



California Regional Water Quality Control Board

Los Angeles Region



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

Alan C. Lloyd, Ph.D.
Agency Secretary

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Arnold Schwarzenegger
Governor

November 18, 2005

Mr. Joy Ross, Development Associate
AMCAL Multi-Housing, Inc.
30141 Agoura Road, Suite 100
Agoura Hills, C 91301

Dear Mr. Ross:

GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER REMEDIATION AT PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE ORGANIC COMPOUND IMPACTED SITES – 424-446 WEST COMMERCIAL STREET, POMONA, CALIFORNIA (FILE NO. 05-172; CI-8988) (R4-2005-0030; SERIES NO. 031)

We have completed our review of your application for Waste Discharge Requirements for the In-situ Chemical Oxidation (ISCO) remediation of hydrocarbon contaminated soil at the above referenced site.

AMCAL Multi-Housing, Inc. (AMCAL or Discharger) owns a vacant property located at 424-446 West Commercial Street, Pomona, California. Historically, the site was used for gasoline, diesel, and oil storage in underground storage tanks (USTs). The USTs were removed from the site in 1988. Environmental assessments conducted in 2003 and 2005 indicated that an area of approximately 22x34 feet square at the site, around the location of the former USTs, is contaminated by petroleum hydrocarbons that are mainly in the diesel and motor oil range. The maximum depth of contamination is approximately 20 to 25 feet below ground surface (bgs). The concentrations of total petroleum hydrocarbons (TPH) in most contaminated soil samples are from several hundred to several thousand mg/kg, while the maximum TPH concentration has been measured at 11,000 mg/kg. Groundwater was not encountered at the maximum boring depth of 35 feet in the environmental assessments. However, groundwater data from nearby monitoring wells indicate that the depth of groundwater at this location is between 200 and 225 feet bgs.

The proposed ISCO technology involves the use of injected chemical oxidants to directly oxidize organic contaminants in the subsurface soil. The Discharger has proposed to construct a grid of 20 injection wells in and around the contaminated area, down to 25 feet bgs. A combination of iron catalysts, citric acid and hydrogen peroxide will be injected in groups of three to 15 wells simultaneously. The remaining wells, when not used for injection, will be used as vents to relieve pressure. Confirmation sampling will be conducted after the remediation. Target cleanup level for petroleum hydrocarbons is established at 1,000 mg/kg of TPH.

The Discharger has conducted a laboratory bench test using petroleum contaminated soil samples collected from the site and has demonstrated that the chemical reagents used in the ISCO technology, with appropriate ratios, are capable of remediating the hydrocarbon contamination in the soil. As required in the attached Monitoring and Reporting Program, before the proposed ISCO remediation is conducted in full scale at the site, the Discharger must also conduct a field pilot test, using a limited number of injection wells, to demonstrate that the proposed remediation technology is appropriate for this site. The results of the pilot test

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must be submitted to the Regional Board for review. The proposed full-scale remediation may not begin until the Executive Officer approves the project.

Regional Board staff have reviewed the information provided and have determined that the proposed remediation, in the context that the remediation process may release chemical reagents, as well as petroleum contaminants that are mobilized during the process, to groundwater, meets the conditions specified in Order No. R4-2005-0030, "*General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites*," adopted by this Regional Board on May 5, 2005.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2005-0030 (Series No. 031) and Monitoring and Reporting Program No. CI-8988.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2005-0030. 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, include a reference to No. CI-8988, which will assure that the reports are directed to the appropriate file and staff. Please 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. R4-2005-0030 only to the applicant. A copy of the Order will be furnished to anyone who requests it.

If you have any additional questions, please contact Dr. Wen Yang at (213) 620-2253.

Sincerely,

Jonathan Bishop
Executive Officer

Enclosures:

1. Board Order No. R4-2005-0030
2. Monitoring and Reporting Program No. CI-8970
3. Standard Provisions Applicable to Waste Discharge Requirements (addressee only)

cc: Mr. Robert Sams, Office of Chief Counsel, State Water Resources Control Board
Mr. Michael Lauffer, Office of Chief Counsel, State Water Resources Control Board
Mr. Donald Thompson, County of Los Angeles Fire Department
Mr. Ami Adini, Ami Adini & Associates, Inc.
Mr. Marc Ashcroft, Rejuvenate Ekco
Mr. Sean Hyatt, AMCAL Housing, Inc.

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