

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

**MONITORING AND REPORTING PROGRAM NO. CI-8842
FOR
CONOCOPHILLIPS COMPANY
76 STATION NO. 6923
(OZONE INJECTION FOR GROUNDWATER CLEANUP)
(FILE NO. 04-133)**

I. REPORTING REQUIREMENTS

- A. The ConocoPhillips Company (hereinafter Discharger) shall implement this monitoring program on the effective date (December 13, 2004) of Regional Board Order No. R4-2004-0180. The first monitoring report under this program, for January-March 2005, shall be received at the Regional Board by April 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 1st 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.

September 14, 2004
Revised: November 1, 2004

- 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.

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"> • Bi-weekly for the first month following injection • Monthly for the next 3 months • Quarterly thereafter |

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall sample upgradient monitoring well, B-9; source area monitoring wells B-6, B-13, and B-18, and downgradient monitoring wells B-8, B-17 and B-24 to provide groundwater quality information prior to, during, and after the ozone injection. Groundwater from the wells noted above shall be monitored for the duration of the remediation in accordance with the following discharge monitoring program:

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

| | | | |
|---|-----------|------|---|
| (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"> • 1 week before injection • Bi-weekly for the first month following injection • Monthly for the next 3 months • Quarterly thereafter |
| Ethanol | µg/L | Grab | <ul style="list-style-type: none"> • 1 week before injection • Bi-weekly for the first month following injection • Monthly for the next 3 months • Quarterly thereafter |
| Total dissolved solids Chloride Sulfate | mg/L | Grab | <ul style="list-style-type: none"> • 1 week before injection • Bi-weekly for the first month following injection • Monthly for the next 3 months • Quarterly thereafter |
| Oxidation-reduction potential | milivolts | | <ul style="list-style-type: none"> • 1 week before injection • Bi-weekly for the first month following injection • Monthly for the next 3 months • Quarterly thereafter |
| Dissolved Oxygen | µg/L | Grab | <ul style="list-style-type: none"> • 1 week before injection • Bi-weekly for the first month following injection • Monthly for the next 3 months • Quarterly thereafter |
| Dissolved ferrous iron | µg/L | Grab | <ul style="list-style-type: none"> • 1 week before injection • Bi-weekly for the first month following injection • Monthly for the next 3 months • Quarterly thereafter |
| Total Chrome and Chromium 6 ² | mg/L | Grab | <ul style="list-style-type: none"> • Bi-weekly for the first month following injection • Monthly for the next 3 months • Quarterly thereafter |

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

¹ µg/l - micrograms per liter
 mg/L – milligrams per liter

² The Discharger is required to monitor if total chromium and chromium 6 are detected during chromium screening tests in wells MW-2, SVE-2, MW-10 and MW-13.

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: December 13, 2004