



California Regional Water Quality Control Board

Los Angeles Region



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

Matthew Rodriguez
Secretary for
Environmental Protection

Edmund G. Brown Jr.
Governor

September 13, 2011

Ms. Shari London
ConocoPhillips Company
3900 Kilroy Airport Way, Ste 210
Long Beach, CA 90806

**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)
76 SERVICE STATION NO. 252021 (DBA JACOBS UNION 76)
8755 WEST THIRD STREET, LOS ANGELES, CALIFORNIA
(CI-9747, SERIES NO. 169); (UST FILE NO. 900480107)**

Dear Ms. London:

We have completed our review of your application for coverage under the General Waste Discharge Requirements (WDR) for Oxygen Release Compound (ORC[®]) application at the subject site. The purpose of the injection is to reduce the dissolved-phase petroleum hydrocarbons concentrations in groundwater beneath the site in order to minimize the threat to underlying aquifers.

The site is an active 76 station located on the corner of 3rd Street and Robertson Boulevard in Los Angeles, California (Figure 1) (Latitude: N 34° 4' 25.0", Longitude: W 118° 22' 59.2"). The site formerly contained two gasoline underground storage tanks (USTs), one waste oil tank, one clarifier and two hydraulic hoists. The site currently contains two 10,000-gallon gasoline USTs and three dispenser islands. The facility owner is Jacobs Union 76 and the responsible party is ConocoPhillips Company.

The site is located within the southern portion of the West Coast Basin of the Los Angeles Coastal Plain Groundwater Basin. The subsurface lithology of the Site consists of gravel, sands, silts and clays from surface to 50 feet below ground surface (bgs), the maximum depth drilled at the Site.

Several site investigations were conducted at the site between 1989 and 2009, which included USTs and waste oil tank removal, USTs upgrade and dispenser replacement activities, drilling of soil borings, clarifier and hydraulic hoists removal, and installation of groundwater monitoring wells. Site investigations found that the soil and groundwater beneath the site have been impacted by fuel constituents.

Currently, there are eleven groundwater monitoring wells installed at the site. Periodic groundwater monitoring program was initiated in November 2005. The most recent monitoring data (April 2011) showed the maximum total petroleum hydrocarbons as gasoline (TPH_G) up to 3,800 µg/L, methyl tertiary butyl ether (MTBE) up to 4,500 µg/L and tertiary butyl alcohol (TBA) up to 240 µg/L in the monitoring wells at the site. Depth to groundwater was measured at approximately 28 feet bgs and groundwater flow direction is toward the north-northeast.

California Environmental Protection Agency

In March 2011, your consultant, Antea Group (Antea) submitted to this Regional Board an application for waste discharge requirements (WDR) for the proposed ORC[®] injection. In a remedial action plan (RAP) dated April 1, 2011, Antea proposed to install 52 injection points for injection of ORC[®] into the groundwater to target the water-bearing zone near onsite wells MW-1, MW-2, MW-3, MW-5 and MW-8. The ORC[®] is a calcium oxy-hydroxide intercalated with phosphate formulation that when hydrated, produces a steady release of oxygen to enhance bioremediation of petroleum hydrocarbons in the groundwater. Six to nine months after the first application, Antea Group proposed to inject ORC[®] into approximately 52 additional injection point locations, dependent upon the effectiveness of the first injections. In a Regional Board staff directive letter dated August 15, 2011, the RAP was conditionally approved. In a letter dated August 18, 2011, Antea submitted a revised site map depicting proposed injection point locations (Figure 2). The revised injection point locations are adequate.

Regional Board staff have 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 Site (General WDRs)*" adopted by the Los Angeles Regional Water Quality Control 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-9747, 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 include a reference to Compliance File No. CI-9747 to assure that the reports are directed to the appropriate staff and uploaded to Geotracker for WDR program (see attached June 20, 2011 letter for WDR Geotracker requirements and training). 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/board decisions/adopted orders/general orders/r4-2007-0019/r4-2007-0019.pdf](http://www.waterboards.ca.gov/losangeles/board%20decisions/adopted%20orders/general%20orders/r4-2007-0019/r4-2007-0019.pdf)

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.

Ms. Shari London
ConocoPhillips Company

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September 13, 2011

If you have any questions, please contact Ms. Rebecca Chou at (213) 620-6156 or rchou@waterboards.ca.gov. Questions regarding the underground storage tank issues should be forwarded to Ms. Chandra Tyler at (213) 576-6782 or cetyler@waterboards.ca.gov.

Sincerely,



Samuel Unger, P.E.
Executive Officer

- Enclosures: 1. Board Order No. R4-2007-0019
2. Monitoring and Reporting Program No. CI-9747
3. Standard Provisions
4. Electronic Submittal of Information (ESI) requirements dated June 20, 2011

cc: Kathy Jundt, State Water Resources Control Board, UST Cleanup Fund
Phuong Ly, Water Replenishment District of Southern California
Eloy Luna, City of Los Angeles Fire Department, Underground Tanks
Captain Matthew Gatewood, City of Los Angeles Fire Department, Underground Tanks
Phillip Gilchrist, The Antea Group

EXPLANATION

- MW-1 GROUNDWATER MONITORING WELL LOCATION
- B-5 SOIL BORING LOCATION
- ANTICIPATED DIRECT INJECTION POINT AREA (10 ft)
- ANTICIPATED DIRECT INJECTION POINT AREA (8 ft)
- ANTICIPATED DIRECT INJECTION POINT (10 ft)
- ANTICIPATED ADDITIONAL DIRECT INJECTION POINT
- (5100) DISSOLVED-PHASE MTBE CONCENTRATION (ug/L)
- ND<0.50 NOT DETECTED ABOVE INDICATED REPORTING LIMIT
- MTBE METHYL TERT-BUTYL ETHER
- ug/L MICROGRAMS PER LITER
- dpi DIRECT INJECTION POINTS
- ANTICIPATED PHASE II INJECTION POINTS

DIRECT INJECTION POINT AREA (10 ft)
(MTBE 100 ug/L - 1/9/09)
52 dpi (× 51 dpi
⊗ 1 dpi)

DIRECT INJECTION POINT AREA (8 ft)
15 dpi

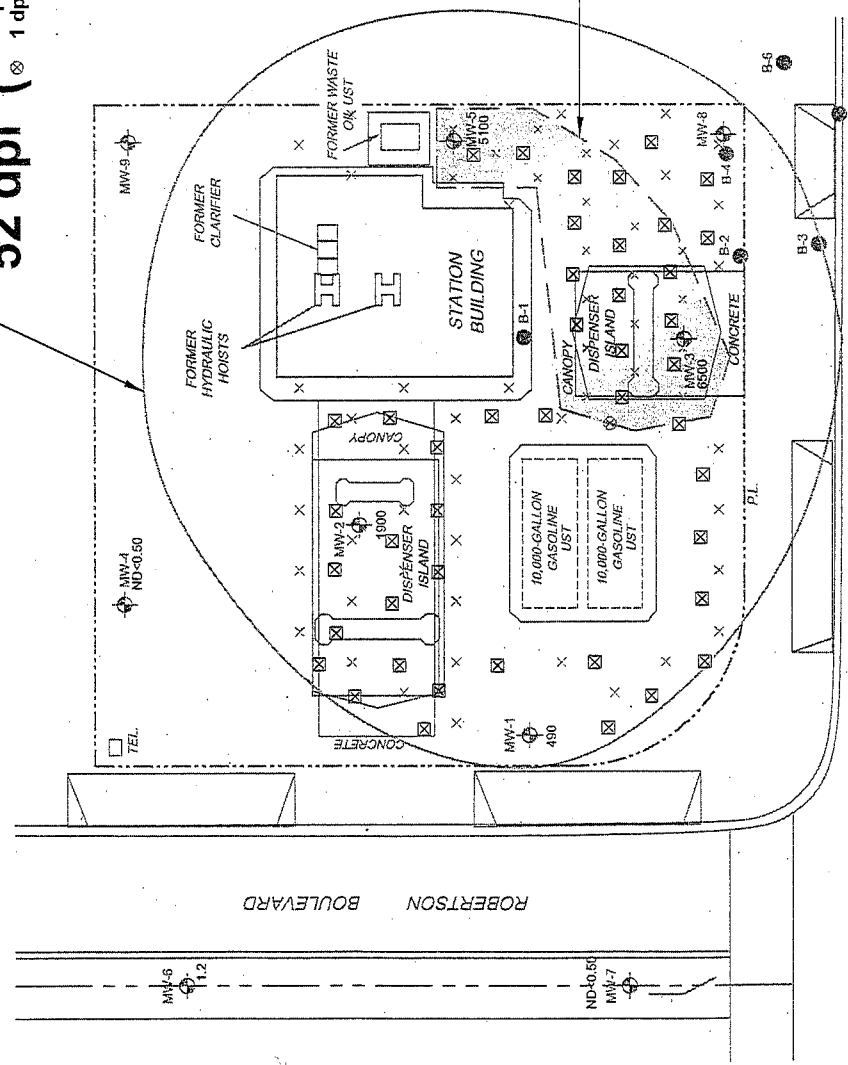
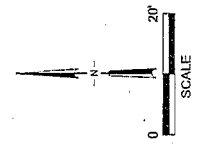


FIGURE 2
REGENESIS DIRECT INJECTION MAP
8-ft CENTERS, 10-ft CENTERS, & ADDITIONAL POINTS

76 STATION NO. 2021
8755 W. THIRD STREET
LOS ANGELES, CALIFORNIA

PROJECT NO. 140252021	DRAWN BY K. MARTIN
FILE NO. 2021-SM2-D1	PREPARED BY P. GILCHRIST
DATE 17 AUG 11	LAYER REGENESIS8

antea



STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION
MONITORING AND REPORTING PROGRAM NO. CI-9747
FOR
76 SERVICE STATION NO. 252021 (DBA JACOBS UNION 76)

8755 WEST THIRD STREET, LOS ANGELES, CA
ENROLLMENT UNDER REGIONAL BOARD
ORDER NO. R4-2007-0019
SERIES NO. 169

I. REPORTING REQUIREMENTS

- A. ConocoPhillips (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 – December 2011, shall be received at the Regional Board by **January 15, 2012**. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

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

- 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 March 1 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 (WDR).
- D. Laboratory analyses – all chemical, bacteriological, and toxicity analyses shall be conducted at a laboratory certified for such analyses by the California Department of Public Health 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.
- E. 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.

- F. 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.
- G. 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.
- H. 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.
- I. 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.
- J. 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.
- K. 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.
- L. The Discharger shall not implement any changes to the Monitoring and Reporting Program prior to receiving Executive Officer's written approval.
- M. The Discharger shall submit all reports required under this MRP, including groundwater monitoring data, to the State Water Resources Control Board GeoTracker database, in addition to submitting hard copies to the Regional Board office. Once the Discharger demonstrate mastery of electronic submittal of reports to GeoTracker for the Site, it may request that the Regional Board waive the requirement of submitting hard copies of reports.

II. DISCHARGE MONITORING REQUIREMENTS

The semi-annual reports shall contain the following information regarding the injection activities.

1. Location map showing injection points used for the injection activities.
2. Written and tabular summary defining:
 - Depth of injection points;
 - Quantity of ORC injected at each injection point;
 - Days on which the injection system was in operation; and
 - Total amount of ORC 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 ORC injection. Separate injection points/wells must be installed at the Site for the proposed ORC 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-3 and MW-8 as upgradient wells; MW-1 and MW-7 as crossgradient wells; MW-2 and MW-5 as source wells; and MW-4 and MW-9, as downgradient wells (Figure 1). A baseline monitoring and sampling shall be conducted prior to the proposed injections. Baseline monitoring will establish the initial conditions with respect to the contaminant levels. These sampling stations shall not be changed and any proposed change of monitoring locations shall be identified and approved by the 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)"

VI. PUBLIC DOCUMENTS

These records and reports are public documents and shall 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.

VII. ELECTRONIC SUBMITTAL OF INFORMATION

The Discharger shall submit all reports required under this MRP, including groundwater monitoring data and discharge location data (latitude and longitude), to the State Water Resources Control Board GeoTracker database, in addition to submitting hard copies to the Regional Board office. Once the Discharger demonstrates mastery of electronic submittal of reports to GeoTracker for the Site, it may request that the Regional Board waive the requirement of submitting hard copies of reports.

Ordered by: Samuel Unger
Samuel Unger, P.E.
Executive Officer

Date: September 13, 2011

