



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
Cal/EPA Secretary

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Arnold Schwarzenegger
Governor

December 14, 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 (ORDER NO. R4-2007-0019)
FORMER MOBIL SERICE STATION #18-FG9, 13272 MOORPARK STREET
SHERMAN OAKS, CALIFORNIA
(CI-9560, SERIES NO. 113); (UST FILE NO. 914230189)**

Dear Mr. Hanley:

We have completed our review of your application for coverage under the General Waste Discharge Requirements (WDR) to inject sodium persulfate and chelated iron into the capillary fringe and groundwater at the subject site (the Site). The purpose of the injection is to mitigate fuel constituents present in the soil and groundwater beneath the Site in order to minimize the threat to the underlying aquifers.

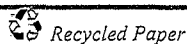
ExxonMobil Oil Corporation (hereinafter Discharger) owns and operates at the Site located at 13272 Moorpark Street, Sherman Oaks. The Site is a former gasoline service station that contained four underground storage tanks (USTs) and four dispensers. The Site is currently occupied by two businesses and an asphalt parking lot along the south and east property lines. The site is surrounded by residential and commercial properties.

The Site is located within the San Fernando Valley Groundwater Basin. The subsurface lithology of the Site consists of silt, clay, silty sand and sand, from the surface to approximately 45 feet below ground surface (bgs), the maximum depth drilled at the Site

Site investigations conducted at the Site to date indicate that the soil and groundwater beneath the Site have been impacted with fuel constituents. Maximum concentrations of TPH_G and benzene detected in the soil were 41,000 and 160 mg/kg, respectively.

Currently, there are thirteen groundwater monitoring wells onsite. Groundwater monitoring has been conducted since June 1987. Historically, up to 160,000 µg/L of TPH_G, 29,000 µg/L of benzene, 40,000 µg/L of MTBE and 43,600 µg/L of TBA were detected in the groundwater beneath the Site. During the installation of injection wells in October 2009, grab groundwater samples collected from the well boreholes detected up to 122,000 µg/L TPH_G, 26,900 µg/L benzene, 3,380 µg/L MTBE and 1,530 µg/L TBA were detected in the groundwater. Depth to groundwater was measured at about 20 feet bgs and the groundwater flow direction varies from northwest to southwest.

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On September 14, 2009, Regional Board staff approved a remedial action plan (RAP) dated April 22, 2009, to mitigate the contaminated fuel constituents in soil and groundwater beneath the Site by utilizing In-Situ Chemical Oxidation (ISCO) technology by injecting sodium persulfate and chelated iron into the subsurface.

On October 5, 2009, the Discharger submitted a WDR application.

Between October 19 through 21, 2009, a total of three injection wells (IW-01 through IW-03) were installed to 27 feet bgs in the treatment zone near existing wells MW-3R, MW-6R and MW-16 using a hollow stem auger drill rig. The persulfate will be mixed with activated chelated iron. A 10% solution of activated persulfate will be injected into the subsurface at each injection well over a period of approximately 8 hours. According to WDR Application submitted October 5, 2009, approximately 2,000 pounds (lbs) of persulfate per well and 100 lbs of chelated iron per well is to be injected. After the desired amount of sodium persulfate is injected, air will be injected into the well to disperse the chemicals throughout the formation. Injection pressures will be 20 pounds psi. Up to four injection events are planned at the target depth of 22 feet to 27 feet bgs.

Based on our review, 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*" adopted by the Regional Board on March 1, 2007.

Enclosed are the Waste Discharge Requirements, consisting of Regional Board Order No. R4-2007-0019, Monitoring and Reporting Program No. CI-9560, and Standard Provisions.

The WDRs issued shall not be terminated until Regional Board staff determines the WDRs are no-longer needed for the site cleanup.

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, please reference Compliance File No. CI-9560 to assure that the reports are directed to the appropriate staff. Do not combine other reports with your monitoring reports complying with Order No. R4-2007-0019. Submit each type of report as a separate document.

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. A copy of the Order can also be found online at: http://www.waterboards.ca.gov/losangeles/html/permits/gen_orders/R4-2007-0019/R4-2007-0019.pdf

Mr. Lee Hanley
ExxonMobil Oil Corporation

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December 14, 2009

If you have any questions, please contact Dr. Rebecca Chou at (213) 620-6156. Questions regarding the underground storage tank issues should be forwarded to Ms. Chandra Cansler at (213) 576-6782.

Sincerely,

Tracy J. Egoscue

Tracy J. Egoscue
Executive Officer

Enclosures: 1. Board Order No. R4-2007-0019
2. Monitoring and Reporting Program No. CI-9560
3. Standard Provisions

Cc: Yvonne Shanks, State Water Resources Control Board, UST Cleanup Fund
Nancy Matsumoto, Water Replenishment District of Southern California
Eloy Luna, City of Los Angeles Fire Department, Underground Tanks
Captain Matthew Gatewood, City of Los Angeles Department, Underground Tanks
Patrick McCullough, ETIC Engineering

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-9560
FOR
EXXONMOBIL OIL CORPORATION
FORMER MOBIL SERVICE STATION #18-FG9
(UST FILE NO. 914230189)

ENROLLMENT UNDER REGIONAL BOARD
ORDER NO. R4-2007-0019
SERIES NO. 113

I. REPORTING REQUIREMENTS

- A. ExxonMobil Oil (hereinafter Discharger) shall implement this monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2007-0019.

Monitoring reports shall be received by the due dates in the following schedule:

<u>Reporting Period</u>	<u>Report Due</u>
April – June	July 15
October – December	January 15

The first monitoring report under this monitoring program is due by January 15, 2010.

- B. 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.
- C. By January 30 of each year, beginning January 30, 2008, 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 (WDR).
- D. 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 the WDR. This section shall be located at the front of the report and shall clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.

E. In addition to the aforementioned requirements, the Discharger shall comply with requirements contained in Section G of Order No. R4-2007-0019 "*Monitoring and Reporting Requirements*".

II. DISCHARGE MONITORING REQUIREMENTS

The semi-annual reports shall contain the following information regarding the injection activities. If there is no injection during any reporting period, the report shall so state:

1. Location map showing injection points.
2. Written summary defining:
 - Depth of injection points;
 - Quantity of the sodium persulfate injected at each injection point; and
 - Total amount of sodium persulfate injected at the site.
3. Semi-annual visual inspection at each injection well shall be conducted to evaluate the well casing integrity after each injection. The semi-annual report shall include a summary of the visual inspection.
4. To avoid groundwater monitoring network reduction, data bias, and well screen clogging or alteration, no groundwater monitoring wells shall be used as injection points during the proposed injection. Separate injection points/wells must be installed at the Site for the proposed injection.

III. GROUNDWATER MONITORING PROGRAM

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the injection activities. The monitoring well network must include MW-4 and MW-13 as upgradient wells; MW-3R, MW-16 and MW-6R as source wells; and MW-5, and MW-8, as downgradient wells. These sampling stations shall not be changed and any proposed change of monitoring locations shall be identified and approved by the Regional Board Executive Officer (Executive Officer). The Discharger shall conduct a baseline sampling from all wells onsite one or two weeks prior to the proposed injection and regular sampling with the required frequencies from all the monitoring wells in the monitoring network for the following constituents:

<u>CONSTITUENT</u>	<u>UNITS</u> ¹	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
pH ²	pH units	grab	Semi-annually
Temperature ²	°F	grab	Semi-annually
Oxidation-reduction potential ²	Milivolts	grab	Semi-annually
Specific conductivity ²	µmhos/cm	grab	Semi-annually

Ferrous iron	µg/L	grab	Semi-annually
Dissolved Oxygen ²	µg/L	grab	Semi-annually
Total Petroleum Hydrocarbons (as gasoline)	µg/L	grab	Semi-annually
Benzene	µg/L	grab	Semi-annually
Ethylbenzene	µg/L	grab	Semi-annually
Toluene	µg/L	grab	Semi-annually
Total xylenes	µg/L	grab	Semi-annually
MTBE	µg/L	grab	Semi-annually
TBA	µg/L	grab	Semi-annually
TAME	µg/L	grab	Semi-annually
DIPE	µg/L	grab	Semi-annually
ETBE	µg/L	grab	Semi-annually
Ethanol	µg/L	grab	Semi-annually
Methane	µg/L	grab	Semi-annually
Formaldehyde	µg/L	grab	Semi-annually
Acetates	µg/L	grab	Semi-annually
Total organic carbon	µg/L	grab	Semi-annually
Total dissolved solids	mg/l	grab	Semi-annually
Arsenic	mg/L	grab	Semi-annually
Bromide	mg/L	grab	Semi-annually
Sulfate	mg/L	grab	Semi-annually
Chloride	mg/L	grab	Semi-annually
Boron	mg/L	grab	Semi-annually
Sodium	mg/L	grab	Semi-annually
Carbon dioxide	mg/L	grab	Semi-annually
Manganese	µg/L	grab	Semi-annually
Total iron	µg/L	grab	Semi-annually
Alkalinity	µg/L	grab	Semi-annually

Total chromium ³	µg/L	grab	Semi-annually
Chromium six ³	µg/L	grab	Semi-annually

¹ mg/L: milligrams per liter; µg/L: micrograms per liter; µmhos/cm: microohms per centimeter; °F: degree Fahrenheit.

² Field instrument may be used to measure this parameter.

³ The Discharger is required to monitor for total chromium and chromium six in the baseline, second and fourth semi-annual 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-annual observation of groundwater levels, recorded to 0.01 feet mean sea level and groundwater flow direction.

IV. MONITORING FREQUENCIES

Specifications in this monitoring program are subject to periodic revisions. Monitoring requirements may be modified or revised by the Executive Officer based on review of monitoring data submitted pursuant to this Order. Monitoring frequencies may be adjusted to a less frequent basis or parameters and locations dropped by the Executive Officer if the Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

V. CERTIFICATION STATEMENT

Each report shall contain the following completed 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)"

ExxonMobil Oil Corporation
Monitoring and Reporting Program No. CI-9560

UST File No. 914230189
Order No. R4-2007-0019

All records and reports submitted in compliance with this Order are public documents and will be made available for inspection during business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region, upon request by interested parties. Only proprietary information, and only at the request of the Discharger, will be treated as confidential.

Ordered by:

Samuel Unger A.E.O. for

Tracy J. Egoscue
Executive Officer

Date: December 14, 2009