



California Regional Water Quality Control Board

Los Angeles Region



Linda S. Adams
Cal/EPA Secretary

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Arnold Schwarzenegger
Governor

May 28, 2008

Robert Kanter, Ph.D.
Director of Environmental Affairs and Planning
The Port of Long Beach
P.O. Box 570
Long Beach, CA 90801-0570

COVERAGE UNDER GENERAL WASTE DISCHARGE PERMIT ORDER NO. R4-2007-0019 AND MONITORING AND REPORTING PROGRAM NO. CI-9416 – GROUNDWATER AREA 1 AND AREA 2, PIER A WEST/AREA 2 SITE REMEDIATION, WILMINGTON, CALIFORNIA (SLIC NO. 1198, SITE ID NO. 2040246)

Los Angeles Regional Water Quality Control Board (Regional Board) staff have completed our review of your application for a permit to implement an In-Situ Chemical Oxidation (ISCO) field demonstration, and later use it for the full-scale remediation of groundwater impacted by volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) in Area 1 and Area 2 at the above-referenced site.

The Chemical Oxidation Pilot Test Work Plan (Work Plan), dated April 16, 2008, includes a proposal for the ISCO pilot test using sodium permanganate in the “A” Zone Aquifer and upper aquitard, and ozone and hydrogen peroxide in the “B” Zone Aquifer, after completion of the sodium permanganate injection in both Groundwater Plume Area 1 and Area 2. On May 14, 2008, the Regional Board approved the Work Plan. The ISCO pilot test will inject a total of 6,300 gallons and 1,800 gallons of 40 percent sodium permanganate solution diluted to a 20 percent solution for the Groundwater Plume Area 1 and Groundwater Plume Area 2 pilot test locations, respectively. Up to 15 pounds per day of ozone gas at up to a 12 percent concentration by weight and up to 35 percent solution at 75 gallons per day will be applied at each testing area in the “B” Zone Aquifer. This pilot test study is to evaluate the effectiveness of the remedial technology, develop a site-specific understanding of permanganate and ozone treatments, and develop design parameters for full-scale applications.

The groundwater monitoring program shall include a complete network of monitoring wells to provide the injection areas, with up-, down-, and cross-gradient monitoring points. There will be 130 injection points in Groundwater Plume Area 1 and 35 injection points in Groundwater Plume Area 2. Groundwater Plume Area 1 is approximately 10,000 square feet (ft²) and Groundwater Plume Area 2 is approximately 2,600 ft². Injections will be performed at a rate of 7 gallons per minute (gpm) per borehole from approximately 3 to 10 ft below ground surface (bgs) in Groundwater Plume Area 1 and at a rate of 5 gpm per borehole from 5 to 13 ft bgs in Groundwater Plume Area 2.

Any potential adverse water quality impacts, that may result, shall be localized, of short-term duration and shall not impact any existing or prospective uses of groundwater. Groundwater quality shall be monitored to verify no long-term adverse impact to water quality. Pier A West/Area 2 is located at N33° 46.317', Longitude W118° 14.67' in Wilmington. The quantities of ISCO solutions injected shall be documented per Monitoring and Program No. CI-9416.

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Regional Board staff have reviewed the information provided and have determined that the proposed discharge meets the conditions specified in Regional Board 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 (File No. 01-116)*, adopted by this Regional Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of a Fact Sheet, Regional Board Order No. R4-2007-0019, and Monitoring and Reporting Program No. CI-9416.

The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this enrollment (May 15, 2008) 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-9416", which will assure that the reports are directed to the appropriate file and staff. Submit each type of report as a separate document. Please do not combine other reports with your monitoring reports.

Board Order No. R4-2007-0019 can be obtained at our web site address: http://www.swrcb.ca.gov/~rwqcb4/html/permits/general_permits.html.

If you have any questions, please contact Ms. Thizar Tintut-Williams at (213) 576-6723 or Ms. Su Han at (213) 576-6735.

Sincerely,

Tracy J. Egoscue
Executive Officer

Enclosures: Fact Sheet
Monitoring and Reporting Program No. CI-9416
WDR Board Order No. R4-2007-0019
Standard Provisions Applicable to WDR

cc: see list

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List

Mr. Mike Floyd, Division of Water Quality, State Water Resources Control Board
Ms. Jennifer Fordyce, Office of Chief Counsel, State Water Resources Control Board
Mr. Alex Carlos, California Regional Water Quality Control Board – Los Angeles Region
Mr. David Penaro, Ventura County Watershed Protection District
Steven Hoch, Hatch & Parent, Santa Barbara
Mr. Charles Purcell, Kennedy/Jenks Consultants, Irvine
Emad Yemut, Department of Toxic Substances Control
Safouh Sayed, Department of Toxic Substances Control
Chris Boyce, Anadarko Petroleum
Linda Kuhn, Anadarko Petroleum
Dominic Holzhaus, City of Long Beach
Tiffani Shin, City of Long Beach
Christine Houston, the Port of Long Beach

Comment [R1]: Correction - not associated with the project. Delete his name in the future letters.

/ttw

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