

**STATE OF CALIFORNIA**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, LOS ANGELES REGION**

**MONITORING AND REPORTING PROGRAM NO. 90-60-001(05)**

**FOR**

**LAND TREATMENT OF PETROLEUM HYDROCARBON CONTAMINATED SOIL**

**SIGNAL HILL PETROLEUM, INC. / ALAMITOS RIDGE DEVELOPMENT – 2080**

**OBISPO AVENUE, LONG BEACH, CA**

**[FILE NO. 90-60]**

Signal Hill Petroleum, Inc. (Discharger) shall implement this Monitoring and Reporting Program (M&RP) on the date of issuance of the Waste Discharge Requirements (WDRs). The reports detailed in Order No. 90-148 shall be submitted as required.

The first monitoring report under this program is due on October 15, 2005. Thereafter, monitoring reports shall be submitted by the date in 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

**I. GROUNDWATER MONITORING PROGRAM**

- A. Groundwater monitoring wells shall be located in suitable and accessible locations downgradient from the land treatment site to serve as groundwater monitoring stations. In addition, at least one monitoring well shall be established upgradient of the treatment site. A proposal for the selected wells shall be submitted for the Executive Officer's approval by May 15, 2005, and shall include drilling methods, construction details, and precise locations. Groundwater monitoring wells shall be installed and sampled prior to conducting land treatment operations. The following shall constitute the groundwater monitoring program for all required wells:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u>
Water Elevation	(0.01 feet) from Datum	Quarterly

Total Dissolved Solids	µg/L	Quarterly
Total Petroleum Hydrocarbon (EPA 8015 C <sub>4</sub> -C <sub>40</sub> )	µg/L	Quarterly
Volatile Organic Compounds (VOCs) And Semi- VOCs (SVOCs) (EPA Method 8260B)	µg/L	Quarterly
pH	pH units	Quarterly

- B. Monitoring wells installed on-site shall be sampled and analyzed for the constituents detailed in I-A. The wells shall be perforated in the uppermost aquifer. Each well shall be installed in a manner that will ensure no cross communication between the shallow and any regional aquifers.

**II. LAND TREATMENT FACILITY SOIL MONITORING**

- A. A soil sampling grid shall be established for the land treatment site and the sampling locations shall be located where representative soil samples can be obtained. Soil samples shall be collected and analyzed for the following parameters:

<u>Parameter</u>	<u>Units</u>	<u>Frequency</u> <sup>1</sup>
Bacteria Plate Count	Colonies/gm	Monthly <sup>2</sup>
Soil Moisture Content	%	Monthly <sup>2</sup>
Total Petroleum Hydrocarbons (EPA Method 8015 C <sub>4</sub> -C <sub>40</sub> )	mg/kg	Quarterly <sup>3</sup>
CAM - Metals	mg/kg	Quarterly <sup>3</sup>
VOCs and SVOCs (EPA Methods 8260B & 8270C)	µg/kg	Quarterly <sup>3</sup>

1. In the event the land treatment is completed prior to the due date of the first monitoring report, then final verification samples shall be collected and analyzed in lieu of the sampling frequency approved by the Executive Officer.
2. Bacteria plate counts and soil moisture content shall be monitored monthly at a representative number of locations within the land treatment units after beginning full-scale land treatment.
3. A representative number of final samples shall be taken of the treated soil at the end of treatment and just prior to removal and reuse. A minimum of one sample per 550 cubic yards of treated soil shall be collected and analyzed for total

petroleum hydrocarbons (TPH), and a minimum of one sample per 1000 cubic yards of treated soil shall be collected and analyzed for California Assessment Manual (CAM) metals, VOCs, and SVOCs.

- B. Treated soil that exceed acceptable levels, as determined by the Executive Officer, shall be retreated and resampled to verify that concentrations of TPH and other contaminants are below their respective acceptable levels prior to removal and reuse and/or proper disposal.

### III. GENERAL PROVISIONS FOR SAMPLING AND ANALYSIS

- A. All sampling, sample preservation, and analysis, shall be performed in accordance with the latest editions of "Guidelines Establishing Test Procedure for Analysis of Pollutants," promulgated by the United States Environmental Protection Agency (U.S. EPA) and U.S. EPA SW-846 Methods (dated December 1996).
- B. All chemical, bacteriological, and bioassay analyses, shall be conducted at a laboratory certified for such analyses by the California Department of Health Services, or approved by the Executive Officer. No changes shall be made in sampling points without prior approval of the Executive Officer.
- C. Written and verbal notice must be made to the Regional Board a minimum of 72 hours in advance of the sampling event so that staff may participate, if they choose.
- D. The Discharger shall maintain all sampling and analytical results, including strip charts, date, exact location, and time of sampling, date analysis were performed, name of analyst, analytical techniques used, and results of all analysis. Such results 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.

### IV. SPECIFIC REPORTING REQUIREMENTS

- A. The following technical reports shall be filed with the Regional Board:
  - 1. A "Petroleum Hydrocarbon Contamination Removal Report" shall be submitted to this Regional Board 15 days after completion of any excavation event from each area, verifying the quantities of the contaminated soil removed for land treatment, and the nature and extent of any residual contaminants to remain in place.

2. A "Land Treatment Completion Report" shall be submitted within 15 days of completing land treatment, verifying that bioremediation is complete for the land treatment zone. The report shall include all data collected to date verifying that cleanup levels have been met.
  3. A "Final Project Completion Report" shall be submitted within 30 days of completing all final verification sampling, summarizing the final hydrocarbon contamination levels of the land treated soils, including laboratory analysis data, and indicating the quantity and the final disposition of the land treated material. A statement, signed by a responsible official of the Discharger, shall be included stating that the land treatment was completed in accordance with the requirements and provisions of Order No. 90-148. All other signed statements required by Order No. 90-148 shall also be included.
- B. When applicable, the technical reports submitted shall contain the following minimum information:
1. Quantity of waste material treated during the reporting period.
  2. Analytical results from any of the groundwater monitoring, as required, land treatment zone soil sampling, and soil monitoring in the excavated areas.
  3. Quantity of water and nutrients added to the land treatment units during the report period.
  4. A statement certifying that storm water runoff was prevented from entering the land treatment area, other than rainfall directly on the land treatment units, and that no waste material was carried away from the land treatment area by rainfall runoff.
  5. Color photographs of the land treatment area shall be taken monthly and be included in the quarterly and final reports.
- C. All technical reports prepared for submittal to the Regional Board shall be signed by one of the following: a California registered professional engineer, a registered geologist, or a certified specialty geologist.
- D. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed, together with a timetable, to bring the discharge back into full compliance with the requirements at the earliest time.

E. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the data, the constituents, and the concentrations, are readily discernible. The data shall be summarized to determine compliance with waste discharge requirements, and where applicable, shall include receiving groundwater analytical data.

F. Monitoring reports submitted to the Regional Board shall be signed by:

1. In the case of a corporation, the principal executive officer of at least the level of Vice President or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which discharge originates;
2. In the case of a partnership, a general partner;
4. In the case of a sole proprietorship, the proprietor;
5. In the case of a municipal, state or public facility, either a principal executive officer, ranking elected official, or other duly authorized employee.

G. Each report shall contain the following completed declaration:

" I declare under penalty of perjury that the foregoing is true and correct.

Executed on the day of \_\_\_\_\_ at \_\_\_\_\_

\_\_\_\_\_(Signature)

\_\_\_\_\_(Title)"

H. 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.

Ordered by: \_\_\_\_\_

Jonathan S. Bishop  
Executive Officer

Date: \_\_\_\_\_