA 160.1	1	10070021201A	03/11/2010 08:04	Susan E Hibner	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	10071020201A	03/12/2010 11:38	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	10071020201A	03/12/2010 11:38	Geraldine C Smith	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	10069834401A	03/10/2010 23:45	Daniel S Smith	1



Analysis Report

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

Sample Description: MW-3_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-3

LLI Sample # WW 5923562
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 14:30 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00
Reported: 03/17/2010 at 11:52
Discard: 04/17/2010

Chevron Pipeline Co.
100 Northpark Blvd
Covington LA 70433

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

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	100701848003	03/16/2010 21:46	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100701848003	03/11/2010 20:20	Mirit S Shenouda	1



Analysis Report

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

Sample Description: MW-4 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-4

LLI Sample # WW 5923563
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 13:40 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00
 Reported: 03/17/2010 at 11:52
 Discard: 04/17/2010

Chevron Pipeline Co.
 100 Northpark Blvd
 Covington LA 70433

SUN-4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l					
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
GC Volatiles SW-846 8015B ug/l					
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
GC Miscellaneous SW-846 8015B modified ug/l					
07105	Methane	74-82-8	N.D.	5.0	1
Metals SW-846 6010B ug/l					
07058	Manganese	7439-96-5	34.3	0.84	1
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	10,500	250	5
00228	Sulfate	14808-79-8	89,800	3,000	10
EPA 160.1 ug/l					
00212	Total Dissolved Solids	n.a.	560,000	9,700	1
EPA 310.1 ug/l as CaCO3					
00202	Alkalinity to pH 4.5	n.a.	312,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 3500 Fe B modified ug/l					
08344	Ferrous Iron	n.a.	130	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	F100712AA	03/12/2010 14:18	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F100712AA	03/12/2010 14:18	Anita M Dale	1



Analysis Report

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

Sample Description: MW-4 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-4

LLI Sample # WW 5923563
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 13:40 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

SUN-4

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071B07A	03/15/2010 18:34	Butch A Sokolowski	1
01146	GC VOA Water Prep	SW-846 5030B	1	10071B07A	03/15/2010 18:34	Butch A Sokolowski	1
07105	Methane - VHH	SW-846 8015B modified	1	100700013A	03/11/2010 15:15	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	100701848003	03/16/2010 21:49	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100701848003	03/11/2010 20:20	Mirit S Shenouda	1
00368	Nitrate Nitrogen	EPA 300.0	1	10069196601A	03/10/2010 17:00	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10069196601A	03/11/2010 12:25	Ashley M Adams	10
00212	Total Dissolved Solids	EPA 160.1	1	10070021201A	03/11/2010 08:04	Susan E Hibner	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	10071020201A	03/12/2010 11:38	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	10071020201A	03/12/2010 11:38	Geraldine C Smith	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	10069834401A	03/10/2010 23:45	Daniel S Smith	1



Analysis Report

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

Sample Description: MW-4_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-4

LLI Sample # WW 5923564
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 13:40 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

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

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	100701848003	03/16/2010 21:58	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100701848003	03/11/2010 20:20	Mirit S Shenouda	1



Analysis Report

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

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

LLI Sample # WW 5923565
LLI Group # 1185429
 CA

Project Name: MP 2.7

Collected: 03/09/2010 11:55 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00
 Reported: 03/17/2010 at 11:52
 Discard: 04/17/2010

Chevron Pipeline Co.
 100 Northpark Blvd
 Covington LA 70433

SUN10

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B 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
GC Volatiles SW-846 8015B ug/l					
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
GC Miscellaneous SW-846 8015B modified ug/l					
07105	Methane	74-82-8	190	5.0	1
Metals SW-846 6010B ug/l					
07058	Manganese	7439-96-5	35.7	0.84	1
Wet Chemistry EPA 300.0 ug/l					
00368	Nitrate Nitrogen	14797-55-8	13,900	250	5
00228	Sulfate	14808-79-8	63,600	1,500	5
EPA 160.1 ug/l					
00212	Total Dissolved Solids	n.a.	596,000	19,400	1
EPA 310.1 ug/l as CaCO3					
00202	Alkalinity to pH 4.5	n.a.	349,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 3500 Fe B modified ug/l					
08344	Ferrous Iron	n.a.	54	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	F100712AA	03/12/2010 14:39	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F100712AA	03/12/2010 14:39	Anita M Dale	1



Analysis Report

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

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

LLI Sample # WW 5923565
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 11:55 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

SUN10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071B07A	03/15/2010 19:01	Butch A Sokolowski	1
01146	GC VOA Water Prep	SW-846 5030B	1	10071B07A	03/15/2010 19:01	Butch A Sokolowski	1
07105	Methane - VHH	SW-846 8015B modified	1	100700013A	03/11/2010 15:29	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	100701848003	03/16/2010 22:01	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100701848003	03/11/2010 20:20	Mirit S Shenouda	1
00368	Nitrate Nitrogen	EPA 300.0	1	10069196601A	03/10/2010 17:16	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10069196601A	03/10/2010 17:16	Ashley M Adams	5
00212	Total Dissolved Solids	EPA 160.1	1	10070021201A	03/11/2010 08:04	Susan E Hibner	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	10071020201A	03/12/2010 11:38	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	10071020201A	03/12/2010 11:38	Geraldine C Smith	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	10069834401A	03/10/2010 23:45	Daniel S Smith	1



Analysis Report

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

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

LLI Sample # WW 5923566
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 11:55 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

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

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	100701848003	03/16/2010 22:04	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100701848003	03/11/2010 20:20	Mirit S Shenouda	1

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

LLI Sample # WW 5923567
 LLI Group # 1185429
 CA

Project Name: MP 2.7

Collected: 03/09/2010 10:35 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

SUN11

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l ug/l					
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
GC Volatiles SW-846 8015B ug/l ug/l					
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
GC Miscellaneous SW-846 8015B modified ug/l ug/l					
07105	Methane	74-82-8	39	5.0	1
Metals SW-846 6010B ug/l ug/l					
07058	Manganese	7439-96-5	17.6	0.84	1
Wet Chemistry EPA 300.0 ug/l ug/l					
00368	Nitrate Nitrogen	14797-55-8	11,900	250	5
00228	Sulfate	14808-79-8	91,700	3,000	10
EPA 160.1 ug/l ug/l					
00212	Total Dissolved Solids	n.a.	615,000	19,400	1
EPA 310.1 ug/l as CaCO3 ug/l as CaCO3					
00202	Alkalinity to pH 4.5	n.a.	341,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 3500 Fe B modified ug/l ug/l					
08344	Ferrous Iron	n.a.	87	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	F100711AA	03/12/2010 14:49	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F100711AA	03/12/2010 14:49	Anita M Dale	1



Analysis Report

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

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

LLI Sample # WW 5923567
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 10:35 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

SUN11

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071B07A	03/15/2010 19:28	Butch A Sokolowski	1
01146	GC VOA Water Prep	SW-846 5030B	1	10071B07A	03/15/2010 19:28	Butch A Sokolowski	1
07105	Methane - VHH	SW-846 8015B modified	1	100700014A	03/11/2010 20:15	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	100701848003	03/16/2010 22:07	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100701848003	03/11/2010 20:20	Mirit S Shenouda	1
00368	Nitrate Nitrogen	EPA 300.0	1	10069196601A	03/10/2010 17:33	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10069196601A	03/11/2010 12:42	Ashley M Adams	10
00212	Total Dissolved Solids	EPA 160.1	1	10070021201A	03/11/2010 08:04	Susan E Hibner	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	10071020201A	03/12/2010 11:38	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	10071020201A	03/12/2010 11:38	Geraldine C Smith	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	10069834401A	03/10/2010 23:45	Daniel S Smith	1



Analysis Report

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

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

LLI Sample # WW 5923568
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 10:35 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

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

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	100701848003	03/16/2010 22:10	John W Yanzuk II	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100701848003	03/11/2010 20:20	Mirit S Shenouda	1



Analysis Report

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

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

LLI Sample # WW 5923569
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010 12:45 by RN

Account Number: 11875

Submitted: 03/10/2010 09:00

Chevron Pipeline Co.

Reported: 03/17/2010 at 11:52

100 Northpark Blvd

Discard: 04/17/2010

Covington LA 70433

SUNST

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
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
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. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	T100711AA	03/12/2010 14:16	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100711AA	03/12/2010 14:16	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071B07A	03/15/2010 19:55	Butch A Sokolowski	1
01146	GC VOA Water Prep	SW-846 5030B	1	10071B07A	03/15/2010 19:55	Butch A Sokolowski	1



Analysis Report

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

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

LLI Sample # WW 5923570
LLI Group # 1185429
CA

Project Name: MP 2.7

Collected: 03/09/2010

Account Number: 11875

Submitted: 03/10/2010 09:00
Reported: 03/17/2010 at 11:52
Discard: 04/17/2010

Chevron Pipeline Co.
100 Northpark Blvd
Covington LA 70433

SUNT1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
	SW-846 8260B		ug/l	ug/l	
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
GC Volatiles					
	SW-846 8015B		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	T100711AA	03/12/2010 13:29	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100711AA	03/12/2010 13:29	Daniel H Heller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071B07A	03/15/2010 11:58	Butch A Sokolowski	1
01146	GC VOA Water Prep	SW-846 5030B	1	10071B07A	03/15/2010 11:58	Butch A Sokolowski	1

Quality Control Summary

 Client Name: Chevron Pipeline Co.
 Reported: 03/17/10 at 11:52 AM

Group Number: 1185429

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: F100711AA	Sample number(s): 5923567							
Benzene	N.D.	0.5	ug/l	93	89	79-120	4	30
Ethylbenzene	N.D.	0.5	ug/l	95	93	79-120	3	30
Toluene	N.D.	0.5	ug/l	96	94	79-120	2	30
Xylene (Total)	N.D.	0.5	ug/l	94	91	80-120	3	30
Batch number: F100712AA	Sample number(s): 5923561, 5923563, 5923565							
Benzene	N.D.	0.5	ug/l	89		79-120		
Ethylbenzene	N.D.	0.5	ug/l	92		79-120		
Toluene	N.D.	0.5	ug/l	93		79-120		
Xylene (Total)	N.D.	0.5	ug/l	91		80-120		
Batch number: T100711AA	Sample number(s): 5923569-5923570							
Benzene	N.D.	0.5	ug/l	98	97	79-120	1	30
Ethylbenzene	N.D.	0.5	ug/l	92	90	79-120	2	30
Toluene	N.D.	0.5	ug/l	98	96	79-120	2	30
Xylene (Total)	N.D.	0.5	ug/l	91	89	80-120	2	30
Batch number: 10071B07A	Sample number(s): 5923561, 5923563, 5923565, 5923567, 5923569-5923570							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	118	75-135	8	30
Batch number: 100700013A	Sample number(s): 5923561, 5923563, 5923565							
Methane	N.D.	5.0	ug/l	102		80-120		
Batch number: 100700014A	Sample number(s): 5923567							
Methane	N.D.	5.0	ug/l	102		80-120		
Batch number: 100701848003	Sample number(s): 5923561-5923568							
Iron	N.D.	52.2	ug/l	105		90-112		
Manganese	N.D.	0.84	ug/l	104		90-110		
Batch number: 10069196601A	Sample number(s): 5923561, 5923563, 5923565, 5923567							
Nitrate Nitrogen	N.D.	50.	ug/l	102		90-110		
Sulfate	N.D.	300.	ug/l	96		89-110		
Batch number: 10069834401A	Sample number(s): 5923561, 5923563, 5923565, 5923567							
Ferrous Iron	N.D.	10.	ug/l	98		92-105		
Batch number: 10070021201A	Sample number(s): 5923561, 5923563, 5923565, 5923567							
Total Dissolved Solids	N.D.	9,700.	ug/l	99		80-120		
Batch number: 10071020201A	Sample number(s): 5923561, 5923563, 5923565, 5923567							
Alkalinity to pH 4.5	N.D.	460.	ug/l as CaCO3	101		98-103		

*- 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.
 Reported: 03/17/10 at 11:52 AM

Group Number: 1185429

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

<u>Analysis Name</u>	<u>MS</u>	<u>MSD</u>	<u>MS/MSD</u>	<u>RPD</u>	<u>BKG</u>	<u>DUP</u>	<u>DUP</u>	<u>Dup RPD</u>
	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Batch number: F100711AA	Sample number(s): 5923567 UNSPK: P921260							
Benzene	96		80-126					
Ethylbenzene	99		71-134					
Toluene	100		80-125					
Xylene (Total)	97		79-125					
Batch number: F100712AA	Sample number(s): 5923561,5923563,5923565 UNSPK: P923800							
Benzene	92	94	80-126	2	30			
Ethylbenzene	96	97	71-134	1	30			
Toluene	98	99	80-125	0	30			
Xylene (Total)	95	95	79-125	0	30			
Batch number: T100711AA	Sample number(s): 5923569-5923570 UNSPK: 5923569							
Benzene	101		80-126					
Ethylbenzene	98		71-134					
Toluene	101		80-125					
Xylene (Total)	94		79-125					
Batch number: 10071B07A TPH-GRO N. CA water C6-C12	Sample number(s): 5923561,5923563,5923565,5923567,5923569-5923570 UNSPK: P924752							
	100		63-154					
Batch number: 100700013A Methane	Sample number(s): 5923561,5923563,5923565 UNSPK: P923746							
	50	50	35-157	0	20			
Batch number: 100700014A Methane	Sample number(s): 5923567 UNSPK: P924575							
	-2833 (2)	-2833 (2)	35-157	0	20			
Batch number: 100701848003 Iron	Sample number(s): 5923561-5923568 UNSPK: 5923561 BKG: 5923561							
	109	107	75-125	2	20	346	361	4 (1) 20
Manganese	104	101	75-125	3	20	9.3	9.3	0 (1) 20
Batch number: 10069196601A Nitrate Nitrogen	Sample number(s): 5923561,5923563,5923565,5923567 UNSPK: P922938 BKG: P922938							
	94		90-110			310	490	46* (1) 20
Sulfate	97		90-110			335,000	342,000	2 (1) 20
Batch number: 10069834401A Ferrous Iron	Sample number(s): 5923561,5923563,5923565,5923567 UNSPK: P923747 BKG: P923747							
	97	100	66-130	2	6	25,200	25,400	1 (1) 10
Batch number: 10070021201A Total Dissolved Solids	Sample number(s): 5923561,5923563,5923565,5923567 UNSPK: P923871 BKG: P923871							
	98	101	54-143	1	12	254,000	254,000	0 9
Batch number: 10071020201A Alkalinity to pH 4.5	Sample number(s): 5923561,5923563,5923565,5923567 UNSPK: P923731 BKG: P923731							
	100	100	64-130	0	2	43,100	43,500	1 4
Alkalinity to pH 8.3						N.D.	N.D.	0 (1) 4

*- 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.
 Reported: 03/17/10 at 11:52 AM

Group Number: 1185429

Surrogate Quality Control

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

Analysis Name: BTEX by 8260B

Batch number: F100711AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5923567	93	99	102	91
Blank	96	98	106	95
LCS	95	98	103	98
LCSD	97	99	106	100
MS	96	98	104	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX by 8260B

Batch number: F100712AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5923561	95	101	107	95
5923563	92	97	104	93
5923565	95	101	106	94
Blank	95	99	106	96
LCS	95	98	103	97
MS	94	99	103	97
MSD	98	101	106	99
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX by 8260B

Batch number: T100711AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5923569	101	101	102	105
5923570	98	100	103	106
Blank	99	99	103	104
LCS	100	106	103	107
LCSD	99	103	102	103
MS	99	101	103	107
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12

Batch number: 10071B07A

Trifluorotoluene-F

5923561	99
5923563	100
5923565	102
5923567	101
5923569	101
5923570	105
Blank	102
LCS	116
LCSD	117
MS	117
Limits:	63-135

*- Outside of specification

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

Quality Control Summary

Client Name: Chevron Pipeline Co.
Reported: 03/17/10 at 11:52 AM

Group Number: 1185429

Surrogate Quality Control

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 100700013A
Propene

5923561	57
5923563	58
5923565	69
Blank	75
LCS	75
MS	73
MSD	74

Limits: 42-131

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 100700014A
Propene

5923567	72
Blank	75
LCS	71
MS	90
MSD	91

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.

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 <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight 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 quantitated 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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ANALYTICAL RESULTS

Prepared for:

Chevron Pipeline Co.
100 Northpark Blvd
Covington LA 70433

713-432-3267

Prepared by:

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

March 24, 2010

Project: MP 2.7

Samples arrived at the laboratory on Thursday, March 11, 2010. The PO# for this group is 0015041168 and the release number is JOHNSON. The group number for this submittal is 1185639.

<u>Client Sample Description</u>	<u>Lancaster Labs (LLI) #</u>
MW-1 Grab Water	5924653
MW-1_Filtered Grab Water	5924654
MW-2 Grab Water	5924655
MW-2_Filtered Grab Water	5924656
MW-8 Grab Water	5924657
MW-8_Filtered Grab Water	5924658
MW-9 Grab Water	5924659
MW-9_Filtered Grab Water	5924660
MW-X Grab Water	5924661
TB-2 NA Water	5924662

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

ELECTRONIC URS
COPY TO
ELECTRONIC URS
COPY TO
ELECTRONIC URS
COPY TO

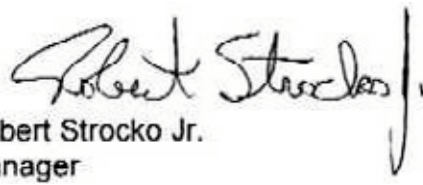
Attn: Joe Morgan

Attn: Rachel Naccarati

Attn: Jacob Henry

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

Respectfully Submitted,



Robert Strocko Jr.
Manager



Analysis Report

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

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

LLI Sample # WW 5924653
LLI Group # 1185639
 CA

Project Name: MP 2.7

Collected: 03/10/2010 11:10 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
 Reported: 03/24/2010 at 10:47
 Discard: 04/24/2010

Chevron Pipeline Co.
 100 Northpark Blvd
 Covington LA 70433

SUN01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l ug/l					
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	4	0.5	1
GC Volatiles SW-846 8015B ug/l ug/l					
01728	TPH-GRO N. CA water C6-C12	n.a.	3,800	50	1
GC Miscellaneous SW-846 8015B modified ug/l ug/l					
07105	Methane	74-82-8	67	5.0	1
Metals SW-846 6010B ug/l ug/l					
07058	Manganese	7439-96-5	431	0.84	1
Wet Chemistry EPA 300.0 ug/l ug/l					
00368	Nitrate Nitrogen	14797-55-8	4,000	250	5
00228	Sulfate	14808-79-8	56,900	1,500	5
EPA 160.1 ug/l ug/l					
00212	Total Dissolved Solids	n.a.	551,000	19,400	1
EPA 310.1 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 3500 Fe B modified ug/l ug/l					
08344	Ferrous Iron	n.a.	N.D.	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	T100741AA	03/15/2010 11:42	Kerri E Koch	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100741AA	03/15/2010 11:42	Kerri E Koch	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071A20A	03/15/2010 13:09	Elizabeth J Marin	1



Analysis Report

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

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

LLI Sample # WW 5924653
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010 11:10 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35

Chevron Pipeline Co.

Reported: 03/24/2010 at 10:47

100 Northpark Blvd

Discard: 04/24/2010

Covington LA 70433

SUN01

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	10071A20A	03/15/2010 13:09	Elizabeth J Marin	1
07105	Methane - VHH	SW-846 8015B modified	1	100700014A	03/12/2010 14:39	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	100741848002	03/19/2010 08:59	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100741848002	03/15/2010 13:48	James L Mertz	1
00368	Nitrate Nitrogen	EPA 300.0	1	10070196602A	03/11/2010 20:38	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10070196602A	03/11/2010 20:38	Ashley M Adams	5
00212	Total Dissolved Solids	EPA 160.1	1	10071021201A	03/12/2010 09:04	Susan E Hibner	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	10074020201A	03/15/2010 11:46	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	10074020201A	03/15/2010 11:46	Geraldine C Smith	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	10070834401A	03/11/2010 22:20	Daniel S Smith	1



Analysis Report

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

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

LLI Sample # WW 5924654
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010 11:10 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
Reported: 03/24/2010 at 10:47
Discard: 04/24/2010

Chevron Pipeline Co.
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Covington LA 70433

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

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	100741848002	03/19/2010 09:02	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100741848002	03/15/2010 13:48	James L Mertz	1



Analysis Report

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

Sample Description: MW-2 Grab Water
 NA URSO
 Sunol Pipeline SL0600100443 MW-2

LLI Sample # WW 5924655
LLI Group # 1185639
 CA

Project Name: MP 2.7

Collected: 03/10/2010 10:10 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
 Reported: 03/24/2010 at 10:47
 Discard: 04/24/2010

Chevron Pipeline Co.
 100 Northpark Blvd
 Covington LA 70433

SUNO2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles SW-846 8260B ug/l ug/l					
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	2	0.5	1
GC Volatiles SW-846 8015B ug/l ug/l					
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
GC Miscellaneous SW-846 8015B modified ug/l ug/l					
07105	Methane	74-82-8	N.D.	5.0	1
Metals SW-846 6010B ug/l ug/l					
07058	Manganese	7439-96-5	18.2	0.84	1
Wet Chemistry EPA 300.0 ug/l ug/l					
00368	Nitrate Nitrogen	14797-55-8	13,000	250	5
00228	Sulfate	14808-79-8	54,900	1,500	5
EPA 160.1 ug/l ug/l					
00212	Total Dissolved Solids	n.a.	532,000	9,700	1
EPA 310.1 ug/l as CaCO3 ug/l as CaCO3					
00202	Alkalinity to pH 4.5	n.a.	322,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
SM20 3500 Fe B modified ug/l ug/l					
08344	Ferrous Iron	n.a.	350	10	1

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	T100741AA	03/15/2010 10:32	Kerri E Koch	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100741AA	03/15/2010 10:32	Kerri E Koch	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071A20A	03/15/2010 13:31	Elizabeth J Marin	1



Analysis Report

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

Sample Description: MW-2 Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-2

LLI Sample # WW 5924655
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010 10:10 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
Reported: 03/24/2010 at 10:47
Discard: 04/24/2010

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Covington LA 70433

SUNO2

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	10071A20A	03/15/2010 13:31	Elizabeth J Marin	1
07105	Methane - VHH	SW-846 8015B modified	1	100700014A	03/12/2010 08:29	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	100741848002	03/19/2010 09:06	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100741848002	03/15/2010 13:48	James L Mertz	1
00368	Nitrate Nitrogen	EPA 300.0	1	10070196602A	03/11/2010 20:55	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10070196602A	03/11/2010 20:55	Ashley M Adams	5
00212	Total Dissolved Solids	EPA 160.1	1	10071021201A	03/12/2010 09:04	Susan E Hibner	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	10074020201A	03/15/2010 11:46	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	10074020201A	03/15/2010 11:46	Geraldine C Smith	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	10070834401A	03/11/2010 22:20	Daniel S Smith	1



Analysis Report

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

Sample Description: MW-2_Filtered Grab Water
NA URSO
Sunol Pipeline SL0600100443 MW-2

LLI Sample # WW 5924656
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010 10:10 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
Reported: 03/24/2010 at 10:47
Discard: 04/24/2010

Chevron Pipeline Co.
100 Northpark Blvd
Covington LA 70433

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

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	100741848002	03/19/2010 09:16	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100741848002	03/15/2010 13:48	James L Mertz	1



Analysis Report

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

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

LLI Sample # WW 5924657
LLI Group # 1185639
 CA

Project Name: MP 2.7

Collected: 03/10/2010 12:55 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
 Reported: 03/24/2010 at 10:47
 Discard: 04/24/2010

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SUNO8

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
	SW-846 8260B		ug/l	ug/l	
06053	Benzene	71-43-2	570	5	10
06053	Ethylbenzene	100-41-4	730	5	10
06053	Toluene	108-88-3	500	5	10
06053	Xylene (Total)	1330-20-7	1,800	5	10
GC Volatiles					
	SW-846 8015B		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	10,000	250	5
GC Miscellaneous					
	SW-846 8015B modified		ug/l	ug/l	
07105	Methane	74-82-8	330	5.0	1
Metals					
	SW-846 6010B		ug/l	ug/l	
07058	Manganese	7439-96-5	334	0.84	1
Wet Chemistry					
	EPA 300.0		ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	1,700	1,500	5
	EPA 160.1		ug/l	ug/l	
00212	Total Dissolved Solids	n.a.	587,000	19,400	1
	EPA 310.1		ug/l as CaCO3	ug/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	453,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
	SM20 3500 Fe B modified		ug/l	ug/l	
08344	Ferrous Iron	n.a.	3,000	100	10

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	T100741AA	03/15/2010 13:16	Kerri E Koch	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100741AA	03/15/2010 13:16	Kerri E Koch	10
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071A20A	03/15/2010 17:52	Elizabeth J Marin	5



Analysis Report

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

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

LLI Sample # WW 5924657
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010 12:55 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
Reported: 03/24/2010 at 10:47
Discard: 04/24/2010

Chevron Pipeline Co.
100 Northpark Blvd
Covington LA 70433

SUN08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01146	GC VOA Water Prep	SW-846 5030B	1	10071A20A	03/15/2010 17:52	Elizabeth J Marin	5
07105	Methane - VHH	SW-846 8015B modified	1	100700014A	03/12/2010 08:43	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	100741848002	03/19/2010 09:19	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100741848002	03/15/2010 13:48	James L Mertz	1
00368	Nitrate Nitrogen	EPA 300.0	1	10070196602A	03/11/2010 21:11	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10070196602A	03/11/2010 21:11	Ashley M Adams	5
00212	Total Dissolved Solids	EPA 160.1	1	10071021201A	03/12/2010 09:04	Susan E Hibner	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	10074020201A	03/15/2010 11:46	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	10074020201A	03/15/2010 11:46	Geraldine C Smith	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	10070834401A	03/11/2010 22:20	Daniel S Smith	10



Analysis Report

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

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

LLI Sample # WW 5924658
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010 12:55 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35

Chevron Pipeline Co.

Reported: 03/24/2010 at 10:47

100 Northpark Blvd

Discard: 04/24/2010

Covington LA 70433

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
01754	Metals Dissolved Iron	SW-846 6010B 7439-89-6	ug/l 277	ug/l 52.2	1

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	100741848002	03/19/2010 09:22	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100741848002	03/15/2010 13:48	James L Mertz	1



Analysis Report

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

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

LLI Sample # WW 5924659
 LLI Group # 1185639
 CA

Project Name: MP 2.7

Collected: 03/10/2010 09:00 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
 Reported: 03/24/2010 at 10:47
 Discard: 04/24/2010

Chevron Pipeline Co.
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SUN09

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles					
	SW-846 8260B		ug/l	ug/l	
06053	Benzene	71-43-2	N.D.	3	5
06053	Ethylbenzene	100-41-4	250	3	5
06053	Toluene	108-88-3	17	3	5
06053	Xylene (Total)	1330-20-7	1,700	3	5
The reporting limits for the GC/MS volatile compounds were raised due to the level of non-target compounds.					
GC Volatiles					
	SW-846 8015B		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	18,000	250	5
GC Miscellaneous					
	SW-846 8015B modified		ug/l	ug/l	
07105	Methane	74-82-8	46	5.0	1
Metals					
	SW-846 6010B		ug/l	ug/l	
07058	Manganese	7439-96-5	2,940	0.84	1
Wet Chemistry					
	EPA 300.0		ug/l	ug/l	
00368	Nitrate Nitrogen	14797-55-8	N.D.	250	5
00228	Sulfate	14808-79-8	40,900	1,500	5
	EPA 160.1		ug/l	ug/l	
00212	Total Dissolved Solids	n.a.	596,000	19,400	1
	EPA 310.1		ug/l as CaCO3	ug/l as CaCO3	
00202	Alkalinity to pH 4.5	n.a.	448,000	460	1
00201	Alkalinity to pH 8.3	n.a.	N.D.	460	1
	SM20 3500 Fe B modified		ug/l	ug/l	
08344	Ferrous Iron	n.a.	1,700	50	5

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	T100741AA	03/15/2010 13:40	Kerri E Koch	5

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

LLI Sample # WW 5924659
 LLI Group # 1185639
 CA

Project Name: MP 2.7

Collected: 03/10/2010 09:00 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35

Chevron Pipeline Co.

Reported: 03/24/2010 at 10:47

100 Northpark Blvd

Discard: 04/24/2010

Covington LA 70433

SUN09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis		Analyst	Dilution Factor
					Date	Time		
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100741AA	03/15/2010	13:40	Kerri E Koch	5
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071A20A	03/15/2010	18:14	Elizabeth J Marin	5
01146	GC VOA Water Prep	SW-846 5030B	1	10071A20A	03/15/2010	18:14	Elizabeth J Marin	5
07105	Methane - VHH	SW-846 8015B modified	1	100700014A	03/12/2010	08:56	Dustin A Underkoffler	1
07058	Manganese	SW-846 6010B	1	100741848002	03/19/2010	09:26	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100741848002	03/15/2010	13:48	James L Mertz	1
00368	Nitrate Nitrogen	EPA 300.0	1	10070196602A	03/11/2010	22:01	Ashley M Adams	5
00228	Sulfate	EPA 300.0	1	10070196602A	03/11/2010	22:01	Ashley M Adams	5
00212	Total Dissolved Solids	EPA 160.1	1	10071021201A	03/12/2010	09:04	Susan E Hibner	1
00202	Alkalinity to pH 4.5	EPA 310.1	1	10076020201A	03/17/2010	10:47	Geraldine C Smith	1
00201	Alkalinity to pH 8.3	EPA 310.1	1	10076020201A	03/17/2010	10:47	Geraldine C Smith	1
08344	Ferrous Iron	SM20 3500 Fe B modified	1	10070834401A	03/11/2010	22:20	Daniel S Smith	5



Analysis Report

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

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

LLI Sample # WW 5924660
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010 09:00 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35
Reported: 03/24/2010 at 10:47
Discard: 04/24/2010

Chevron Pipeline Co.
100 Northpark Blvd
Covington LA 70433

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

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	100741848002	03/19/2010 09:29	Joanne M Gates	1
01848	WW SW846 ICP Digest (tot rec)	SW-846 3005A	1	100741848002	03/15/2010 13:48	James L Mertz	1



Analysis Report

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

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

LLI Sample # WW 5924661
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010 13:00 by RN

Account Number: 11875

Submitted: 03/11/2010 09:35

Chevron Pipeline Co.

Reported: 03/24/2010 at 10:47

100 Northpark Blvd

Discard: 04/24/2010

Covington LA 70433

SUNOX

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles			SW-846 8260B	ug/l	
06053	Benzene	71-43-2	580	5	10
06053	Ethylbenzene	100-41-4	730	5	10
06053	Toluene	108-88-3	500	5	10
06053	Xylene (Total)	1330-20-7	1,800	5	10
GC Volatiles			SW-846 8015B	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	10,000	250	5

General Sample Comments

State of California Lab Certification No. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	T100741AA	03/15/2010 14:03	Kerri E Koch	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100741AA	03/15/2010 14:03	Kerri E Koch	10
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10071A20A	03/15/2010 18:36	Elizabeth J Marin	5
01146	GC VOA Water Prep	SW-846 5030B	1	10071A20A	03/15/2010 18:36	Elizabeth J Marin	5



Analysis Report

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

Sample Description: TB-2 NA Water
NA URSO
Sunol Pipeline SL0600100443 TB-2

LLI Sample # WW 5924662
LLI Group # 1185639
CA

Project Name: MP 2.7

Collected: 03/10/2010

Account Number: 11875

Submitted: 03/11/2010 09:35
Reported: 03/24/2010 at 10:47
Discard: 04/24/2010

Chevron Pipeline Co.
100 Northpark Blvd
Covington LA 70433

SUNOT

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
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
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. 2501

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06053	BTEX by 8260B	SW-846 8260B	1	T100741AA	03/15/2010 09:46	Kerri E Koch	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100741AA	03/15/2010 09:46	Kerri E Koch	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10076B20A	03/18/2010 00:10	Elizabeth J Marin	1
01146	GC VOA Water Prep	SW-846 5030B	1	10076B20A	03/18/2010 00:10	Elizabeth J Marin	1

Quality Control Summary

 Client Name: Chevron Pipeline Co.
 Reported: 03/24/10 at 10:47 AM

Group Number: 1185639

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

<u>Analysis Name</u>	<u>Blank Result</u>	<u>Blank MDL</u>	<u>Report Units</u>	<u>LCS %REC</u>	<u>LCSD %REC</u>	<u>LCS/LCSD Limits</u>	<u>RPD</u>	<u>RPD Max</u>
Batch number: T100741AA	Sample number(s): 5924653, 5924655, 5924657, 5924659, 5924661-5924662							
Benzene	N.D.	0.5	ug/l	103		79-120		
Ethylbenzene	N.D.	0.5	ug/l	90		79-120		
Toluene	N.D.	0.5	ug/l	94		79-120		
Xylene (Total)	N.D.	0.5	ug/l	90		80-120		
Batch number: 10071A20A	Sample number(s): 5924653, 5924655, 5924657, 5924659, 5924661							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	100	100	75-135	0	30
Batch number: 10076B20A	Sample number(s): 5924662							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	91	100	75-135	10	30
Batch number: 100700014A	Sample number(s): 5924653, 5924655, 5924657, 5924659							
Methane	N.D.	5.0	ug/l	102		80-120		
Batch number: 100741848002	Sample number(s): 5924653-5924660							
Iron	N.D.	52.2	ug/l	100		90-112		
Manganese	N.D.	0.84	ug/l	98		90-110		
Batch number: 10070196602A	Sample number(s): 5924653, 5924655, 5924657, 5924659							
Nitrate Nitrogen	N.D.	50.	ug/l	103		90-110		
Sulfate	N.D.	300.	ug/l	98		89-110		
Batch number: 10070834401A	Sample number(s): 5924653, 5924655, 5924657, 5924659							
Ferrous Iron	N.D.	10.	ug/l	100		92-105		
Batch number: 10071021201A	Sample number(s): 5924653, 5924655, 5924657, 5924659							
Total Dissolved Solids	N.D.	9,700.	ug/l	108		80-120		
Batch number: 10074020201A	Sample number(s): 5924653, 5924655, 5924657							
Alkalinity to pH 4.5	N.D.	460.	ug/l as CaCO3	100		98-103		
Batch number: 10076020201A	Sample number(s): 5924659							
Alkalinity to pH 4.5	N.D.	460.	ug/l as CaCO3	101		98-103		

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

MS	MSD	MS/MSD	RPD	BKG	DUP	DUP	Dup RPD
----	-----	--------	-----	-----	-----	-----	---------

*- 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: 1185639

Reported: 03/24/10 at 10:47 AM

<u>Analysis Name</u>	<u>%REC</u>	<u>%REC</u>	<u>Limits</u>	<u>RPD</u>	<u>MAX</u>	<u>Conc</u>	<u>Conc</u>	<u>RPD</u>	<u>Max</u>
Batch number: T100741AA	Sample number(s): 5924653,5924655,5924657,5924659,5924661-5924662 UNSPK: 5924655								
Benzene	104	100	80-126	4	30				
Ethylbenzene	96	94	71-134	2	30				
Toluene	98	96	80-125	2	30				
Xylene (Total)	93	90	79-125	3	30				
Batch number: 10071A20A	Sample number(s): 5924653,5924655,5924657,5924659,5924661 UNSPK: P924765								
TPH-GRO N. CA water C6-C12	100		63-154						
Batch number: 10076B20A	Sample number(s): 5924662 UNSPK: P926236								
TPH-GRO N. CA water C6-C12	100		63-154						
Batch number: 100700014A	Sample number(s): 5924653,5924655,5924657,5924659 UNSPK: P924575								
Methane	-2833 (2)	-2833 (2)	35-157	0	20				
Batch number: 100741848002	Sample number(s): 5924653-5924660 UNSPK: P924575 BKG: P924575								
Iron	1621 (2)	1280 (2)	75-125	3	20	111,000	114,000	3	20
Manganese	95	94	75-125	0	20	999	1,000	0	20
Batch number: 10070196602A	Sample number(s): 5924653,5924655,5924657,5924659 UNSPK: P924575 BKG: P924575								
Nitrate Nitrogen	110	111*	90-110	0	20	N.D.	N.D.	0 (1)	20
Sulfate	107	105	90-110	1	20	40,000	39,100	2	20
Batch number: 10070834401A	Sample number(s): 5924653,5924655,5924657,5924659 UNSPK: 5924657 BKG: 5924657								
Ferrous Iron	95	97	66-130	1	6	3,000	2,900	1 (1)	10
Batch number: 10071021201A	Sample number(s): 5924653,5924655,5924657,5924659 UNSPK: P923881 BKG: P923881								
Total Dissolved Solids	87	83	54-143	2	12	1,050,000	1,030,000	2	9
Batch number: 10074020201A	Sample number(s): 5924653,5924655,5924657 UNSPK: P924575 BKG: P924575								
Alkalinity to pH 4.5	85	86	64-130	1	2	125,000	123,000	1	4
Alkalinity to pH 8.3						N.D.	N.D.	0 (1)	4
Batch number: 10076020201A	Sample number(s): 5924659 UNSPK: P924843 BKG: P924843								
Alkalinity to pH 4.5	99	100	64-130	0	2	283,000	285,000	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: BTEX by 8260B

Batch number: T100741AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5924653	100	100	101	106
5924655	99	101	101	102
5924657	99	99	103	106
5924659	99	100	100	106
5924661	99	101	101	104
5924662	100	102	100	100
Blank	101	102	98	99

*- 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.
Reported: 03/24/10 at 10:47 AM

Group Number: 1185639

Surrogate Quality Control

LCS	102	104	99	99
MS	99	102	100	103
MSD	100	101	101	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 10071A20A
Trifluorotoluene-F

5924653	130
5924655	80
5924657	98
5924659	116
5924661	102
Blank	93
LCS	102
LCSD	118
MS	107

Limits: 63-135

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 10076B20A
Trifluorotoluene-F

5924662	104
Blank	102
LCS	125
LCSD	132
MS	132

Limits: 63-135

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 100700014A
Propene

5924653	74
5924655	65
5924657	59
5924659	69
Blank	75
LCS	71
MS	90
MSD	91

Limits: 42-131

*- Outside of specification

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

Chevron Generic Analysis Request/Chain of Custody

011733



For Lancaster Laboratories use only
 Acct. #: 11875 Sample #: 5924653-62 SCR#: _____

1185639

Facility #: <u>Sunol Spill</u> Site Address: <u>MP 2.7 Cabaveras Rd Sunol, CA</u> Chevron PM: <u>Jeff Johnson</u> Lead Consultant: <u>WRS</u> Consultant/Office: <u>WRS - Oakland</u> Consultant Prj. Mgr.: <u>Joe Morgan</u> Consultant Phone #: <u>(510) 899-3600</u> Fax #: <u>(510) 814-3268</u> Sampler: <u>R Naccarati / A Fowler</u> Service Order #: _____ <input type="checkbox"/> Non SAR: _____				Matrix Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Water <input type="checkbox"/> Air <input type="checkbox"/> Soil <input type="checkbox"/>		Analyses Requested Preservation Codes H <input type="checkbox"/> BTEX <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> # <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Steam Methane <input type="checkbox"/> 9015 <input type="checkbox"/> # <input type="checkbox"/> Oxygenates <input type="checkbox"/> Aik by break-down <input type="checkbox"/> # <input type="checkbox"/> TPH <input type="checkbox"/> GPO by NCA <input type="checkbox"/> UFT <input type="checkbox"/> # <input type="checkbox"/> TPH D <input type="checkbox"/> Extended Ring <input type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/> # <input type="checkbox"/> Lead Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> # <input type="checkbox"/> VPH/PH <input type="checkbox"/> Dissolved Iron <input type="checkbox"/> 6010 # <input type="checkbox"/> NWT/PH <input type="checkbox"/> HCl <input type="checkbox"/> Quantification # <input type="checkbox"/> TDS by 160.1 # <input type="checkbox"/> Manganese by 6010B # <input type="checkbox"/> Ferrous Iron <input type="checkbox"/> SM 40 Meth <input type="checkbox"/> # <input type="checkbox"/> Nitrate Nitrogen <input type="checkbox"/> Sulfate <input type="checkbox"/> 3000												Preservative Codes H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits																										
Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX	8021	8260	Naphth	Steam Methane	9015	Oxygenates	Aik by break-down	TPH	GPO	by NCA	UFT	TPH D	Extended Ring	Silica Gel Cleanup	Lead Total	Diss.	Method	VPH/PH	Dissolved Iron	6010	NWT/PH	HCl	Quantification	TDS by 160.1	Manganese by 6010B	Ferrous Iron	SM 40 Meth	Nitrate Nitrogen	Sulfate	3000	Comments / Remarks			
MW-1	3/10/10	1110	X			X			15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-2		1010	X			X			15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-8		1255	X			X			15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-9		900	X			X			15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-X		1300	X			X			6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
TB-2		-				X			2	X																																		

Turnaround Time Requested (TAT) (please circle) STD. TAT <u>24 hour</u> 72 hour 48 hour 4 day 5 day	Relinquished by: <u>Michele [Signature]</u>	Date: <u>3/10/10</u>	Time: <u>1900</u>	Received by: _____	Date: _____	Time: _____
	Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Data Package Options (please circle if required) QC Summary Type I - Full Type VI (Raw Data) Disk / EDD WIP (RWQCB) <u>Standard Format</u> Disk _____ Other.	Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
	Relinquished by Commercial Carrier: <u>FedEx</u>	UPS	Other: _____	Received by: <u>[Signature]</u>	Date: <u>3/11/10</u>	Time: <u>935</u>
	Temperature Upon Receipt: <u>3.2-3.8</u> °C			Custody seals intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

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 <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
>	greater than		
ppm	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
ppb	parts per billion		
Dry weight 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 quantitated 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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