

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

**MONITORING AND REPORTING PROGRAM NO. CI-9326
for
CONOCOPHILLIPS COMPANY
23670 PACIFIC COAST HIGHWAY, MALIBU, TOSCO/76 STATION NO. 6267**

**(OZONE INJECTION FOR GROUNDWATER CLEANUP)
(ORDER NO. R4-2007-0019 SERIES NO. 036)**

I. REPORTING REQUIREMENTS

- A. ConocoPhillips Company (hereinafter Discharger) shall implement this monitoring program on the effective date (September 28, 2007) under Regional Board Order No. R4-2007-0019.

The first monitoring report under this program, for October-December 2007, is due by **January 15, 2008**. Monitoring reports shall be received by the dates according to the following schedule:

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

Monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

- B. If there is no discharge or injection during any reporting period, the report shall so state.
- 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 (WDRs).
- D. 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.

- 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 shall contain a separate section titled "Summary of Non-Compliance" that 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 discharge requirements.
- G. 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.
- H. 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.
- I. 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.

II. OZONE INJECTION MONITORING REQUIREMENTS

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

1. Location map showing injection points used for the ozone injection.
2. Written and tabular summary defining the quantity of ozone injected per month to the groundwater and a summary describing the days on which the injection system was in operation.
3. Quarterly visual inspection at each injection well shall be conducted to evaluate the well casing integrity. The quarterly 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 ozone injection. Separate sparge points/wells must be installed at the site for the injection.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site.

Groundwater samples shall be collected from up-gradient monitoring wells W-6 and MW-11; source area wells W-1, W-2, W-4A, W-5, and EW-7; cross-gradient wells W-3, MW-9, MW-10, MW-13, and EW-8; and down-gradient well MW-12, to monitor the effectiveness of the in-situ groundwater remediation (refer to attached Figure 1). The existing monitoring wells shall not be used as injection points and ozone 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 ¹
Total petroleum hydrocarbons as gasoline (TPH _G) and as diesel (TPH _D)	µg/L	Grab	Quarterly
Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)	µg/L	Grab	Quarterly
Methyl tertiary butyl ether (MTBE), Tertiary butyl alcohol (TBA), Tertiary amyl methyl ether (TAME), Di-isopropyl ether (DIPE), Ethyl tertiary butyl ether (ETBE)	µg/L	Grab	Quarterly
Ethanol Formaldehyde Acetone	µg/L	Grab	Quarterly
cis-1,2-Dichloroethene (c-1,2-DCE) trans-1,2-Dichloroethene (t-1,2-DCE) cis-1,3-Dichloropropene Carbon tetrachloride Chlorobenzene Methylene chloride (Dichloromethane) Chloroethane 1,1,2,2-Tetrachloroethane Chloroform 1,1,1,2-Tetrachloroethane Chloromethane Tetrachloroethene (PCE) 1,1,1-Trichloroethane (1,1,1-TCA) 1,2-Dichlorobenzene 1,1,2-Trichloroethane (1,1,2-TCA) 1,3-Dichlorobenzene Trichloroethene (TCE) 1,4-Dichlorobenzene	µg/L	Grab	Quarterly ²

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS ¹
1,1-Dichloroethane (1,1-DCA) 1,2-Dichloroethane (1,2-DCA) Vinyl chloride (VC) 1,1-Dichloroethylene (1,1-DCE)			
Total dissolved solids Boron Chloride Sulfate	mg/L	Grab	Quarterly
Oxidation-reduction potential	millivolts		Quarterly
Dissolved Oxygen	mg/L	Grab	Quarterly
Dissolved ferrous iron	µg/L	Grab	Quarterly
Total chromium and chromium six ³	µg/L	Grab	Quarterly
pH	pH units	Grab	Quarterly
Temperature	⁰ F/ ⁰ C	Grab	Quarterly
Groundwater Elevation	Feet, mean sea level and below ground surface	In situ	Quarterly
¹ The first sampling event must be conducted one week following the ozone injection. ² The Discharger is required to monitor for these compounds only if they are detected in the first sampling event. ³ The Discharger is required to monitor for total chromium and chromium six only if they are detected in the first sampling event.			

All groundwater monitoring reports must include, at 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 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)"

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: **original signed by David A. Bacharowski for** Date: September 28, 2007
Deborah J. Smith
Interim Executive Officer