



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
Agency Secretary

Recipient of the 2001 *Environmental Leadership Award* from Keep California Beautiful

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Arnold Schwarzenegger
Governor

June 25, 2007

Ms. Maria Zrupko
Thrifty Oil Company
13116 Imperial Highway
Santa Fe Springs, CA 90670

GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER CLEANUP AT PETROLEUM HYDROCARBON FUEL, VOLATILE ORGANIC COMPOUND And/OR HEXAVALENT CHROMIUM IMPACTED SITES – THRIFTY STATION # 003, 2330 E. 7TH STREET, LONG BEACH (ORDER NO. R4-2007-0019, SERIES NO. 021; CI NO. 9280)

Dear Ms. Zrupko:

We have completed our review of your application for coverage under the General Waste Discharge Requirements to inject non-hazardous ozone at the site referenced above in Long Beach, California for groundwater cleanup and remediation.

The station currently maintains three 10,000-gallon gasoline underground storage tanks (USTs) and three dispenser islands. In February 1988, three steel 10,000-gallon USTs were removed and replaced with three 10,000-gallon fiberglass USTs. 636 tons of impacted soil were excavated and disposed of off-site.

Prior to and subsequent to the tank replacement, seven groundwater monitoring wells and ten soil borings were installed to characterize soil and groundwater beneath the site. TPH, benzene, and MTBE were detected up to 16,220, 127, and 12 mg/kg, respectively in soil; and up to 448,000, 29,000, 39,000, and 3,380 µg/L, respectively in groundwater.

Between December 2002 and May 2005, the site was remediated with a vapor extraction/air sparge system. After 16,087 hours of operation, removing 33,932 lbs of hydrocarbons as vapor, the system was shut down as the influent vapor reached the asymptotic levels. Over-purging was also initiated in February 2004, as an interim remedial action, and had removed 11,198 gallons of contaminated groundwater as of November 27, 2006.

To abate the impacted groundwater beneath the site, in March 2006, you submitted a work plan in which you proposed to conduct an ozone sparging feasibility study prior to implementing a full-scale remedial system. The test will be conducted using a C-Sparge Ozone Oxidation System and five sparge points that will be installed at locations as shown in Figure 2 of the work plan. The C-Sparge technology combines low-flow air sparging with ozonation. Generated ozone microbubbles will be introduced below the groundwater table through sparge points to oxidize contaminants into benign byproducts. These byproducts and residuals include acetate, butyrate, formate, propionate, carboxylic acids, tertiary butyl formate, formaldehyde, carbon dioxide, hydrogen peroxide, and oxygen. The release of oxygen and hydrogen peroxide to groundwater promotes aerobic bacterial growth that will enhance the biodegradation process. The Regional Board approved the work plan on September 1, 2006.

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Ms. Maria Zrupko
Thrifty Oil Co.

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June 25, 2007

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 State Water Resources Control Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of General WDRs Board Order No. 2007-0019 and Monitoring and Reporting Program No. CI-9280 and Standard Provisions.

The WDRs issued shall not be rescinded until Regional Board staff determine the WDRs are no longer needed for the subject site.

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-9280, 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.

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/html/permits/gen_orders/R4-2007-0019/R4-2007-0019.pdf

If you have any questions, please contact Mr. Rod Nelson at (213) 576-6119.

Sincerely,

Deborah J. Smith
Interim Executive Officer

Enclosures: 1. Board Order No. R4-2007-0019
2. Monitoring and Reporting Program No. CI-9280

cc: Mr. Jeff Benedict, City of Long Beach, Department of Health and Human Services
Ms. Nancy Matsumoto, Water Replenishment District of Southern California
Mr. Mark Stewart, Central Basin Watermaster, California Department of Water Resources
Mr. Richard Vogl, GeoHydrologic Consultants, Inc.

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