California Regional Water Quality Control Board
Los Angeles Region

Linda A. Adams
Agency Secretary

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Arnold Schwarzenegger
Governor

April 28, 2010

Mr. Joe Lentini
Shell Oil Products U.S.
20945 South Wilmington Ave
Carson, CA 90810

Dear Mr. Lentini:

GENERAL WASTE DISCHARGE REQUIREMENTS FOR OXYGEN RELEASE COMPOUND (ORC) AND REGENOX INJECTION FOR GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE ORGANIC COMPOUND IMPACTED SITES – SHELL SERVICE STATION #204-4115-0405, 4905 BELLFLOWER BLVD, LAKEWOOD (FILE NO. I-04296) (CLEANUP FUND NO. 4620)

We have completed our review of your application for coverage under the General Waste Discharge Requirements to inject non-hazardous Oxygen Release Compound (ORC) and RegenOx at the site referenced above in Bellflower, California for groundwater cleanup and remediation.

In 1983, three underground storage tanks (USTs) were removed from the subject site. Multiple Phases of site assessments and remediations have resulted in the installation and operation of numerous soil borings, soil vapor extraction wells, a soil vapor extraction system, a dual phase extraction system, and the installation of 12 groundwater monitoring wells (MW-1 through MW-4, OW-1, OW-3, B-11, B-12, and B-15 through B-18) to characterize the groundwater contaminant plume. Groundwater monitoring has been conducted since November 1989. On February 24, 2010, TPHg up to 100,000 µg/L (MW-3), benzene up to 3200 µg/L (MW-3), TBA up to 6700 µg/L (MW-2), and MTBE up to 1400 µg/L (MW-2) were detected in the groundwater. Depth to the groundwater was measured at about 28 feet bgs, and the flow direction was toward southwest.

A letter dated December 16, 2008 from this Regional Water Quality Control Board approved a Final Remedial Action Plan to inject RegenOx and/or ORC in the former tank pit, south of the tank pit and in Del Amo Blvd for in-situ treatment of soil and groundwater. ORC stimulates aerobic bioremediation. It offers maximum oxygen release for a period of up to 12 months on a single injection and is designed to minimize oxygen waste while maximizing site remediation.

RegenOX is an in situ chemical oxidation technology designed to treat organic contaminants including high concentration source area in the saturated and vadose zones.

RegenOx and ORC will be injected in, and south of, the former tank pit. Injections will not be conducted in Del Amo Boulevard due to utilities and difficulties in obtaining encroachment

permits. Proposed injection locations are shown on Figure 1. RegenOx/ORC will be injected from approximately 20 to 35 feet below the ground surface.

Prior to implementing the full scale injection of RegenOX/ORC, a preliminary injection test will be performed to determine if the injection of RegenOx/ORC is feasible and the appropriate spacing of injection points. The test will be conducted by injecting RegenOx/ORC at different distances from well MW-3 (Figure 1). During the test, MW-3 will be monitored for perioxide, pH and color change. The final location and spacing of the injection points will be determined by results obtained fro the injection test.

Regional Board staff has determined that the proposed discharge meets the conditions specified in Order No. R4-2007-0019, "*Revised General Waste Discharge Requirements for Groundwater Remediation At Petroleum Hydrocarbon Fuel, Volatile Organic Compound and/or Hexavalent Chromium Impacted Sites (General WDRs)*," adopted by the Los Angeles Regional Water quality Control Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of General WDRs Board Order No. 2010-xxxx and Monitoring and Reporting Program No. CI-9597 and Standard Provisions. This Waste Discharge Requirements shall not be terminated without the regulatory oversight agency's prior approval.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2007-0019. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to Compliance File No. CI-9597, which will assure that the reports are directed to the appropriate file and staff. Do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

To avoid paying future annual fees, please submit written request for termination of your enrollment under the general permit in a separate letter when your project has been completed and the permit is no longer needed. Be aware that the annual fee covers the fiscal year billing period beginning July 1 and ending June 30, the following year. You will pay the full annual fee if your request for termination is made after the beginning of the new fiscal year beginning July 1.

We are sending a copy of Order No. R4-2007-0019 only to the applicant. A copy of the Order will be furnished to anyone who requests it, or on line at:
http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/general_orders/r4-2007-0019/r4-2007-0019.pdf

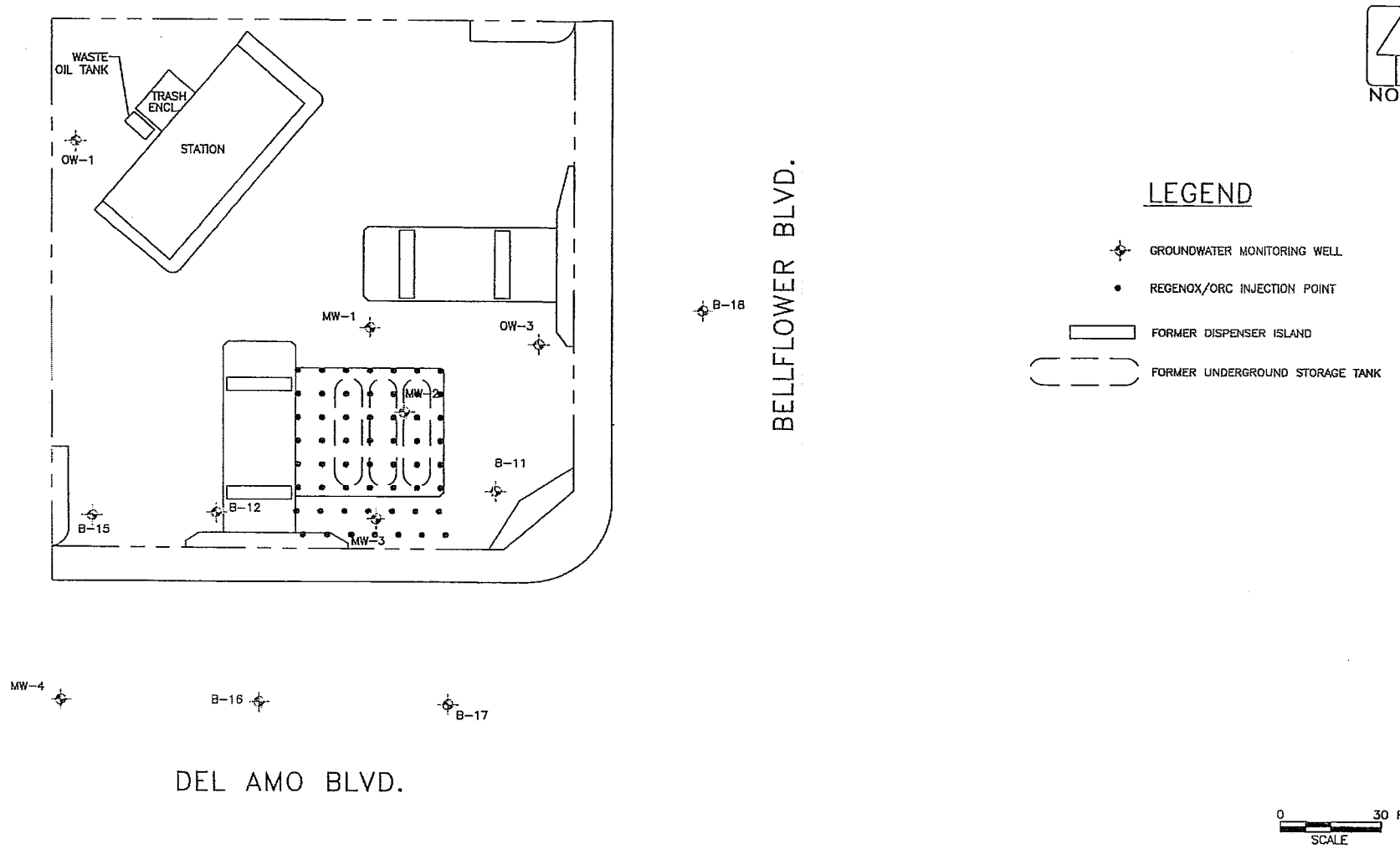
If you have any questions, please contact Dr. Rebecca Chou at (213) 620-6156 for WDRs administration matters, or Mr. Gregg Kwey at (213) 576-6702 for technical matters.

Sincerely,

Tracy J. Egoscue
Executive Officer

Enclosures: 1. Board Order No. R4-2007-0019
2. Standard Provisions for Reporting and Monitoring
3. Monitoring and Reporting Program No. CI-9597

cc: Mr. John Huff, Wayne Perry, Inc.
Mr. Emiel Kamal, Property Owner



Wayne Perry Inc. Drilling - Construction - Engineering - Maintenance Since 1909	DATE DRAWN	PLOT PLAN WITH INJECTION POINTS	FIGURE NO. 1
	REV. DATE	SHELL SERVICE STATION 4905 BELLFLOWER BLVD. LAKEWOOD, CA	PROJECT NO. 09.592
	CAD FILE 09592INJ		

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

MONITORING AND REPORTING PROGRAM NO. CI-9597

FOR

EQUILON ENTERPRISES LLC DBA SHELL OIL PRODUCTS US
FORMER SHELL SERVICE STATION #204-4115-0405
4905 BELLFLOWER BLVD, LAKEWOOD

(OXYGEN RELEASE COMPOUND AND REGENOX INJECTION FOR GROUNDWATER CLEANUP)
(ORDER NO. R4-2007-0019, SERIES NO. 124)

I. REPORTING REQUIREMENTS

A. Equilon Enterprises LLC dba Shell Oil Products Us (hereinafter Discharger) shall implement this monitoring program on the effective date of Regional Board Order No. R4-2007-0019. The first monitoring report under this program, for January to June 2010, shall be received at the Regional Board by July 15, 2010. Subsequent monitoring reports shall be received at the Regional Board according to the following schedule:

Monitoring Period	Report Due
January – June	July 15
July – December	January 15

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.

B. 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).

C. 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.

D. 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.

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 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.

G. 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.

H. 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.

I. 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.

J. 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.

K. The Discharger should not implement any changes to the Monitoring and Reporting Program prior to receiving Executive Officer's written approval.

II. OXYGEN RELEASE COMPOUND (ORC) AND REGENOX INJECTION MONITORING REQUIREMENTS

The Semi-Annually reports shall contain the following information regarding injection activities:

1. Location map showing injection points used for the ORC and RegenOx injection. Several injection points are currently proposed to be used as injection points as referenced in Figure 1. Additional injection points should be reviewed and approved by the Regional Board prior to full scale implementation.

2. Written and tabular summary defining the quantity of ORC and RegenOx injected per month to the groundwater and a summary describing the days on which the injection system was in operation.

III. GROUNDWATER MONITORING PROGRAM

The Discharger shall conduct groundwater monitoring at the site. Groundwater samples shall be collected from two down-gradient monitoring wells MW-4 and B-16, two source area monitoring wells MW-2 and MW-3, and one up-gradient monitoring well MW-1 on a Semi-Annually basis to monitor the effectiveness of the in-situ groundwater remediation. Additional monitoring wells for full scale implementation may be required if Regional Board deemed they are necessary. 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
Total petroleum hydrocarbons as gasoline (TPHg) and as diesel (TPHd)	µg/L	Grab	• Semi-Annually[1]
Benzene, Toluene, Ehylbenzene, Xylenes (BTEX)	µg/L	Grab	• Semi-Annually[1]
Methyl tertiary butyl ether (MTBE), Tertiary butyl alcohol (TBA), Tertiary amyl methyl ether (TAME), Di-isopropyl ether (DIPE), ether (ETBE)	µg/L	Grab	• Semi-Annually[1]
Ethanol Formaldehyde Acetone	µg/L	Grab	• Semi-Annually[1]
Total dissolved solids, Arsenic, Boron, Chloride, Bromide, Sulfate, Lead, Nickel, Cadmium, Manganese	mg/L	Grab	• Semi-Annually[1]
Oxidation-reduction potential	milivolts		• Semi-Annually[1]
Dissolved Oxygen	µg/L	Grab	• Semi-Annually[1]
Dissolved ferrous iron	µg/L	Grab	• Semi-Annually[1]
Total Chromium and chromium six [2]	µg/L	Grab	• Semi-Annually[1]
PH	pH units	Grab	• Semi-Annually[1]
Temperature	^{0}F/^{0}C	Grab	• Semi-Annually[1]
Groundwater Elevation	Feet, mean sea level and below ground surface	In situ	• Semi-Annually[1]

[1] One week before injection and Semi-Annually thereafter

[2] The Discharger is required to monitor for total chromium and chromium six in the baseline, second and fourth Semi-Annually sampling. If detected at any of these sampling events, the total chromium and chromium six must be monitored Semi-Annually thereafter.

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. Semi-Annually 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 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:

Tracy J. Egoscue
Executive Officer

Date: April 28, 2010