

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

**MONITORING AND REPORTING PROGRAM NO. CI-8907
FOR**

**TESORO PETROLEUM COMPANY
FORMER FAST FUEL STATION
ORDER NO. R4-2005-0030 (SERIES NO. 015)
(UST ID# 916061625)**

I. REPORTING REQUIREMENTS

- A. The Discharger shall implement this monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2005-0030.
- B. The Discharger shall inform the Regional Board within 24 hours in the event that any discharge exceeds the discharge limits. Written confirmation shall follow within one week and shall include corrective actions taken.
- C. The Discharger shall submit the summary reports detailing the results of the remediation every other month. The first monthly report is due to this Regional Board two months after the end of remediation.
- D. Fourteen months after the end of the remediation, the Discharger shall submit a final summary report to the Regional Board to report the comprehensive findings observed during the remediation and post-remediation monitoring period.
- E. The Discharger shall comply with requirements contained in Section G of Order No. R4-2005-0030 "*Monitoring and Reporting Requirements*" in addition to the aforementioned requirements.

II. BIOLOGICAL ACTIVATED, GRAULAR ACTIVATED CARBON (BioGAC) RELEASE COMPOUND MONITORING REQUIREMENTS

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

- 1. Location Map showing injection point(s) of the BioGAC treated water used during the reporting period.
- 2. Boring log of each injection point or vertical cross-section diagram of injection point(s), showing groundwater depth, indicating the placement of the BioGAC treated water during the reporting period.
- 3. Written supplemental summary including, but not limited to:
 - Depth of injection point(s);
 - Quantity of treated groundwater injected at each point; and
 - Total amount of treated groundwater injected.

- Calculation of mass reduction due to BioGAC based on the contaminant concentration changes prior and after injection.

III. GROUNDWATER MONITORING PROGRAM

A groundwater monitoring program shall be designed to detect and evaluate impacts associated with the BioGAC treated water injection activities. All existing upgradient and downgradient groundwater monitoring network shall be sampled and analyzed every other month. The following shall constitute the monitoring program:

<u>CONSTITUENT</u>	<u>UNITS</u> ¹	<u>TYPE OF SAMPLE</u>	<u>MINIMUM FREQUENCY OF ANALYSIS</u>
pH ⁵	pH units	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Temperature ⁵	°F	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Oxidation-reduction potential ⁵	milivolts	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Specific conductivity ⁵	µmhos/cm	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Ferrous iron	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Dissolved Oxygen ⁵	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Acetone	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Bromochloromethane	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Methyl Chloride	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Tetrachloroethene (PCE)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Trichloroethene (TCE)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Cis-1, 2-dichloroethene (Cis-1, 2-DCE)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Trans-1, 2-dichloroethene (Trans-1, 2-DCE)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
1,1-dichloroethene (1,1-DCE)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
1,2-dichloroethane (1,2-DCA)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
1,1,1-trichloroethane (1,1,1-TCA)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Carbon tetrachloride	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
1,2,4-trimethylbenzene	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
1,1,2,2-tetrachloroethane	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴

Vinyl chloride	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Benzene	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Ethylbenzene	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Toluene	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Total xylenes	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Methyl tertiary butyl ether (MTBE)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Di-isopropyl ether (DIPE)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Ethyl tertiary butyl ether (ETBE)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Tertiary butyl alcohol (TBA)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Tertiary amyl methyl ether (TAME)	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Methane	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Total organic carbon	µg/L	grab	Weekly ² /Monthly ³ /Quarterly ⁴
Total dissolved solids	mg/L	grab	Quarterly ⁴
Sulfate	mg/l	grab	Quarterly ⁴
Chloride	mg/L	grab	Quarterly ⁴
Chromium (6)	mg/L	grab	Quarterly ⁶
Total Chromium	mg/L	grab	Quarterly ⁶
Sodium	mg/L	grab	Quarterly ⁴
Carbon dioxide	mg/L	grab	Quarterly ⁴
Manganese	µg/L	grab	Quarterly ⁴
Total iron	µg/L	grab	Quarterly ⁴
Alkalinity	µg/L	grab	Quarterly ⁴

¹ mg/L: milligrams per liter; µg/L: micrograms per liter; µmhos/cm: microohms per centimeter;

°F: degree Fahrenheit.

² Weekly sampling events are required for the first two weeks from the injection date

³ Monthly sampling events are required after the two weekly sampling events for a period of six months from the injection date.

⁴ Quarterly sampling events are required after the first six months sampling events.

⁵ Field instrument will be used to test for this constituent.

⁶ One time sampling before the injection of BioGAC is required for this constituent from wells MW-19, MW-24, and MW-25. If detected, quarterly monitoring is required from the same monitoring wells.

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. 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)"

Ordered by: _____
Jonathan Bishop
Executive Officer

Date: June 28, 2005