

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

**MONITORING AND REPORTING PROGRAM NO. CI-8920  
FOR  
CONOCOPHILLIPS COMPANY  
76 STATION NO. 5836  
(OZONE INJECTION FOR GROUNDWATER CLEANUP)  
(FILE NO. R-24976, ORDER NO. R4-2005-0030, SERIES NO. 016)**

I. REPORTING REQUIREMENTS

- A. ConocoPhillips Company (hereinafter Discharger) shall implement this monitoring program on the effective date (June 29, 2005) of Regional Board Order No. R4-2005-0030. The first monitoring report under this program, for July - September 2005, shall be received at the Regional Board by October 15, 2005. 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

- 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<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).
- 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.

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- 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.

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II. OZONE INJECTION MONITORING REQUIREMENTS

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

1. Location map showing injection points used for the ozone.
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 has been operating:

CONSTITUENT	UNITS*	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total ozone delivered per injection point	Grams/day	--	<ul style="list-style-type: none"> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> <li>• Quarterly thereafter</li> </ul>

III. GROUNDWATER MONITORING PROGRAM

A groundwater-monitoring program shall be designed to detect and evaluate impacts associated with the injection activities. The following shall constitute the monitoring program for both monitoring wells (source area [MW-1, MW-1A, and MW-2 through MW-4], up- and cross-gradient area [MW-5, MW-10, and MW-11], and down- and cross-gradient area [MW-6 through MW-9, MW-12, and MW-13]) and dedicated injection points. 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) prior to their use. The Discharger shall conduct baseline sampling from wells MW-1, MW-1A through MW-13, as well as the dedicated injection points, one or two weeks prior to ozone injections and regular sampling with the required frequencies from the upgradient, downgradient, and source monitoring wells for the constituents contained in the following table (Pages T3-T5):

CONSTITUENT	UNITS <sup>1</sup>	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd); Benzene, Toluene, Ethylbenzene, Total xylenes (BTEX)	µg/L	Grab	<ul style="list-style-type: none"> <li>• 1 week before injection</li> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> <li>• Quarterly thereafter</li> </ul>

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Tetrachloroethene (PCE), Trichloroethene (TCE), Cis-1,2-Dichloroethene (Cis-1,2-DCE), 1,1-Dichloroethane (1,1-DCA), 1,1-Dichloroethene (1,1-DCE), 1,2-Dichloroethane (1,2-DCA), 1,1,1-Trichloroethane (1,1,1-TCA), Total Dichlorobenzene (TDCB)	µg/L	Grab	<ul style="list-style-type: none"> <li>• 1 week before injection</li> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> <li>• Quarterly thereafter</li> </ul>
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	<ul style="list-style-type: none"> <li>• 1 week before injection</li> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> <li>• Quarterly thereafter</li> </ul>
Ethanol, Formaldehyde, and Acetone	µg/L	Grab	<ul style="list-style-type: none"> <li>• 1 week before injection</li> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> <li>• Quarterly thereafter</li> </ul>
Total dissolved solids Chloride Sulfate	mg/L	Grab	<ul style="list-style-type: none"> <li>• 1 week before injection</li> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> <li>• Quarterly thereafter</li> </ul>
Oxidation-reduction potential	Milivolts		<ul style="list-style-type: none"> <li>• 1 week before injection</li> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> <li>• Quarterly thereafter</li> </ul>
Dissolved Oxygen	µg/L	Grab	<ul style="list-style-type: none"> <li>• 1 week before injection</li> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> <li>• Quarterly thereafter</li> </ul>
Dissolved ferrous iron	µg/L	Grab	<ul style="list-style-type: none"> <li>• 1 week before injection</li> <li>• Bi-weekly for the first month following injection</li> <li>• Monthly for the next 3 months</li> </ul>

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			<ul style="list-style-type: none"> <li>Quarterly thereafter</li> </ul>
Total Chromium and chromium six <sup>2</sup>	µg/L	Grab	<ul style="list-style-type: none"> <li>1 week before injection</li> <li>Bi-weekly for the first month following injection</li> <li>Monthly for the next 3 months</li> <li>Quarterly thereafter</li> </ul>
PH	pH units	Grab	<ul style="list-style-type: none"> <li>1 week before injection</li> <li>Bi-weekly for the first month following injection</li> <li>Monthly for the next 3 months</li> <li>Quarterly thereafter</li> </ul>
Temperature	<sup>0</sup> F/ <sup>0</sup> C	Grab	<ul style="list-style-type: none"> <li>1 week before injection</li> <li>Bi-weekly for the first month following injection</li> <li>Monthly for the next 3 months</li> <li>Quarterly thereafter</li> </ul>
Groundwater Elevation	Feet, mean sea level and below ground surface	In situ	<ul style="list-style-type: none"> <li>1 week before injection</li> <li>Bi-weekly for the first month following injection</li> <li>Monthly for the next 3 months</li> <li>Quarterly thereafter</li> </ul>

<sup>1</sup> µg/l - micrograms per liter

<sup>2</sup> The Discharger is required to monitor for total chromium and chromium six if total chromium is detected in the baseline samples. The monitoring is required only for the well(s) that the total chromium was detected.

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.

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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: \_\_\_\_\_  
Jonathan S. Bishop  
Executive Officer

Date: June 29, 2005

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