



California Regional Water Quality Control Board  
Los Angeles Region

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Linda S. Adams  
Secretary for  
Environmental Protection

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<http://www.waterboards.ca.gov/losangeles>

Arnold Schwarzenegger  
Governor

October 22, 2009

Mr. Lee Hanley  
ExxonMobil Oil Corporation  
1464 Madera Road, Suite N. #265  
Simi Valley, CA 93065

**GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER CLEANUP  
AT PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND  
AND/OR HEXAVALENT CHROMIUM IMPACTED SITES—FORMER EXXONMOBIL  
STATION 18KP6, 3102 THOUSAND OAKS BLVD, THOUSAND OAKS (ORDER NO.  
R4-2007-0019, SERIES NO. 108; CI NO. 9551)**

Dear Mr. Hanley:

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

Multiple phases of assessment have been conducted since 1987, which included the advancement of nine soil borings (B1 and B4 through B11), and the installation of three soil vapor extraction wells (B2, B3 and B12), four piezometer well clusters [P01, P02, P03 (A – D) and MW04/MW05], and 14 groundwater monitoring wells (MWA, MW01 through MW03, MW06 through MW14 and MW09A).

In July 2008, a 2-day dual-phase extraction test was performed. During the test, 5.98 pounds of hydrocarbon vapor and 1,800 gallons of groundwater were extracted. Extracted TPHg, benzene and MTBE concentrations were generally stable throughout the test, at maximum concentrations of 290, 1.2 and 0.10 ppmv, respectively, with the highest concentrations from on-site well MW01

Due to the persistent dissolved phase hydrocarbon and oxygenate concentrations measured at the site at one to three orders of magnitude above regulatory standards, the VCEHD has required remedial action to progress the case to closure. Therefore, Environmental Resolutions, Inc. (ERI) proposes on your behalf, through the "Site Assessment Report and Work Plan for Feasibility Testing" dated March 23, 2009, to conduct an in-situ chemical oxidation test using Fenton's reagent to evaluate the feasibility of the technology to remediate the residual subsurface hydrocarbons. Well MW09 is proposed as the primary test well. Additionally, to monitor subsurface conditions during and after the chemical injection test, two groundwater monitoring wells are proposed downgradient of the injection area, and between the injection points and the adjacent residential and commercial areas (Plate 16).

Dear Mr. Hanley

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October 22, 2009

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-9551 and Standard Provisions. This Waste Discharge Requirements shall not be terminated without the regulatory oversight agency's prior approval.

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-9551, 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](http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/general_orders/r4-2007-0019/r4-2007-0019.pdf)

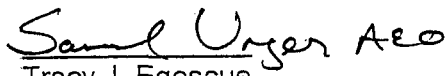
Dear Mr. Hanley

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October 22, 2009

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-9551

cc:            Mr. David Salter, Ventura County Division of Environmental Health  
                  Mr. James Anderson, Environmental Resolutions, Inc.

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

MONITORING AND REPORTING PROGRAM NO. CI-9551

FOR

FORMER EXXONMOBIL STATION 18KP6  
3102 THOUSAND OAKS BLVD, THOUSAND OAKS

(FENTON'S REAGENT INJECTION FOR GROUNDWATER CLEANUP)  
(ORDER NO. R4-2007-0019, SERIES NO. 108)

I. REPORTING REQUIREMENTS

- A. ExxonMobil oil Corporation (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 July to December 2009, shall be received at the Regional Board by January 15, 2010. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

<u>Monitoring Period</u>	<u>Report Due</u>
January – June	July 15
July – 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 1<sup>st</sup> 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. FENTON'S REAGENT INJECTION MONITORING REQUIREMENTS

The Semi-Annually reports shall contain the following information regarding injection activities:

1. Location map showing injection points used for the Fenton's Reagent injection. Five direct-push injection locations surrounding monitoring well MW09 are currently proposed as can be referenced in Plate 16. Groundwater monitoring wells shall not be used as injection points to avoid reduction of groundwater monitoring network, data bias, well screen clogging and alteration. Additional injection points should be reviewed and approved by the County of Ventura, Environmental Health Division (VCEHD) and Regional Board prior to implementations.
2. Written and tabular summary defining the quantity of Fenton's Reagent 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 proposed down-gradient monitoring wells MW15 & MW16, two source area monitoring well MW09 & MW9A, and one up-gradient monitoring wells MW06 on a semi-annual 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. 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	µg/L	Grab	• Semi-Annually <sup>1</sup>

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

<sup>1</sup> One week before injection and Semi-Annually thereafter

<sup>2</sup> The Discharger is required to monitor for total chromium and chromium six in the baseline, second and fourth Semi-Annually sampling. If detected at any of these sampling events, the total chromium and chromium six must be monitored Semi-Annually 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. Semi-Annually 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.

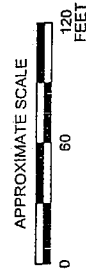
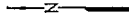
Ordered by: Tracy J. Egoscue A&O for  
Tracy J. Egoscue  
Executive Officer

Date: October 22, 2009



**EXPLANATION**

- ◆ MW11 Groundwater monitoring well
- ◆ P03A Piezometer nest with four casings
- 892.67 Groundwater elevation (feet, relative
- \* Not used for contouring
- Line of equal groundwater elevation
- Underground storage tank

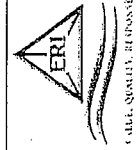


**GROUNDWATER ELEVATION CONTOUR  
MAP - BEDROCK WELLS - 09/08-09/08**

FORMER EXXONMOBIL STATION 18KFP6  
3102 Thousand Oaks Boulevard  
Thousand Oaks, California

PROJECT NO.  
FN 10070005

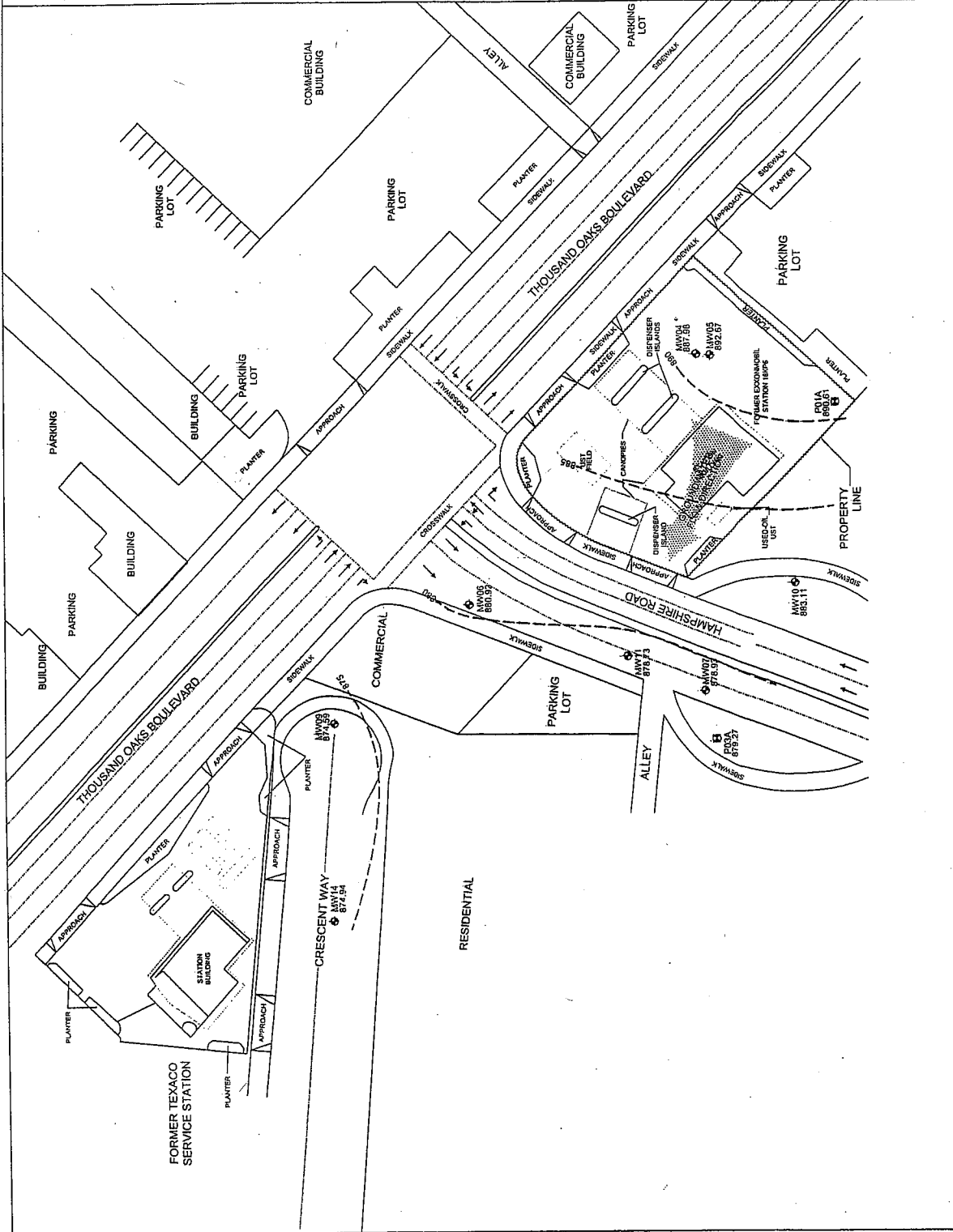
1007

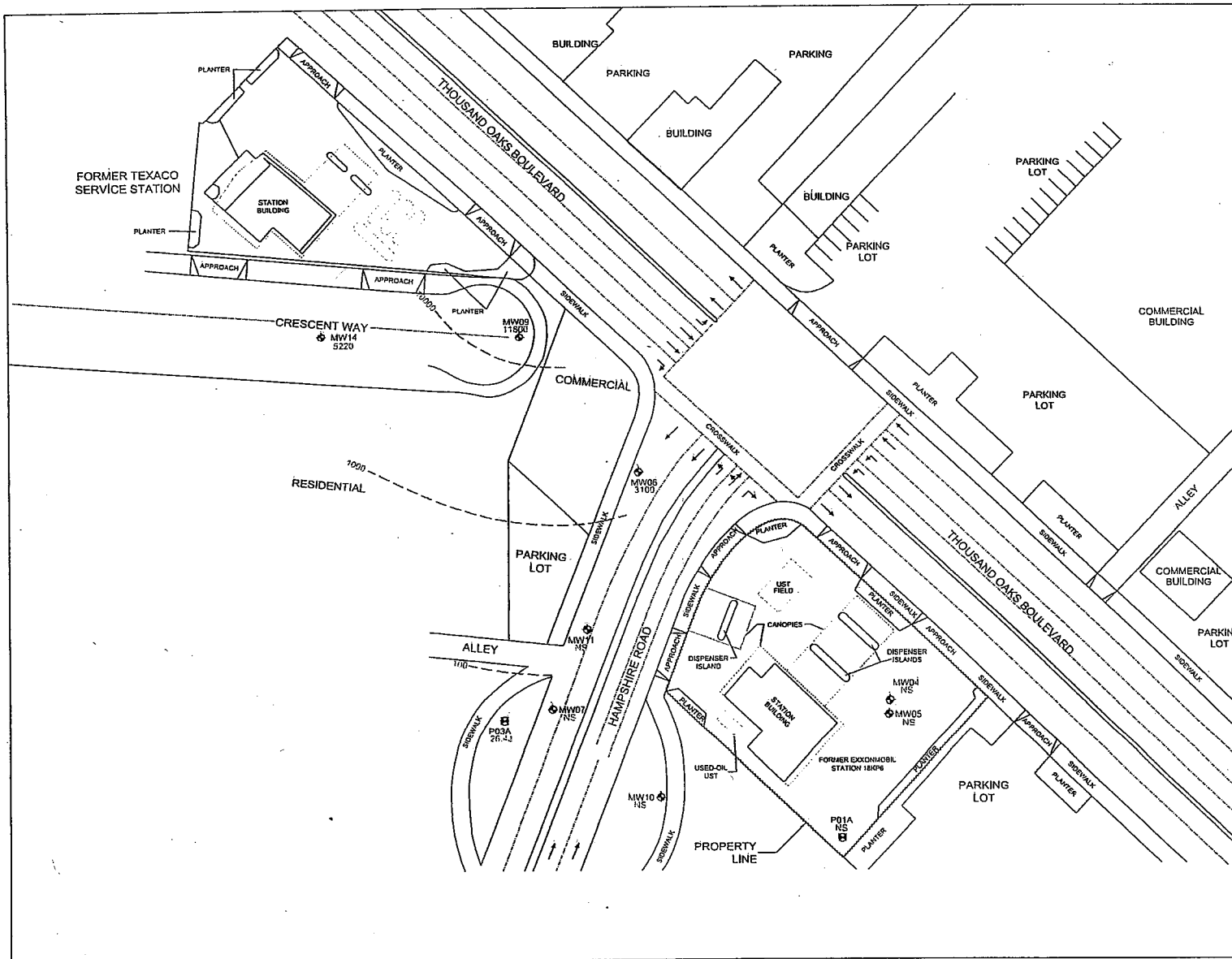


REVISOR BY  
MBB

PLATE  
5

DATE: 12/10/08





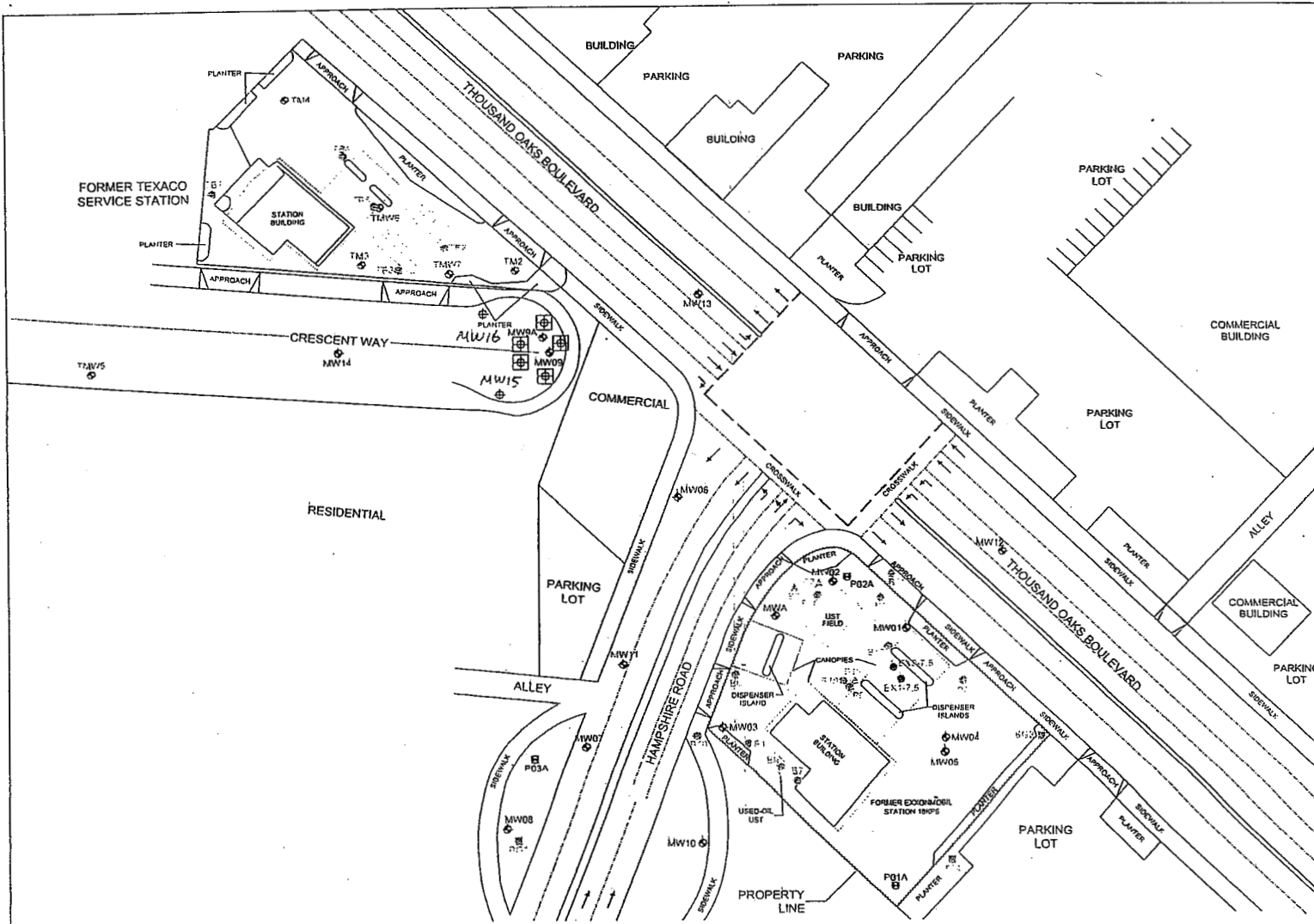
### EXPLANATION

- ⊕ MW11 Groundwater monitoring well
- ⊕ P03A Piezometer nest with four casings
- 11800 TPHg concentration in micrograms
- J Estimated value between method detection limit and practical quantitation limit
- NS Not sampled
- Line of equal TPHg concentration (dashed where inferred)
- ⋯ Underground storage tank

APPROXIMATE SCALE

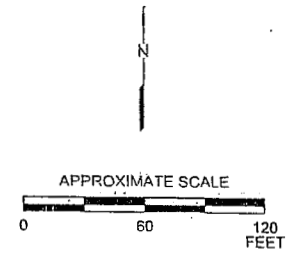
0 60 120 FEET

<b>TPHg GROUNDWATER ISOPLETH CONCENTRATION MAP - BEDROCK WELLS - 09/08-9/08</b> FORMER EXXONMOBIL STATION 18KP6 3102 Thousand Oaks Boulevard Thousand Oaks, California		
FN 10070005	<p>ERI SAFELY. QUALITY. RESPONSE.</p>	PROJECT NO. 1007
REVISED BY MBB		PLATE 13
		DATE: 12/10/08



**EXPLANATION**

- MW14 Groundwater monitoring well
- TMW7 Texaco groundwater monitoring well
- P03A Piezometer nest with four casings
- TB5 Texaco soil boring
- E16 Soil boring
- BC3 Background lead sample
- EX2-7.5 Excavation verification sample location
- F1 Soil vapor extraction well
- Proposed groundwater monitoring well
- Proposed direct-push boring
- Underground storage tank



**PROPOSED GROUNDWATER MONITORING WELL AND INJECTION LOCATIONS**  
 FORMER EXXONMOBIL STATION 18KP6  
 3102 Thousand Oaks Boulevard  
 Thousand Oaks, California

FN 10070005		PROJECT NO. 1007
REVISED BY MBB		PLATE 16
	<small>ER</small>	DATE: 03/13/09