



California Regional Water Quality Control Board

Los Angeles Region



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

Linda S. Adams
Agency Secretary

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Arnold Schwarzenegger
Governor

August 30, 2007

Mr. Scott Averill
AM PM Special Delivery Service, Inc.
11223 Venice Boulevard
Los Angeles, CA 90066

General Waste Discharge Requirements for Hydrogen Peroxide Solution Injection at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites – AM PM Special Delivery Service, Inc., 11223 Venice Boulevard, Los Angeles, California (File No. 900660152, CI-9315, Order No. R4-2007-0019, Series No. 032)

Dear Mr. Averill:

We have completed our review of your application for coverage under the General Waste Discharge Requirements for the injection of hydrogen peroxide and sodium persulfate solutions at the site referenced above in Los Angeles, California.

AM PM Special Delivery Service, Inc. (hereinafter Discharger) is conducting the soil and groundwater cleanup activities at its facility located at 11223 Venice Boulevard, Los Angeles, California. The discharger owns the property. The Site contains a one-story commercial/office building performing delivery/courier services and an associated paved parking lot. The Site previously contained a 3,000-gallon gasoline underground storage tank (UST) for fueling delivery/courier vehicles.

Site investigations from 1993 to 2001 indicate that soil and groundwater had been contaminated with petroleum hydrocarbons. The maximum concentrations of total petroleum hydrocarbon as gasoline (TPH_G), benzene, and methyl tertiary butyl ether (MTBE) were detected in soil at 31,000 mg/kg, 5.9 mg/kg, and 2.9 mg/kg, respectively. The maximum concentration of TPH_G, benzene, and MTBE in the groundwater of the perched zone was 140,000 µg/L, 17,000 µg/L, and 5.1 µg/L, respectively, while TBA has not been detected (ND). MTBE was detected once in the groundwater of the shallow aquifer in 2001 (11 µg/L in GW2B), but not since. In addition, TPH_G, benzene, and TBA have been ND each round since 2001 at the shallow aquifer.

The site is located within the Charnock Subbasin of the Santa Monica Groundwater Basin. Prior to 1996, groundwater was produced for domestic use from wells located at the City of Santa Monica Charnock Wellfield, located approximately one-half mile northwest of the site. These wells are screened primarily in the Upper and Lower Silverado aquifers. Production from these wells ceased after MTBE was detected in groundwater at the wellfield.

Soil from ground surface to about 15 feet bgs consists of silt and silty sand, followed by a sand layer that contains gravel and cobbles. Soil from about 20 to 39 feet bgs is primarily fine-grained. A clay/silt layer at approximately 39 to 43 feet bgs acts as an aquitard.

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Based upon groundwater monitoring results from March 2007, the depth to groundwater in the perched zone is approximately 39 feet bgs. For the wells screened below the aquitard, the depth to groundwater has risen since the Charnock wellfield was shut down in 1996 and the most recent groundwater level measurements indicate depth to groundwater is approximately 39 feet bgs. The groundwater flow direction in the shallow aquifer zone was measured towards the east-northeast. The nearest production well (02S15W11C17S) is located 2,826 feet from the Site.

In January 2007, Ami Adini & Associates (AA&A) submitted a revised remedial action plan (RAP) that proposed in-situ chemical oxidation. In the RAP, AA&A proposed to conduct enhanced chemical treatment for contaminated soil and groundwater at the Site using In-situ Chemical Oxidation (ISCO) technology. AA&A proposes to conduct bench tests and pilot tests for three ISCO systems: 1) hydrogen peroxide with pH adjustment (classic Fenton's Reagent), 2) hydrogen peroxide with sodium persulfate and amendments, and 3) sodium persulfate with iron EDTA catalyst but no pH adjustment. A total of 14 to 16 injection ports (5 to 7 feet between injection points, see attached figure) would be installed in the source area near GW-1A, where concentrations in soil are elevated at depths of 25 to 40 feet bgs. The hydrogen peroxide portion of the RAP was approved by the Regional Board on February 7, 2007, with the statement that hydrogen peroxide be used without the need to complete a bench test, but that a pilot test was needed. Our RAP approval letter dated February 7, 2007, indicated that the use of persulfate was not allowed for this site at that time, but we have subsequently incorporated the use of activated persulfate into our amended General Waste Discharge Requirements on March 1, 2007. Therefore, your RAP is now also approved for the use of activated persulfate in addition to hydrogen peroxide. However, with the approval of the RAP, 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.

Based on our review, 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*," adopted by the Regional Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2007-0019 (Series No. 032) and Monitoring and Reporting Program No. CI-9315 and Standard Provisions.

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

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment (August 30, 2007) under Regional Board Order No. R4-2007-0019. You are required to utilize 14-16 Geoprobe rods upgradient of GW-1A and/or GW-4A as injection points dedicated to the introduction of the hydrogen peroxide and sodium persulfate in order to meet the conditions specified in Order No. R-4-2007-0019 for the proposed project. The existing monitoring wells shall not be used as injection points. 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-9315 to assure that the reports are directed to the appropriate



Mr. Scott Averill
AM PM Special Delivery Service, Inc.

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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. A copy of the Order can also be found online 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. Rodney Nelson at (213) 620-6119. Questions regarding the underground storage tank issues should be forwarded to Mr. Dave Bjostad at (213) 576-6713 or dbjostad@waterboards.ca.gov.

Sincerely,

Original signed by David A. Bacharowski for

Deborah J. Smith
Interim Executive Officer

Enclosures: 1. Board Order No. R4-2007-0019
 2. Monitoring and Reporting Program No. CI-9315
 3. Standard Provisions

cc: Ms. Yvonne Shanks, State Water Resources Control Board, Underground Storage Tank Cleanup Fund
Ms. Nancy Mastumoto, Water Replenishment District of Southern California
Captain Frank Comfort, Los Angeles City Fire Department, Underground Tanks
Ms. Valerie Toney, Los Angeles City Fire Department, Underground Tanks
Mr. Ami Adini, Ami Adini & Associates, Inc.

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