



California Regional Water Quality Control Board

Los Angeles Region



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320 W. 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 FAX (213) 576-6640 - Internet Address: <http://www.swrcb.ca.gov/rwqcb4>

June 30, 2003

Mr. William B. Barber
Group Environmental Management Company
4850 East 49th Street
MBC3-147
Cuyahoga Heights, OH 44125-1079

GENERAL WASTE DISCHARGE REQUIREMENTS COVERAGE FOR PILOT TEST TO INJECT ZERO-VALENT IRON FILINGS (ORDER NO. R4-2002-0030: SERIES NO. 026) GROUNDWATER REMEDIATION PILOT STUDY, BP CHEMICAL, 1600 WEST 135TH STREET, GARDENA, CALIFORNIA (SLIC # 0470) (SITE ID # 2047900)

Dear Mr. Barber:

We have completed our review of your application for coverage under the General Waste Discharge Requirements to conduct a pilot test to demonstrate the effectiveness of injecting zero-valent cast iron filings in a hydroxypropyl guar food-grade gel, into the subsurface, along the southern property boundary line of the former BP Chemical Facility (now Group Environmental Management Company), located at 1600 West 135th Street, Gardena, California (Site), to degrade VOC contaminants in groundwater.

Group Environmental Management Company (GEMC) proposes to construct a Pilot Iron Permeable Reactive Barrier (IPRB) by injecting zero-valent cast iron filings in a hydroxypropyl guar food-grade gel into the subsurface to evaluate the effectiveness of the IPRB in degrading high concentrations of chlorinated VOCs in groundwater to non-toxic end products. On May 19, 2003, the Regional Board approved the "Remedial Action Plan, Groundwater Remediation, 1600 West 135th Street Remediation Project, Gardena, California," (RAP)" dated April 11, 2003.

The proposed IPRB will be 775 feet in length, oriented approximately perpendicular to the groundwater flow regime, be approximately 3 to 4.5 inches in average iron-effective thickness installed in the subsurface, and extend from a depth of 18 feet below ground surface down to a total depth of 100 feet. The IPRB is proposed to be constructed in two phases: 1) a Pilot IPRB of 100 feet in length to intersect the highest levels of groundwater contamination, and following satisfactory performance monitoring of the Pilot IPRB system; and 2) an extension of the IPRB for the remaining 675 feet in length.

Regional Board staff have reviewed the information provided and have determined that the proposed discharge meets the conditions specified in Regional Board Order No. R4-2002-0030, "General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites," adopted by this Regional Board on January 24, 2002. Refer to the attached fact sheet.

Enclosed are your Waste Discharge Requirements consisting of Regional Board Order No. R4-2002-0030 (Series 026), Monitoring and Reporting Program No. CI-8596 and Fact Sheet. Please note that the

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Mr. Bill Barber
GEMC

- 2 -

June 30, 2003

discharge limits in Attachment A (DWR Basin No. 4-11 (Central Basin)) of this Order No. R4-2002-0030 are applicable to your discharge.

The "Monitoring and Reporting Program" requires you to implement the monitoring and reporting program on the effective date of this enrollment under Regional Board Order No. R4-2002-0030. 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-8596," which will assure that the reports are directed to the appropriate file and staff. Also, please do not combine other reports with your monitoring reports. Please submit each type of report as a separate document.

We are sending a copy of Order No. R4-2002-0030 only to the applicant. A copy of the Order will be furnished to anyone who requests it.

A technical report documenting the effectiveness of the Pilot Test program shall be submitted and reviewed by Regional Board staff prior to expanding the cleanup program. The technical report is to contain all data generated and materials used during the Pilot Test. The technical report is also to include an evaluation of the cleanup technology and any modifications to the injection and monitoring system, which may be needed for full scale operation. The technical report shall contain the locations, number, and depths of additional injection points, and the locations of multi-depth groundwater monitoring wells required for monitoring the upgradient area, source area, and downgradient of the source area, for full scale operation of the cleanup plan.

Prior to full scale operation of the cleanup plan, these Waste Discharge Requirements will need to be revised to incorporate the additional injection points and monitoring locations necessary for full scale cleanup.

Please call Mr. Pinaki R. Guha-Niyogi at (213) 576-6742, or Mr. J.T. Liu at (213) 576-6667 if you have any questions.

Sincerely,

Dennis A. Dickerson
Executive Officer

Enclosures:

Adopted Board Order No. R4-2002-0030
Fact Sheet
Monitoring and Reporting Program No. CI-8596
Figures B-1, 3 and 6

cc: Mr. Gordon Innes, Division of Water Quality, State Water Resources Control Board
Mr. Mike Floyd, Division of Water Quality, State Water Resources Control Board

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Mr. Chris Nagler, Watermaster - California Department of Water Resources
Ms. Vera Melnyk-Vecchio, State Department of Health Services, Drinking Water
Field Operations Branch
Mr. Richard Wagner, Department of Health Services, County of Los Angeles
Ms. Cheryl Ross, West Basin Municipal Water District
Ms. Melinda A. Sperry, Water Replenishment District of Southern California
Mr. Uday Shah, Southern California Water Company
Mr. Simon Ricks, HITCO Carbon Composites
Mr. Grant Hocking, GeoSierra, Atlanta, Georgia
Mr. Brian Bracken, GeoSierra, Torrance, California
Mr. Paul Farmanian, Parsons, Pasadena, California
Ms. Yvonne Mallory, City of Gardena

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