



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
Secretary for
Environmental Protection

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Arnold Schwarzenegger
Governor

May 6, 2009

Mr. Daryl J. Pessler
ConocoPhillips Company
P.O. Box 25376
Santa Ana, CA 92799-5376

GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND AND/OR HEXAVALENT CHROMIUM IMPACTED SITES—INACTIVE 76 STATION 5756, 1369 ERRINGER ROAD, SIMI VALLEY (ORDER NO. R4-2007-0019; CI NO. 9506)

Dear Mr. Pessler:

We have completed our review of your application for coverage under the General Waste Discharge Requirements to inject hydrogen peroxide at the site referenced above for groundwater cleanup and remediation.

Multiple phases of assessment have been conducted at the site since 1989, which includes the installation of 17 groundwater monitoring wells (MW-1 through MW-17) and 4 vapor extraction wells (SVE1 through SVE4). Results of the pre-remediation assessment activities indicated that maximum TPH as gasoline, benzene, MTBE, and TBA concentrations in groundwater were 64,000, 250, 54,000, and 330,000 µg/L respectively.

To evaluate the appropriate method to remediate the soil and groundwater contaminations beneath the site, feasibility study on groundwater pump and treat, dual-phase extraction, sparging, chemical oxidation, and enhanced biodegradation had been conducted and enhanced biodegradation with hydrogen peroxide was selected as the ideal method for the subject site.

A letter dated October 13, 2008, from VCEHD approved the Interim Remedial Action Plan for a hydrogen peroxide injection pilot test dated September 29, 2008.

Regional Board staff has determined that the proposed discharge meets the conditions specified in Order No. R4-2007-0019, "Revised General Waste Discharge Requirements for Groundwater Remediation At Petroleum Hydrocarbon Fuel, Volatile Organic Compound and/or Hexavalent Chromium Impacted Sites (General WDRs)," adopted by the Los Angeles Regional Water Quality Control Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of General WDRs Board Order No. 2007-0019 and Monitoring and Reporting Program No. CI-9506 and Standard Provisions. This Waste Discharge Requirements shall not be terminated without the regulatory oversight agency's prior approval.

California Environmental Protection Agency

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Order No. R4-2007-0019
Monitoring & Reporting Program No. CI-9506

May 6, 2009

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2007-0019. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to Compliance File No. CI-9506, which will assure that the reports are directed to the appropriate file and staff. Do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

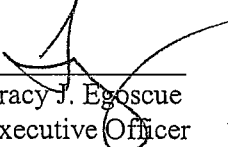
To avoid paying future annual fees, please submit written request for termination of your enrollment under the general permit in a separate letter when your project has been completed and the permit is no longer needed. Be aware that the annual fee covers the fiscal year billing period beginning July 1 and ending June 30, the following year. You will pay the full annual fee if your request for termination is made after the beginning of the new fiscal year beginning July 1.

We are sending a copy of Order No. R4-2007-0019 only to the applicant. A copy of the Order will be furnished to anyone who requests it, or on line at:

http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/general_orders/r4-2007-0019/r4-2007-0019.pdf

If you have any questions, please contact Dr. Rebecca Chou at (213) 620-6156 for WDRs administration matters, or Mr. Gregg Kwey at (213) 576-6702 for technical matters.

Sincerely,


Tracy J. Egoscue
Executive Officer

Enclosures: 1. Board Order No. R4-2007-0019
2. Standard Provisions for Reporting and Monitoring
3. Monitoring and Reporting Program No. CI-9506

cc: Ms. Erin O'Connell, Ventura County Division of Environmental Health
Ms. Leslie Bond, Stantec Consulting Inc.

California Environmental Protection Agency

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STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

MONITORING AND REPORTING PROGRAM NO. CI-9506

FOR

CONOCOPHILLIPS COMPANY
INACTIVE 76 STATION 5756
1369 ERRINGER ROAD, SIMI VALLEY

(HYDROGEN PEROXIDE INJECTION FOR GROUNDWATER CLEANUP)
(ORDER NO. R4-2007-0019, SERIES NO. 093)

I. REPORTING REQUIREMENTS

- A. ConocoPhillips Company (hereinafter Discharger) shall implement this monitoring program on the effective date of Regional Board Order No. R4-2007-0019. The first monitoring report under this program, for April to June 2009, shall be received at the Regional Board by October 15, 2009. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – March	April 15
April – June	July 15
July – September	October 15
October – December	January 15

If there is no discharge or injection during any reporting period, the report shall so state. Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

- B. By March 1st of each year, the Discharger shall submit an annual summary report to the Regional Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous calendar year. In addition, the Discharger shall explain the compliance record and the corrective actions taken, or planned, which may be needed to bring the discharge into full compliance with the waste discharge requirements (WDRs).

- C. Laboratory analyses – all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Health Services Environmental Laboratory Accreditation Program (ELAP). A copy of the laboratory certification shall be provided each time a new and/or renewal certification is obtained from ELAP.
- D. The method limits (MLs) employed for effluent analyses shall be lower than the permit limits established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable and obtains approval for a higher ML from the Regional Board Executive Officer (Executive Officer). The Discharger shall submit a list of the analytical methods employed for each test and the associated laboratory quality assurance/quality control (QA/QC) procedures upon request by the Regional Board.
- E. Groundwater samples must be analyzed within allowable holding time limits as specified in 40 CFR Part 136. All QA/QC samples must be run on the same dates when samples were actually analyzed. The Discharger shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff.
- F. Each monitoring report must affirm in writing that “All analyses were conducted at a laboratory certified for such analyses by the California Department of Health Services, and in accordance with current United States Environmental Protection Agency (USEPA) guideline procedures or as specified in this Monitoring Program.” Proper chain of custody procedures must be followed and a copy of the completed chain of custody form shall be submitted with the report.
- G. Each monitoring report shall contain a separate section titled “Summary of Non-Compliance” which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with WDRs. This section shall be located at the front of the report and shall clearly list all non-compliance with WDRs, as well as all excursions of effluent limitations.
- H. The Discharger shall maintain all sampling and analytical results: date, exact place, and time of sampling; dates analyses were performed; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.
- I. If the Discharger performs analyses on any groundwater samples more frequently than required by this Order using approved analytical methods, the results of those analyses shall be included in the report.

- J. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized to demonstrate compliance with the requirements and, where applicable, shall include results of receiving water observations.
- K. The Discharger should not implement any changes to the Monitoring and Reporting Program prior to receiving Executive Officer's written approval.

II. HYDROGEN PEROXIDE INJECTION MONITORING REQUIREMENTS

The quarterly reports shall contain the following information regarding injection activities:

1. Location map showing injection points used for the hydrogen peroxide injection. Groundwater monitoring wells shall not be used as injection points to avoid reduction of groundwater monitoring network, data bias, well screen clogging and alteration. Two injection wells (IW-1, and IW-2) are currently proposed to be installed in the center of groundwater plumes that can be referenced in Figure 3. Additional injection points should be reviewed and approved by the County of Ventura, Environmental Health Division (VCEHD) and Regional Board prior to full scale implementation.
2. Written and tabular summary defining the quantity of hydrogen peroxide injected per month to the groundwater and a summary describing the days on which the injection system was in operation.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site. Groundwater samples shall be collected from two source area groundwater monitoring wells MW-4A and MW-16, and one down-gradient dual-zone groundwater monitoring well MW-6 on a quarterly basis to monitor the effectiveness of the in-situ groundwater remediation. Additional monitoring wells for full scale implementation may be required if VCEHD and Regional Board deemed they are necessary. The injection points shall not be used as monitoring points. Groundwater shall be monitored for the duration of the remediation in accordance with the following discharge monitoring program:

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd)	µg/L	Grab	• Quarterly ¹
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	µg/L	Grab	• Quarterly ¹

Methyl tertiary butyl ether (MTBE), Tertiary butyl alcohol (TBA), Tertiary amyl methyl ether (TAME), Di-isopropyl ether (DIPE), ether (ETBE)	µg/L	Grab	• Quarterly ¹
Ethanol Formaldehyde Acetone	µg/L	Grab	• Quarterly ¹
Total dissolved solids, Arsenic, Boron, Chloride, Bromide, Sulfate, Lead, Nickel, Cadmium, Manganese	mg/L	Grab	• Quarterly ¹
Oxidation-reduction potential	millivolts		• Quarterly ¹
Dissolved Oxygen	µg/L	Grab	• Quarterly ¹
Dissolved ferrous iron	µg/L	Grab	• Quarterly ¹
Total Chromium and chromium six ²	µg/L	Grab	• Quarterly ¹
PH	pH units	Grab	• Quarterly ¹
Temperature	⁰ F/ ⁰ C	Grab	• Quarterly ¹
Groundwater Elevation	Feet, mean sea level and below ground surface	In situ	• Quarterly ¹

¹ One week before injection and Quarterly thereafter

² The Discharger is required to monitor for total chromium and chromium six in the baseline, second and fourth quarterly sampling. If detected at any of these sampling events, the total chromium and chromium six must be monitored quarterly thereafter.

All groundwater monitoring reports must include, at a minimum, the following:

- a. Well identification, date and time of sampling;
- b. Sampler identification, and laboratory identification;
- c. Quarterly observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

IV. MONITORING FREQUENCIES

Monitoring frequencies may be adjusted to a less frequent basis or parameters dropped by the Executive Officer if the Discharger makes a request and the Executive Officer determines that the request is adequately supported by statistical trends of monitoring data submitted.

V. CERTIFICATION STATEMENT

Each report shall contain the following declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

Executed on the _____ day of _____ at _____.

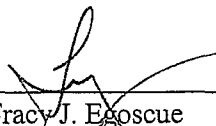
(Signature)

(Title)"

VI. PUBLIC DOCUMENTS

These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.





Ordered by:

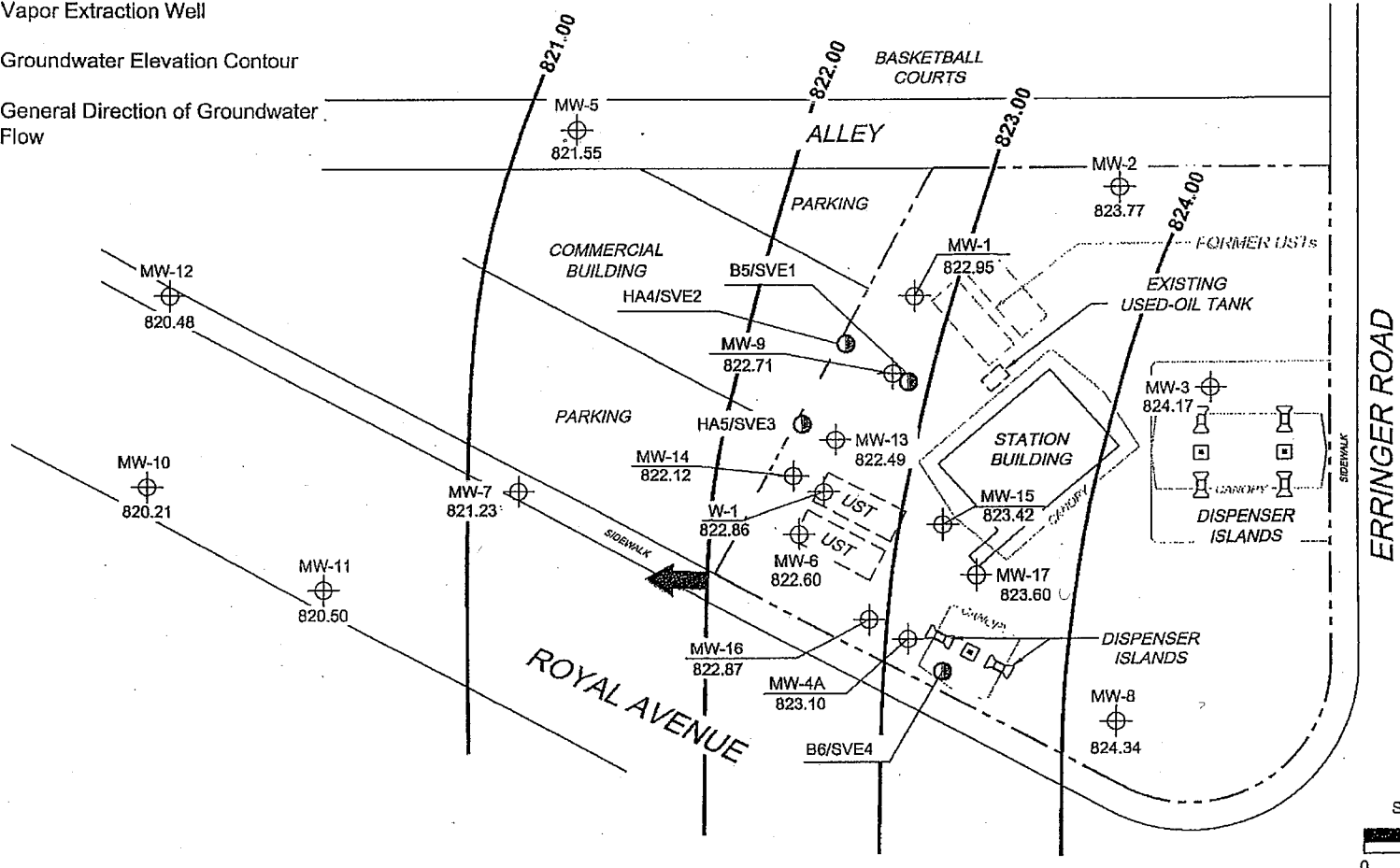


Tracy J. Egoscue
Executive Officer

Date: May 6, 2009

LEGEND

- MW-17  Monitoring Well with Groundwater Elevation (feet)
- B6/SVE4  Vapor Extraction Well
- 824.00  Groundwater Elevation Contour
-  General Direction of Groundwater Flow



NOTES:

Contour lines are interpretive and based on fluid levels measured in monitoring wells. Elevations are in feet above mean sea level. UST = underground storage tank.



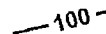


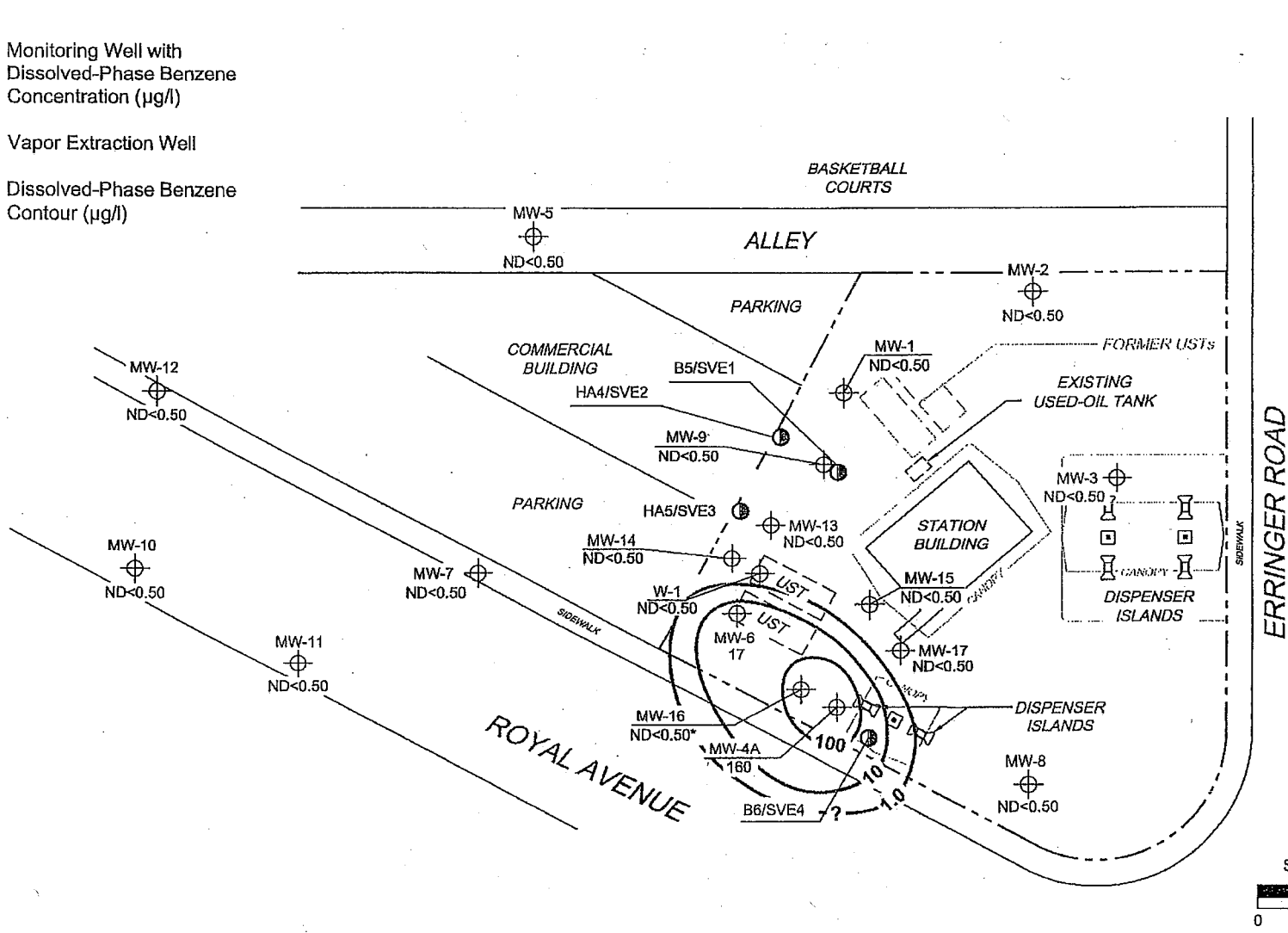
PROJECT: 154770
 FACILITY:
 76 STATION 5756
 1369 ERRINGER ROAD
 SIMI VALLEY, CALIFORNIA

**GROUNDWATER ELEVATION
 CONTOUR MAP**
 June 26, 2008

FIGURE 2

LEGEND

- MW-17  Monitoring Well with Dissolved-Phase Benzene Concentration (µg/l)
- B6-SVE4  Vapor Extraction Well
-  100 Dissolved-Phase Benzene Contour (µg/l)



NOTES:

Contour lines are interpretive and based on laboratory analysis results of groundwater samples.
 µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. * = not included in contour interpretation. UST = underground storage tank.



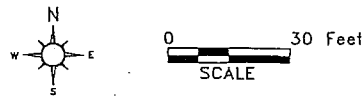
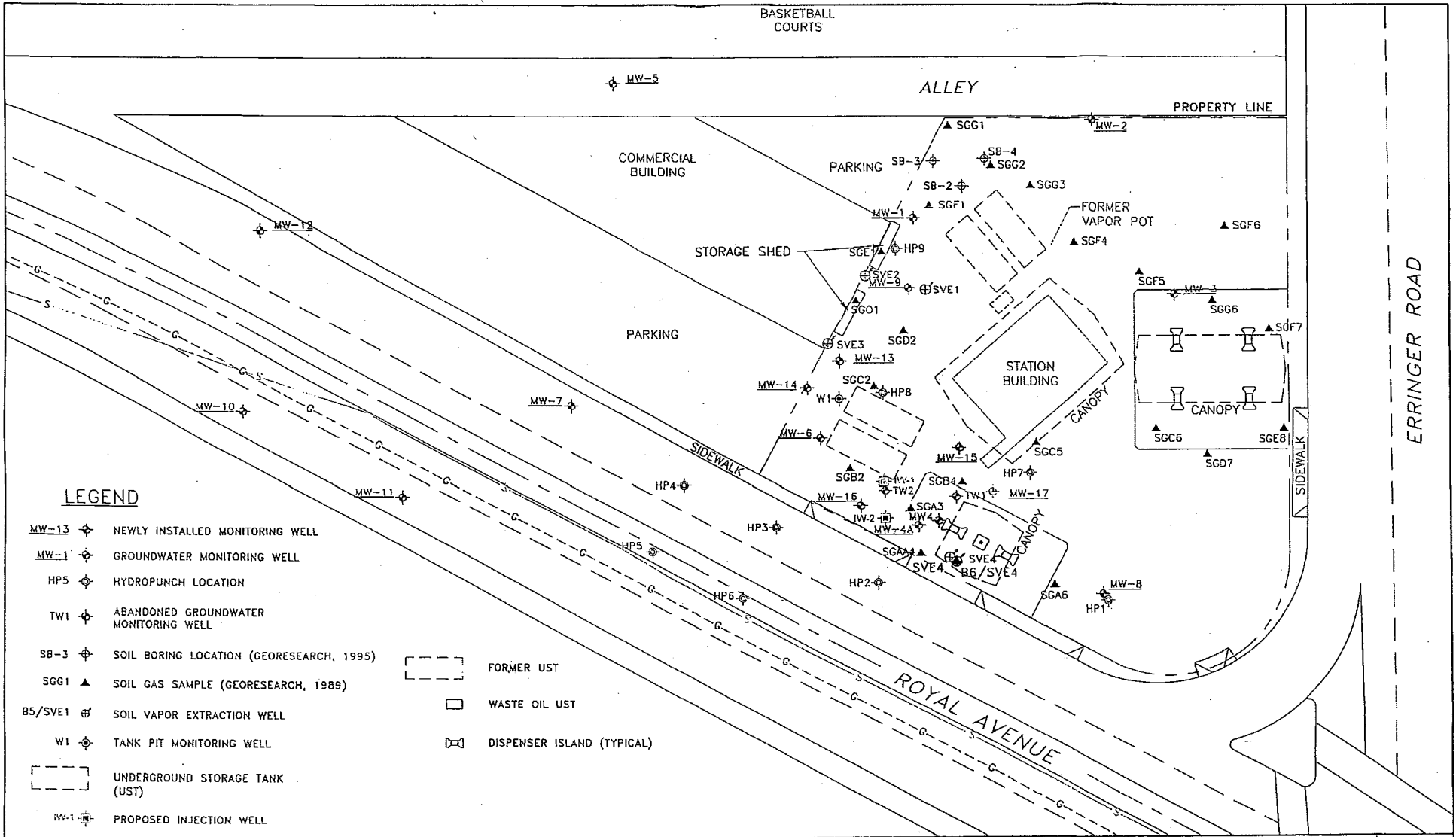
PROJECT: 154770

FACILITY:

76 STATION 5756
 1369 ERRINGER ROAD
 SIMI VALLEY, CALIFORNIA

**DISSOLVED-PHASE BENZENE
 CONCENTRATION MAP
 June 26, 2008**

FIGURE 4



 290 Conejo Ridge Avenue Thousand Oaks, CA 91320 (805) 230-1268/230-1277 (Fax)	FOR: ConocoPhillips	SITE MAP WITH PROPOSED INJECTION WELL LOCATIONS		FIGURE: 3
	76 STATION NO. 5756 1369 Erringer Road Simi Valley, California	CHECKED BY: L. Band	APPROVED BY: P. Kinney	DATE: 09/23/08
JOB NUMBER: 37CP.01+65.40	DRAWN BY: R. Roman			

MAP SOURCE: ATC ASSOCIATES INC., DATED NOVEMBER 9, 2005.
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