Chevron

Global Gas

Jeff Cosgray
Environmental Team Leader

Chevron Pipe Line Company
4800 Fournace, Room E320C
Bellaire, Texas 77401
Tel 713 432 3335
Fax 866 653 0301
jcos@chevron.com

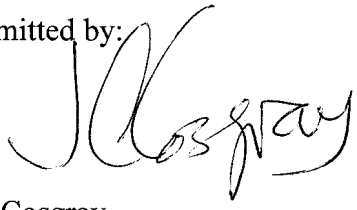
July 2, 2008

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' letter titled "**SLIC Case No. RO0002892, Chevron Sunol Pipeline, 2793 Calaveras Road, Sunol, CA – Monitoring Well Abandonment and SVE System Restart Letter Report**" are true and correct to the best of my knowledge at the present time.

Submitted by:



Jeff Cosgray

This letter report ("**Monitoring Well Abandonment and SVE System Restart Letter 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 Monitoring Well Abandonment Letter 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

Robert Horwath, P.G.

URS

July 7, 2008

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

Subject: SLIC Case No. RO0002892, Chevron Sunol Pipeline, 2793 Calaveras Rd, Sunol, CA
Monitoring Well Abandonment and SVE System Restart Letter Report

Dear Mr. Wickham:

URS, on behalf of Chevron Pipeline Company (CPL), is updating Alameda County Environmental Health (ACEH) regarding the abandonment of monitoring wells MW-5, MW-6, and MW-7 at the CPL site near Sunol, California (Figure 1).

Monitoring Well Abandonment Activities

URS observed Gregg Drilling and Testing, Inc (Gregg) abandon monitoring wells MW-5 through MW-7 according to Zone 7 Water Agency (Zone 7) well abandonment procedures on June 23, 2008. The former monitoring wells were located along the eastern side of Calaveras Road, below the initial release area (Figure 2). ACEH approved the abandonment of the monitoring wells in a letter dated November 29, 2007 and is presented in Attachment A.

URS has completed the required Department of Water Resources (DWR) well completion reports and has submitted documentation to all appropriate state and local agencies. Attachment B contains the ACEH copies of the DWR well completion reports.

Tree Removal Activities

Tree removal activities took place during the week of June 9, 2008. Several photographs were taken to document the tree removal. Attachment C contains a photographic log describing the photographs.

Soil Vapor Extraction System Installation

With the removal of the trees, URS and CPL are moving forward with the restarting of the soil vapor extraction (SVE) system at the site. Stratus Environmental, Inc. (Stratus) has submitted the initial plans to the Alameda County Building Department (ACBD). The ACBD has involved the Alameda County Fire Department (ACFD) due to the potential fire hazards associated with on-site activities related to construction.

The San Francisco Public Utilities Commission (SFPUC) has approved the URS request to install the electrical power system that will be used to power the SVE system. URS has requested Stratus to conduct brush removal activities at the site prior to the beginning of the electrical and SVE system installation to minimize the potential for fire.

URS estimates electrical installation work can begin the week of July 28, 2008. The ACBD and ACFD approval process may delay the start of work. URS will update ACEH by August 15, 2008 or earlier, with

developments of the above mentioned items and any other significant information pertaining to the restarting of the SVE system.

If you have questions, please do not hesitate to contact me at (510) 874-3201.

Sincerely,

URS CORPORATION

Joe Morgan III
Project Manager

Jacob Henry, P.G.
Senior Geologist

Attachments:

A	ACEH Letter Dated November 29, 2007
B	DWR Well Completion Reports
C	Photographic Log

cc: Mr. Jeffrey Cosgray, CPL
Mrs. Amber Koster, URS

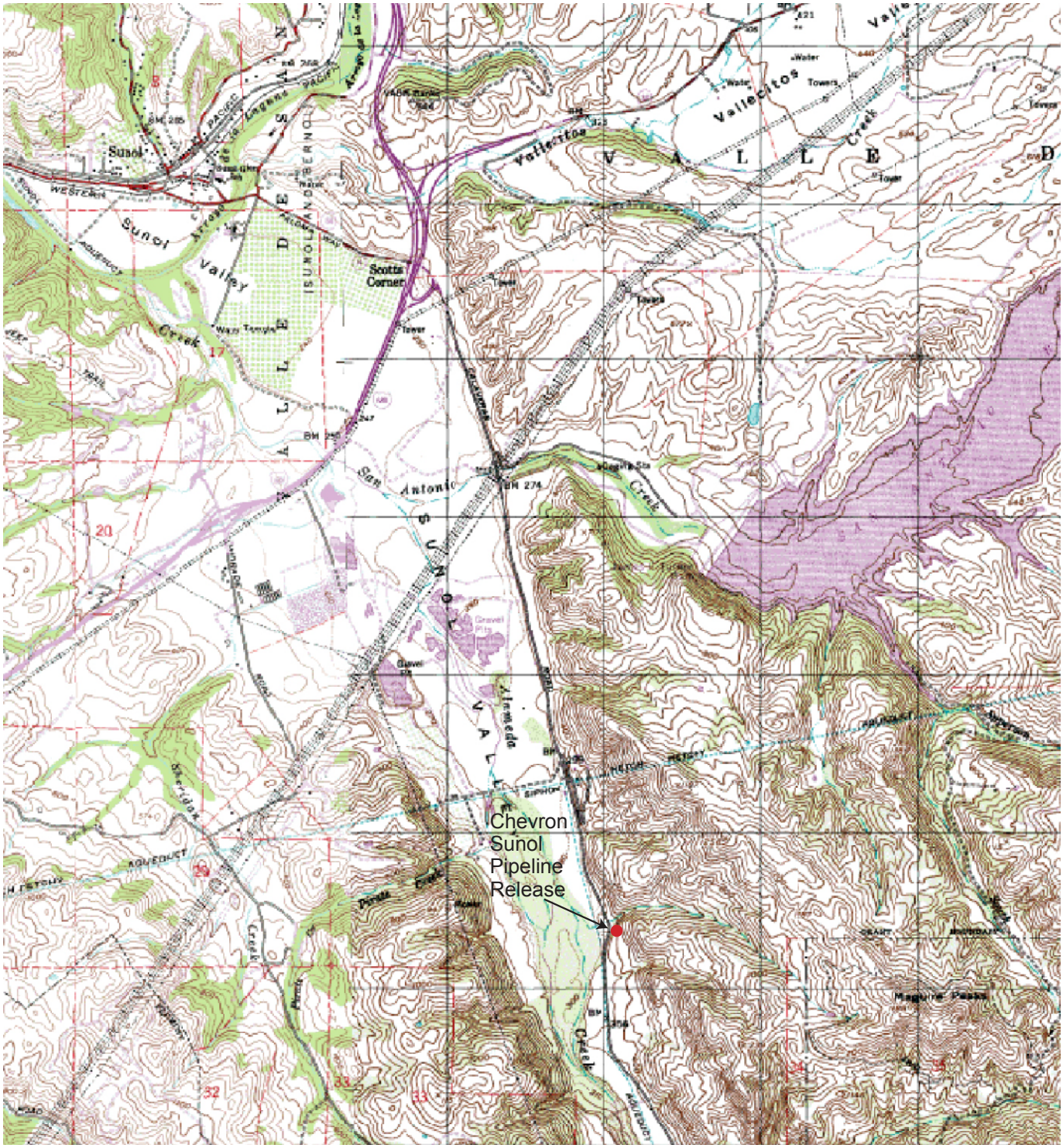


Image obtained from topozone.com

N

MAP REFERENCE:

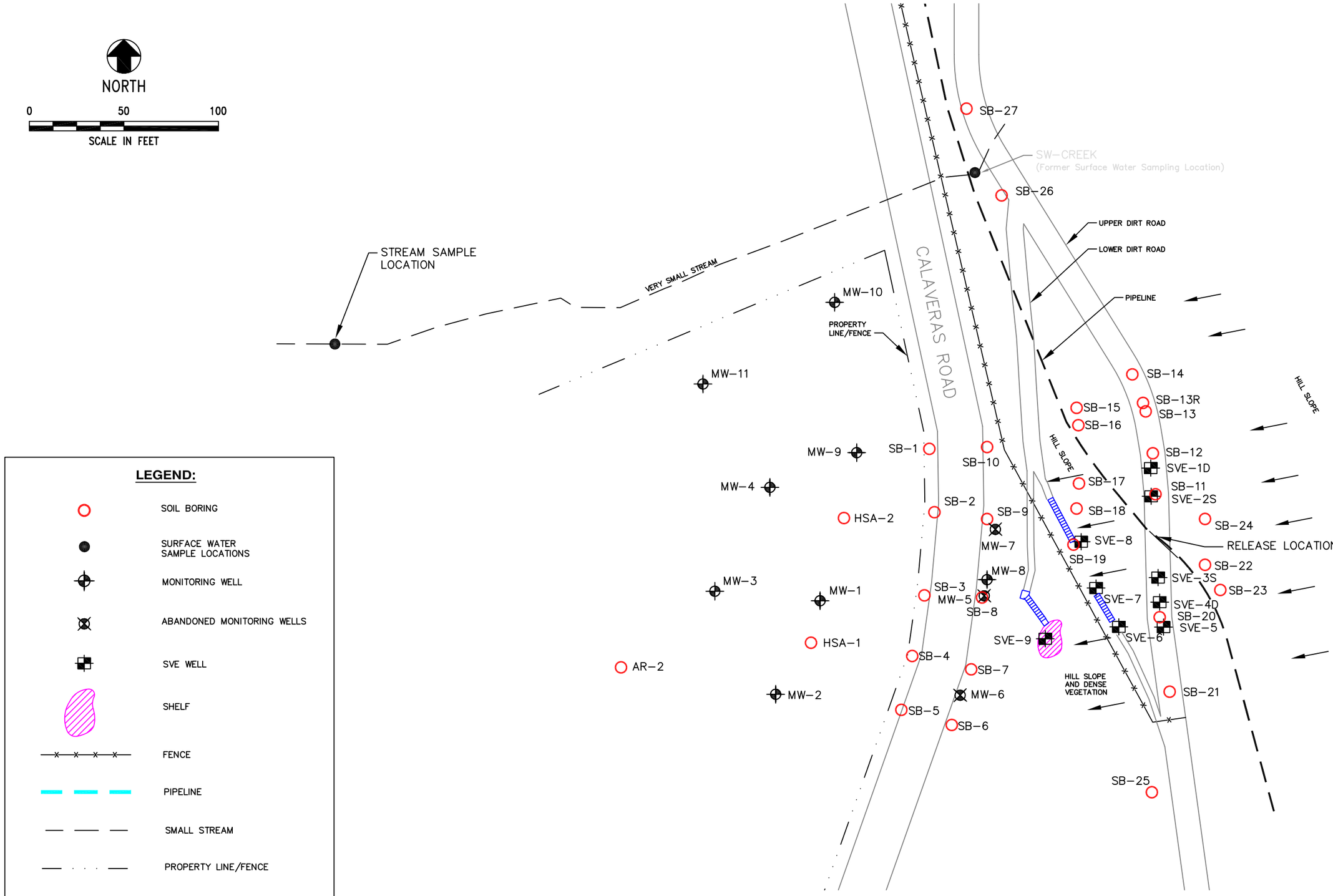
PORTION OF U.S.G.S. QUANDRANGLE MAP
7 1/2 MINUTE SERIES (TOPOGRAPHIC)
LA COSTA VALLEY QUADRANGLE

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

NORTH

0 50 100

SCALE IN FEET



LEGEND:

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

URS

CHEVRON PIPELINE COMPANY

Project No. 26815217

SVE AND GROUNDWATER MONITORING WELL LOCATIONS CHEVRON SUNOL PIPELINE

Figure 2

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

November 29, 2007

Mr. Jeff Cosgray
Chevron Pipe Line Company
4800 Fournace Place
Bellaire, TX 77401-2324

Subject: SLIC Case No. RO0002892 and Geotracker Global ID SL0600100443, Chevron Sunol Pipeline, 2793 Calaveras Road, Sunol, CA 94586

Dear Mr. Cosgray:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted documents entitled, "Additional Monitoring Well Installation Report," dated October 2007 and "Third Quarter 2007 Groundwater and Soil Vapor Extraction System Monitoring Report," dated November 15, 2007. Both documents were prepared on your behalf by URS Corporation. The "Additional Monitoring Well Installation Report," dated October 2007 describes the installation of two monitoring wells (MW-10 and MW-11) to assess the downgradient edge of the petroleum hydrocarbon plume. No groundwater was encountered in either of the two wells. The report recommends that the three proposed secondary monitoring wells not be installed at this time.

The "Third Quarter 2007 Groundwater and Soil Vapor Extraction System Monitoring Report," dated November 15, 2007 discusses third quarter groundwater monitoring results. During the third quarter of 2007, monitoring wells MW-1 and MW-9 contained measurable free product and were not sampled. Groundwater from well MW-8, which is described as monitoring the apparent hillside groundwater recharge source, contained total petroleum hydrocarbons as gasoline and benzene at concentrations of 4,200 and 470 micrograms per liter (µg/L), respectively. None of the downgradient wells on the west side of Calaveras Road were sampled. The report also discussed the shutdown and discontinuation of SVE operations on August 17, 2007. As discussed in technical comment 1 below, we do not concur with the removal of the SVE system.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Shutdown of SVE System.** The SVE system was apparently shutdown and removed from the site on August 17, 2007. We do not concur with the removal of the SVE system and discontinuation of remedial activities. The Third Quarter 2007 Groundwater and Soil Vapor Extraction System Monitoring Report cites a substantial decline in system recovery rates as a reason for discontinuing system operation. We note that the system mass removal rate decreased from a maximum of more than 120 pounds per day in December 2006 after system start-up to approximately 30 pounds per day in August 2007. A decline from the initial rate of mass removal is expected during the normal operation of an SVE system. The

initial rate of mass removal is expected during the normal operation of an SVE system. The removal of 30 pounds of petroleum hydrocarbons per day indicates residual petroleum hydrocarbons remain in place and that the system is continuing to remove mass in the source area. Moreover, the SVE well that is directly below the release (SVE-8) was disconnected from the system due to water in the well and has remained closed since November 30, 2006. Unfortunately, the SVE system was removed during the dry season when water levels are likely to be below the screen interval of SVE-8. Incorporating SVE-8 or a replacement well for SVE-8 is likely to increase the removal rate beyond 30 pounds per day. We request that you replace the SVE system and **resume SVE operations no later than January 29, 2008**. In addition, well SVE-8 or a replacement well is to be included in the system.

2. **Decommissioning of SVE Wells.** The Third Quarter 2007 Groundwater and Soil Vapor Extraction System Monitoring Report recommends "abandonment" of SVE wells at the site. As discussed in technical comment 1, we do not concur with the discontinuation of the SVE system operations. Therefore, we do not concur with the decommissioning of any SVE wells.

3. **Wells MW-10 and MW-11 and Secondary Monitoring Wells.** Groundwater was not encountered in newly installed monitoring wells MW-10 and MW-11. Wells MW-10 and MW-11 are to be gauged quarterly and sampled when sufficient groundwater is present in the wells. We concur with the recommendation to assess the need for further investigation in this area based on the results of future groundwater monitoring.

4. **Quarterly Groundwater Monitoring.** We request that you continue quarterly groundwater monitoring for the site including sampling and analytical results from the proposed additional groundwater monitoring wells. Based on sampling results to date, we have no objection to discontinuing monitoring and decommissioning wells MW-5 though MW-7. Please present results of the quarterly groundwater sampling in the monitoring reports requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **January 29, 2008** – SVE System Start Up
- **February 20, 2008** – Quarterly SVE Operation and Groundwater Monitoring Report for the Fourth Quarter 2007
- **May 20, 2008** – Quarterly SVE Operation and Groundwater Monitoring Report for the First Quarter 2008
- **August 20, 2008** – Quarterly SVE Operation and Groundwater Monitoring Report for the Second Quarter 2008

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the

responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791.

Sincerely,

Jerry Wickham
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Cheryl Dizon, QIC 80201, Zone 7 Water Agency, 100 North Canyons Parkway, Livermore, CA 94551

Joe Morgan III, URS Corporation, 1333 Broadway, Suite 800
Oakland, CA 94612

Robert Horwath, URS Corporation, 1333 Broadway, Suite 800
Oakland, CA 94612

Joe Naras, San Francisco Public Utilities Commission, Natural Resources Division
1657 Rollins Road, Burlingame, CA 94010

Craig Freeman, San Francisco Public Utilities Commission, Environmental and Regulatory Compliance Division, 1145 Market Street, Suite 500, San Francisco, CA 94103

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING & WELL CONSTRUCTION

Borehole ID: MW-5

Total Depth: 49.8 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Client: Chevron Pipeline	**Drilling Company:** Resonant Sonic International
Site Location: Milepost 2.7 Calaveras Road, Sunol, California	**Driller:** Valentin Gudoy
Project Manager: Joe Morgan	**Type of Drilling Rig:** Sonic Continuous Core Rig
RG: Leonard Niles	**Drilling Method:** 8"x10' Core Barrel with water wash
Geologist: Leonard Niles & Greg White	**Sampling Method:** 4"x10' Core Barrel
Job Number: 26815217.03003	**Date(s) Drilled:** January 24-27, 2006

BORING & WELL INFORMATION

Groundwater Depth: 11.48 ft from TOC-N (Static 2/21/06)	**Boring Location:** Along the east side of Calveras Road (near milepost 2.7)
Air Knife or Hand Auger Depth: 5 ft bgs	**Boring Diameter:** 8 inches
Coordinates: X 6168225.98 Y 2025764.36 Z 334.81 (TOC)	**Boring Type:** Monitoring/Remediation Well Completion

Depth (ft bgs)	USCS	Symbol	Lithologic Description	% Recovery	PID Reading	Well Construction Details	Drilling Comments
0							
2			SANDY CLAY: 0-5 Very dark brown (10YR2/2), low to medium plasticity, damp to moist, soft, 15-20% fine sand, 5-10% coarse gravel (up to 2" in diameter), 70-80% clayey to silty fines, root material.			Well installed on January 25-27, 2006. Surface Completion: Flushed mounted cast-iron well box.	1/24 09:00 Begin hand augering to 5 ft bgs. Ambient PID: 0.0 ppm.
4					10.2		
6	CL		SANDY CLAY: 5-9 As above, except moist to wet on the outside of the core (due to rainwater infiltration) from 5-6.5 ft. No gravel, moist from 6.5-9 ft, grades to clayey silt from 7-9 ft.				1/24 09:30 Begin drilling with 4" core barrel.
8					49.3	0.33-39.5 ft bgs: 4" Sch. 40 PVC riser.	
10	ML		CLAYEY SILT: 9-10 Yellowish brown (10YR4/3), very low plasticity, hard, damp, 10-15% fine sand, <30% clay, > 50% silt, caliche veins, slight HC odor.		73.5	0.8-36 ft bgs: 95% cement / 5% bentonite grout.	1/24 11:20 Collect soil sample MW-5-10'.
12			NO RECOVERY: 10-15 No recovery.				
14							
16			SLOUGH: 15-16 Probable slough from above.		24.6		
18	ML		CLAYEY TO SANDY SILT: 16-19 Yellowish brown (10YR4/3), no plasticity, damp, increasing fine sand to 15-20%. decreasing clay, HC odor. 19-20.5 Color change to brownish yellow (10YR6/8), increasing sand and clay, 20% fine sand.		34.4		
20					2349		1/24 11:35 Collect soil sample MW-5-20'.
22			SILTY GRAVEL: 20.5-24.7 Light gray (N7/), 20% silt, 15% fine sand, 65% coarse gravel to cobbles (up to 4" in diameter), fine grained sandstone clasts, strong HC odor, dry, subangular to subrounded clasts.		2827		

URS

LOG OF BORING

Borehole ID: MW-5

Depth (ft bgs)	USCS	Symbol	Lithologic Description	% Recovery	PID Reading	Well Construction Details	Comments
24	GM				55.3		
	CL		CLAY: 24.7-25 Dark brown, medium to high plasticity, moist, < 10% fine sand.		75.3		
26	SP		SAND: 25-30 WEATHERED SANDSTONE bedrock, crumbles to sand, light gray (N7/), very soft, damp, 10-15% silt, 85-90% fine sand. Grades to weathered sandy siltstone at 30 ft bgs.		5.9		
28					3.2		
30	ML		SANDY SILT: 30-32 WEATHERED SANDY SILTSTONE bedrock, light gray (N7/) to dark gray (N4/), very soft, no plasticity, damp to moist, 50-60% silt, 40-50% fine sand, slight HC odor. Grades to weathered silty sandstone at 32 ft bgs.		2.0		1/24 12:45 4" Core barrel very warm, steam rising off of it.
32					4.1		
34	SM		SILTY SAND: 32-38 WEATHERED SILTY SANDSTONE bedrock, light to dark gray (N7/ to N4/), very soft, moist, 60-70% fine sand, 30-40% silt. Grades to weathered sandstone from 38-38.6 ft bgs.		4.3		1/24 13:30 Drilling difficult 40-45 ft bgs. 13:50 Collect soil sample MW-5-46'
36					4.8		
38	SP		SAND: 38-40 WEATHERED SANDSTONE bedrock, light gray (N7/), soft, moist, 10% silt, 90% fine sand, more consolidated and less weathered than above. Grades to silty sandstone at 40 ft bgs.		4.3		
40	SM		SILTY SAND: 40-45 WEATHERED SILTY SANDSTONE, light to dark gray (N7/ to N4), soft, moist, 10-15% silt, 85-90% fine sand, decreasing silt from 42-44 ft, then increasing at 44 ft to 15-20% silt. 45-48 As above except wet at 45-45.5 ft, moist 46-47 ft. Increasing silt content to 20-30% at 46 ft, then decreasing to 10% at 47 ft, strong HC odor. Grades to sandstone at 48 ft bgs.		4.9	36-38 ft bgs: Bentonite pellet seal.	13:55 Groundwater measured at 44.8 ft bgs during drilling. (Static water level 11.48 ft below TOC-N on 2/21/06)
42					4.8		
44					4.4		
46					5.0	39.5-49.5 ft bgs: 4" Sch 40 PVC 0.020" screen.	1/24 14:30 Broke 4" core barrel joint at ~30 ft bgs. 20 ft of 4" casing in bottom of boring from 30-50 ft bgs.
48			SANDSTONE: 48-49.5 As above except increasingly unweathered and hard, wet, weathered to SANDY SILT (SM) along fractures, 10-15% silt, fractured disks by coring, harder and massive at 49.8 ft, quartz veins.		6.6	38-49.8 ft bgs: #3 RMC sand.	
					643		
					42		1/25 08:25 Drove fishing tool into broken casing stuck at 30 ft bgs.
					4.3	49.5-49.8 ft bgs: 4" PVC silt trap and well cap.	
50			**END OF BORING AT 49.8 FT BGS**				08:30 Install 12" surface casing to ~8 ft bgs. Begin reaming out boring with 8" casing.
52							10:30 Blow water fitting at 25 ft bgs. Shut down rig to repair fitting.
54							13:45 Resume drilling with 8" casing.

URS

LOG OF BORING

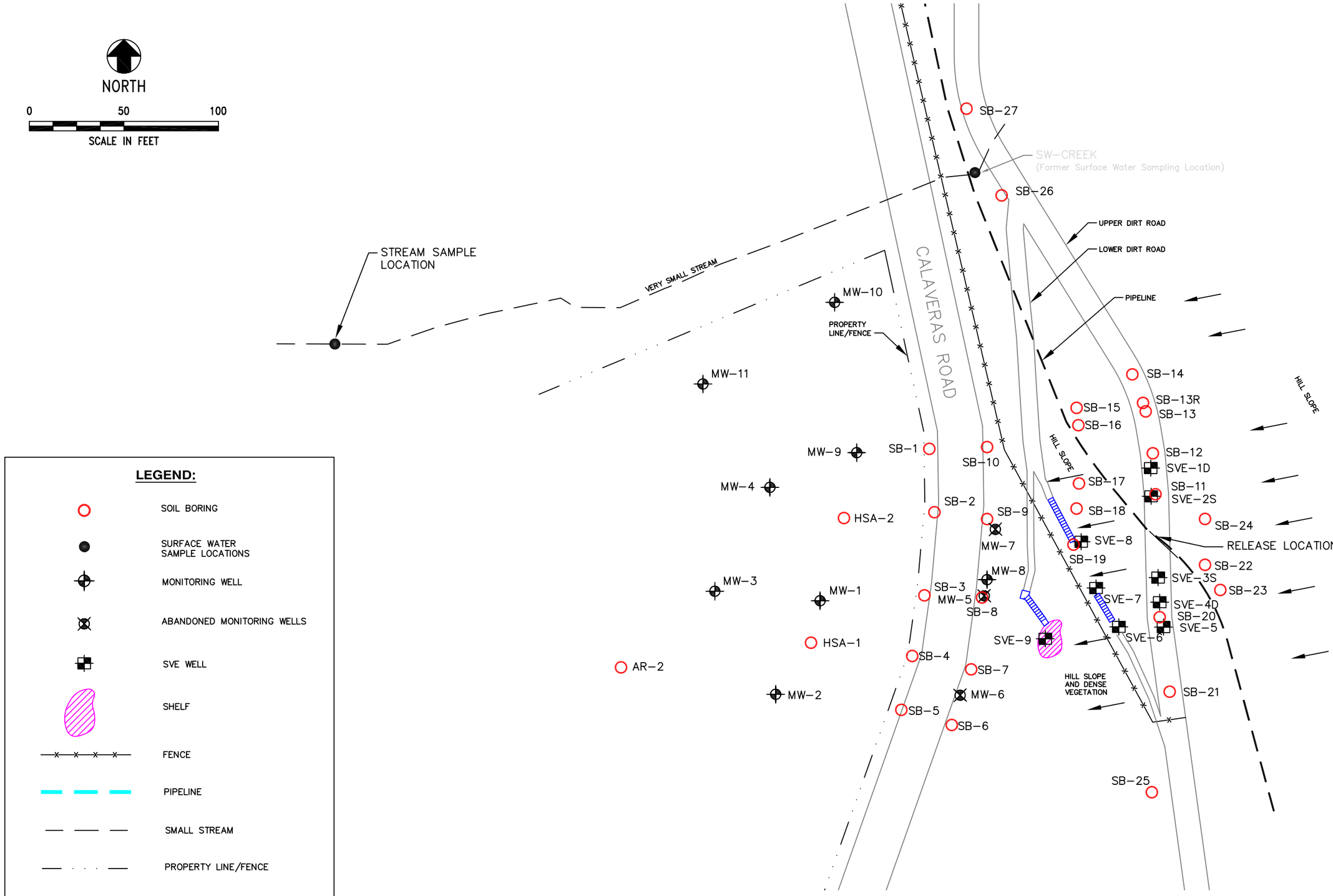
Borehole ID: MW-5

Depth (ft bgs)	USCS	Symbol	Lithologic Description	% Recovery	PID Reading	Well Construction Details	Comments
56							14:30 Reach 50 ft bgs with 8" casing. Pull 4" casing from inside 8" casing using fishing tool. End of boring at ~50 ft bgs. 15:00 Collect soil sample MW-5-48'.
58							
60							
62							
64							

NORTH

0 50 100

SCALE IN FEET



LEGEND:

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

URS

CHEVRON PIPELINE COMPANY

Project No. 26815217

SVE AND GROUNDWATER MONITORING WELL LOCATIONS CHEVRON SUNOL PIPELINE

Figure 2

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

URS 1333 Broadway, Suite 800 Oakland, California 94612	LOG OF BORING & WELL CONSTRUCTION
	Borehole ID: MW-6
	Total Depth: 50 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Client: Chevron Pipeline	**Drilling Company:** Resonant Sonic International
Site Location: Milepost 2.7 Calaveras Road, Sunol, California	**Driller:** Valentin Gudoy
Project Manager: Joe Morgan	**Type of Drilling Rig:** Sonic Continuous Core Rig
RG: Leonard Niles	**Drilling Method:** 8"x10' Core Barrel with water wash
Geologist: Leonard Niles and Greg White	**Sampling Method:** 4"x10' Core Barrel
Job Number: 26815217.03003	**Date(s) Drilled:** January 26-27, 2006
BORING & WELL INFORMATION	
Groundwater Depth: 18.02 from TOC-N (Static 2/21/06)	**Boring Location:** Along the east side of Calveras Road (near milepost 2.7)
Air Knife or Hand Auger Depth: 5 ft bgs	**Boring Diameter:** 8 inches
Coordinates: X 6168213.24 Y 2025711.81 Z 332.38 (TOC)	**Boring Type:** Monitoring/Remediation Well Completion

Depth (ft bgs)	USCS	Symbol	Lithologic Description	% Recovery	PID Reading	Well Construction Details	Drilling Comments
0	CL		SANDY CLAY: 0-5 Dark brown (10YR2/2), medium plasticity, moist, 15-20% fine to medium sand, 80-85% clayey to silty fines, ~5% coarse gravel at 1 foot, some root material.		1.5	Well installed on January 26-27, 2006 Surface Completion: Flushed mounted cast-iron well box.	10:00 Begin hand augering to 5 ft bgs. Ambient PID: 0.0 ppm.
6	ML		SANDY SILT: 5-9 Dark brown (10YR2/2), very low plasticity, damp, 15-20% fine sand, 80-85% silt and clay, minor gravel at 8-10 ft, increasing clay at 8-9 ft, some root material.		0.2	0.23-34.7 ft bgs: 4" Sch. 40 PVC riser.	10:25 Begin coring from 5 ft bgs.
10	CL		SANDY CLAY: 9-10 As above except %clay>%silt, low to moderate plasticity, 20% sand, 5% gravel.		2.3		
12	ML		SANDY SILT: 10-15 Yellowish brown (10YR4/3), no plasticity, damp, 20-30% fine grained sand, 5-10% fine to coarse subrounded gravel, some root material and caliche fragments.		0.6	0.8-31 ft bgs: 95% cement / 5% bentonite grout.	
14					0.6		
16	CL		GRAVELLY CLAY: 15-18 Very dark brown (10YR2/2), moderate plasticity, damp, 10% fine sand, 20% coarse gravel to 3" in diameter. Color change at 16 ft to yellowish brown (10YR4/3), increasing fine to coarse sand to 15-25%, increasing fine to coarse gravel at 17-18 ft.		7.7		
18			NO RECOVERY: 18-20 No recovery.		16.0		15:20 Collect soil sample MW-6-17'
20	CL		SANDY CLAY: 20-22 Yellowish brown (10YR6/8) and dark olive gray (5Y3/2) mottled, low plasticity, damp, 10-20% fine sand.		6.5		11:00 Ambient PID: 0.0 ppm Advance a split spoon at 20 ft bgs to see if a pearched water zone exists within the gravel layer.
22	ML		SANDY SILT: 22-24 Yellowish brown (10YR6/8) and dark olive gray (5Y3/2) mottled, very low plasticity, damp, 15-20% fine sand, increasing sand at 23.6 ft.				
24			SILTY SAND: 24-46 Light gray (N7/), highly WEATHERED SILTY SANDSTONE, no plasticity, damp to moist at 35-40 ft, 40-50% silt, 50-60% very fine sand.		0.0		
26							

URS

LOG OF BORING

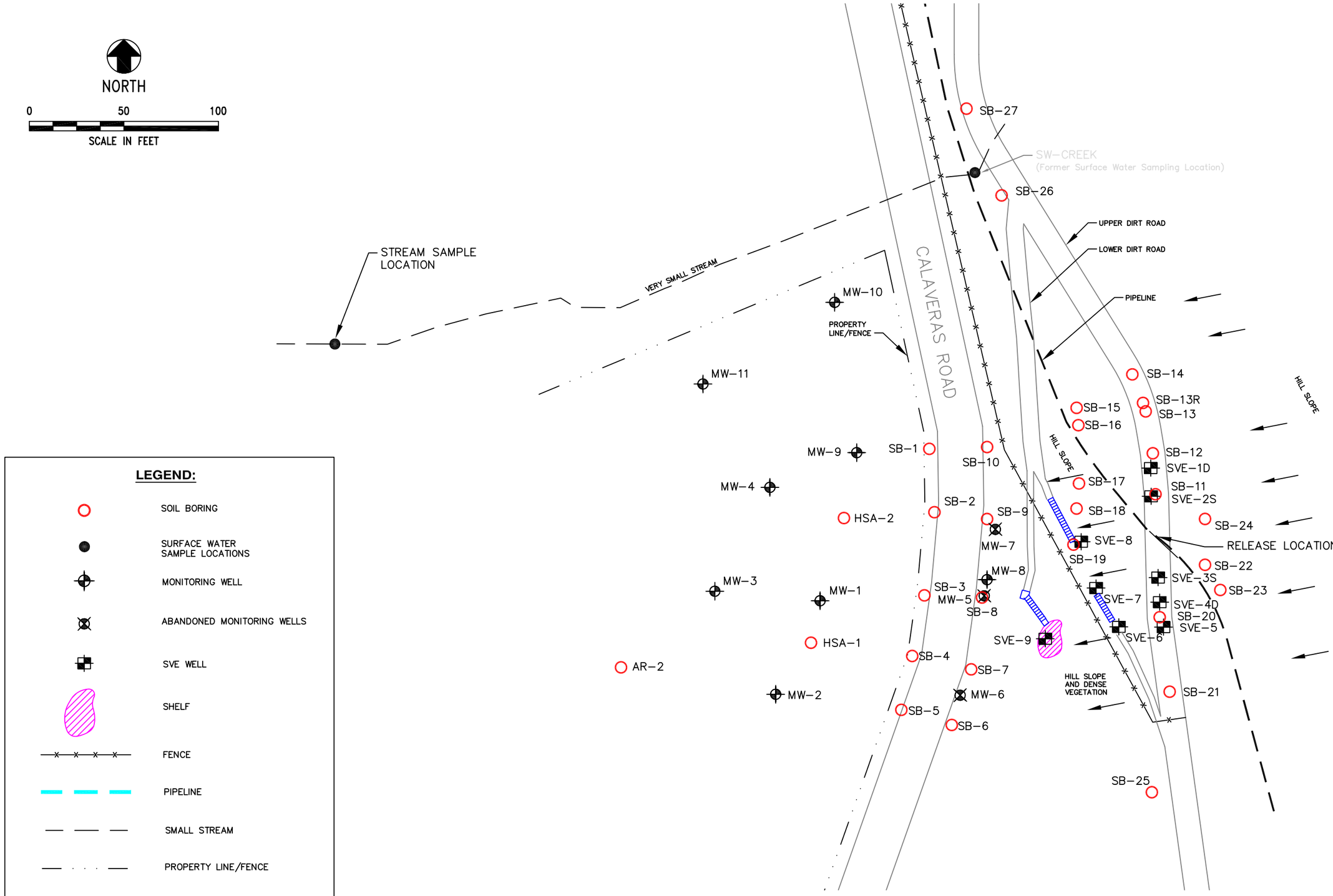
Borehole ID: MW-6

Depth (ft bgs)	USCS	Symbol	Lithologic Description	% Recovery	PID Reading	Well Construction Details	Comments
28			As Above		0.0		
30					0.0		
32					0.0	31-33 ft bgs: Bentonite pellet seal.	12:00 Ambient PID: 0,0 ppm
34					0.0		
36	SM				0.0		
38					0.0		
40					0.0		
42					0.0	34.7-49.7 ft bgs: 4" Sch 40 PVC 0.020" screen.	
44					0.0		Groundwater encountered during drilling at 46 ft bgs.
46 ▽			SILTY SAND: 46-46.8 Light gray (N7/), increasing less WEATHERED SANDSTONE, wet, powdered and pulverized by coring bit.		0.0	33-50 ft bgs: #3 RMC sand.	
48			SILTY SANDSTONE: 46.8-50 Light gray (N7/), hard, well cemented, dry, 15-20% silt, 80-85% very fine to fine sand, fractured and pulverized by coring bit.				12:45 Groundwater measured at 49 ft bgs after removing 4" casing.
50			**END OF BORING AT 50 FT BGS**			49.7-50 ft bgs: 4" PVC silt trap and well cap.	13:30 Groundwater rises to 46.7 ft bgs. Begin overdrilling boring with 8" casing. (Static water level 18.02 ft below TOC-N on 2/21/06).
52							15:15 Collect soil sample MW-6-46'.
54							
56							
58							
60							
62							

NORTH

0 50 100

SCALE IN FEET



LEGEND:

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

URS

CHEVRON PIPELINE COMPANY

Project No. 26815217

SVE AND GROUNDWATER MONITORING WELL LOCATIONS CHEVRON SUNOL PIPELINE

Figure 2

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED

URS

1333 Broadway, Suite 800
Oakland, California 94612

LOG OF BORING & WELL CONSTRUCTION

Borehole ID: MW-7

Total Depth: 50 ft bgs

PROJECT INFORMATION	DRILLING INFORMATION
Client: Chevron Pipeline	**Drilling Company:** Resonant Sonic International
Site Location: Milepost 2.7 Calaveras Road, Sunol, California	**Driller:** Valentin Gudoy
Project Manager: Joe Morgan	**Type of Drilling Rig:** Sonic Continuous Core Rig
RG: Leonard Niles	**Drilling Method:** 8"x10' Core Barrel with water wash
Geologist: Greg White & Leonard Niles	**Sampling Method:** 4"x10' Core Barrel
Job Number: 26815217.03003	**Date(s) Drilled:** January 27, 2006

BORING & WELL INFORMATION

Groundwater Depth: 15.43 ft from TOC-N (Static 2/21/06)	**Boring Location:** Along the east side of Calveras Road (near milepost 2.7)
Air Knife or Hand Auger Depth: 5 ft bgs	**Boring Diameter:** 8 inches
Coordinates: X 6168231.84 Y 2025799.52 Z 336.22 (TOC)	**Boring Type:** Monitoring/Remediation Well Completion

Depth (ft bgs)	USCS	Symbol	Lithologic Description	% Recovery	PID Reading	Well Construction Details	Drilling Comments
0							
2	CL		SILTY CLAY: 0-5 Very dark brown (10YR2/2), soft, medium plasticity, moist, some coarse sand and tree roots.		5.1	Well installed on January 27, 2006. Surface Completion: Flush mounted cast-iron well box.	08:15 Begin hand augering to 5 ft bgs. Ambient PID: 0.3 ppm.
4							
6	GW		SILTY CLAY: 5-7 Same as above except medium stiff and wet from 5-5.5 ft.		5.0		08:35 Begin coring with 4" casing from 5 ft bgs.
8	ML		SANDY GRAVEL: 7-7.2 Brown to yellowish brown (10YR4/3 to 10YR6/8), loose, moist, fine to coarse sand and gravel, subangular to subrounded, some silt.		7.5	0.24-34.7 ft bgs: 4" Sch. 40 PVC riser.	08:40 Faint HC odor from 7-7.6 ft bgs.
	NR		SILT: 7.2-7.5 Dark brown, hard, moist to dry, brittle, some caliche veins, with fine to coarse subrounded to rounded gravel, trace root material.				
10			NO RECOVERY: 7.5-10		25.8	0.8-31 ft bgs: 95% cement / 5% bentonite grout.	
12	SM		SILTY SAND: 10-15 Grayish brown, dry, with subangular to subrounded gravel, some caliche veins, trace root material, ~60% fine sand, 30-35% silt, 5-10% gravel.		30.7		
14					45.2		
16	ML		SANDY SILT: 15-16 Grayish brown, low plasticity, moist, with subangular to subrounded fine to medium gravel, trace root material, ~60% silt, ~30% sand, ~5% clay, ~5% gravel.		102		
18	SM		SILTY SAND: 16-18 Brownish yellow (10YR6/8), medium dense, moist, trace gravel, ~55-60% fine sand, ~40-45% silt.		174		
20	NR		NO RECOVERY: 18-20				
22			SILTY SAND: 20-24.5 Brownish yellow (10YR6/8), medium dense, moist, trace gravel, ~55-60% fine sand, ~40-45% silt.		137		

URS

LOG OF BORING

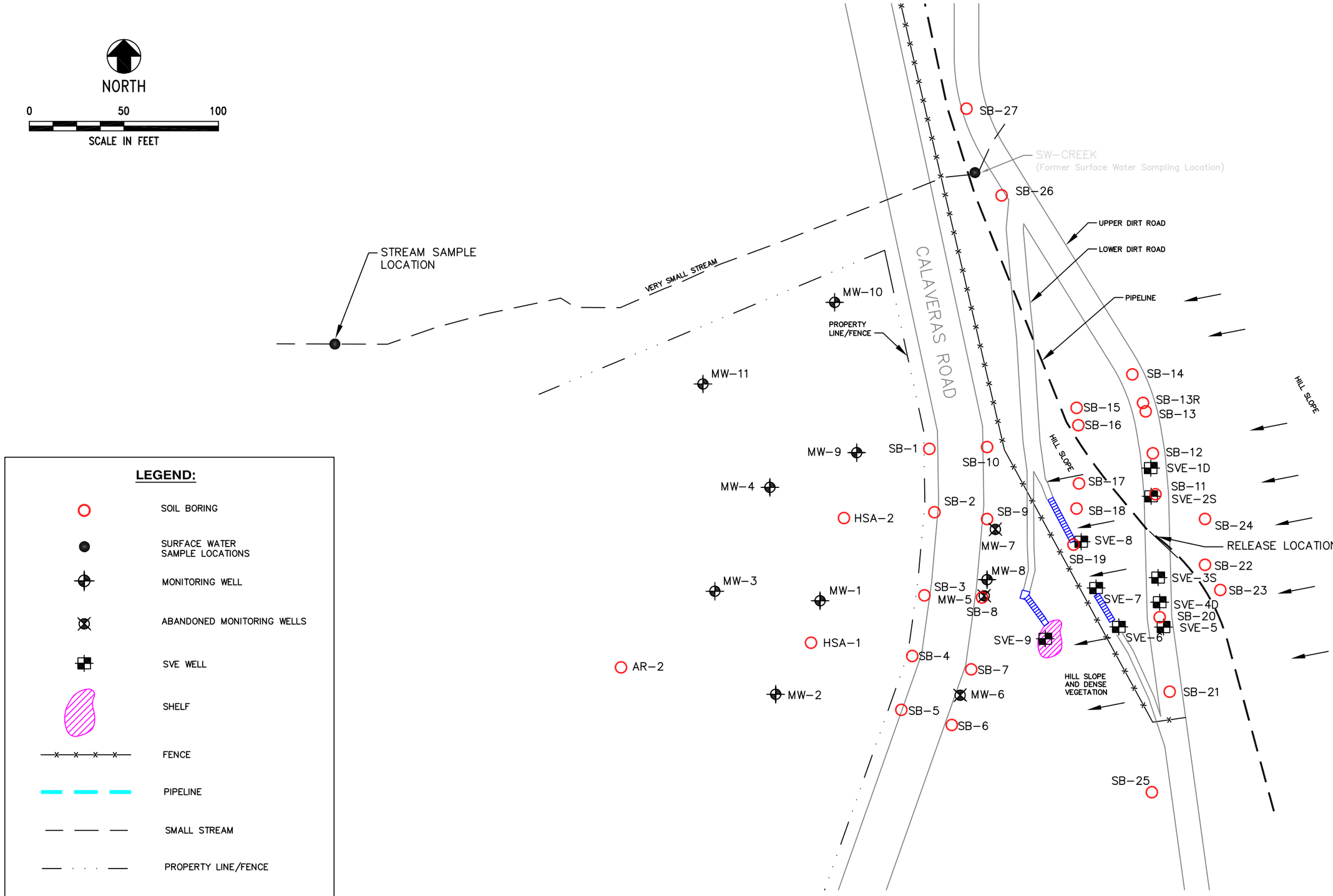
Borehole ID: MW-7

Depth (ft bgs)	USCS	Symbol	Lithologic Description	% Recovery	PID Reading	Well Construction Details	Comments
24	SM				595		
26			SILTY SAND: 24.5-36 Gray, moist, WEATHERED SILTY SANDSTONE bedrock, ~60% fine sand, ~40% silt.		124		09:15 Sheer bolts break on rig head at 30 ft bgs.
28					1.7		09:20 Collect sample MW-7-18'.
30					4.2		09:55 Down-hole PID at 30 ft bgs is 0.4 ppm.
32	SM				2.0	31-32.9 ft bgs: Bentonite pellet seal.	10:00 Resume coring from 30 ft bgs.
34							10:10 20-25 foot sample has noticable odor.
36					2.0		10:28 Collect soil sample MW-7-22.5'.
38			SILTY SANDSTONE: 36-41 Gray to light gray, well cemented.		1.9		
40							11:10 End of boring at 50 ft bgs, lose 2 ft of core down hole. Inital water level 44.2 ft bgs.
42 ▽			SILTY SAND: 41-48 Gray, moist, WEATHERED SILTY SANDSTONE bedrock, ~60% fine sand, ~40% silt.		3.2	34.7-49.7 ft bgs: 4" Sch 40 PVC 0.020" screen.	11:30 Water level now 42 ft bgs. Collect grab groundwater sample MW-7-GW. (Static Water level 15.43 ft below TOC-N on 2/21/06).
44 ▽	SM					32.9-50 ft bgs: #3 RMC sand.	
46					5.9		Begin overdrilling with 8" casing to 50 ft bgs.
48	NR		NO RECOVERY: 48-50 No Recovery.		7.1	49.7-50 ft bgs: 4" PVC silt trap and well cap.	
50			**END OF BORING AT 50 FT BGS**				
52							
54							

NORTH

0 50 100

SCALE IN FEET



LEGEND:

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

URS

CHEVRON PIPELINE COMPANY

Project No. 26815217

SVE AND GROUNDWATER MONITORING WELL LOCATIONS CHEVRON SUNOL PIPELINE

Figure 2

URS

PHOTOGRAPHIC LOG

Chevron Pipe Line Company	Sunol Spill Monitoring Well Destruction Sunol, California	URS Project No. 26815217

Photo No. 1 | **Date:** 6/23/08

Direction Photo Taken:

West facing East

Description:

URS employee in relationship to the hillside where trees were removed, staircase to soil vapor extraction wells, and approximate location of pipeline.

Photo No. 2 | **Date:** 6/23/08

Direction Photo Taken:

West facing East

Description:

Approximate location of the pipeline along road on hillside.

URS

PHOTOGRAPHIC LOG

Chevron Pipe Line Company	Sunol Spill Monitoring Well Destruction Sunol, California	URS Project No. 26815217

Photo No. 3 | **Date:** 6/23/08

Direction Photo Taken:

West facing East

Description:

Staircase to soil vapor extraction (SVE) wells.

Photo No. 4 | **Date:** 6/23/08

Direction Photo Taken:

West facing East

Description:

URS employee in relationship to the hillside.

URS

PHOTOGRAPHIC LOG

Chevron Pipe Line Company	Sunol Spill Monitoring Well Destruction Sunol, California	URS Project No. 26815217

Photo No.	Date:
5	6/23/08

Direction Photo Taken:

South facing North

Description:

Monitoring well destruction along Calaveras Road.