



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

October 7, 2005

Ms. Clara Lisa Kabbaz
Le Lycee Francaise De Los Angeles
3261 Overland Ave
Los Angeles, CA 90034

Dear Ms. Kabbaz:

GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER REMEDIATION AT PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE ORGANIC COMPOUND IMPACTED SITES – 10309 NATIONAL BLVD., LOS ANGELES, CALIFORNIA, SITE OF FUTURE LE LYCEE FRANCAISE DE LOS ANGELES PRIVATE HIGH SCHOOL (FILE NO. 05-171; CI-8970) (R4-2005-0030; SERIES NO. 028)

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.

Le Lycee Française De Los Angeles (LFLA or Discharger) owns a property located at 10309 Nation Boulevard in the City of Los Angeles, California, and intends to construct a private high school at the site. The property is approximately 0.8 acre and is currently vacant. Site investigations indicate that in the northwestern section of the site, in an area of approximately 2,000 square feet, subsurface soils are contaminated with petroleum hydrocarbon (gasoline) and volatile organic compounds (VOCs). Concentrations of total petroleum hydrocarbon (TPGg) range from 2,500 to 11,000 parts per million (ppm) in soils from ground surface to 30 feet below ground surface (bgs), decreasing to less than 100 ppm between 35 and 60 feet bgs, and further decreasing to below 10 ppm from 60 to 80 feet bgs.

Groundwater was initially encountered at the site between 75 to 80 feet bgs. A grab sample taken in a borehole at 80 feet bgs on April 5, 2005 indicated that the groundwater at the site was contaminated with TPHg (1.01 ppm) and VOCs (0.0028 to 0.0431 ppm). To further assess the groundwater contamination at the site, four groundwater-monitoring wells were installed at the site in September 2005. Two rounds of groundwater sampling in those monitoring wells did not indicate any contamination of TPHg or VOCs. It is believed that the contamination detected in the water sample taken on Aril 5, 2005 was most likely caused by cross contamination of soil debris that fell into the borehole.

The new groundwater monitoring wells also indicate that the aquifer under the site is confined and that the groundwater potentiometric surface is at approximately 55 feet bgs. The confining stratum is a clay layer of 3 to 5 feet lays between 75 to 80 feet bgs. Because the four groundwater wells were not installed properly (they were screened across the confining stratum), they were decommissioned on September 27, 2005, as required and approved by Regional Board staff.

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The proposed ISCO technology involves the use of injected chemical oxidants (hydrogen peroxide and citric acid) to directly oxidize organic contaminants in the subsurface soil. The Discharger has proposed to construct a grid of 40 injection wells in and around the contaminated area, going down to 65 to 70 feet bgs. A combination of iron catalysts, citric acid and hydrogen peroxide will be injected in groups of three to 15 well simultaneously. The remaining wells, when not used for injection, will be used as vents to relieve pressure. The remediation treatment is expected to last for approximately three weeks.

Target cleanup levels for the remediation are established for two intervals. For top soil from surface to 18 feet bgs that will be excavated and disposed at a Class III landfill, concentrations of any contaminate in soil shall not exceed 100 times of its maximum contamination level (MCL), except for TPHg, which shall not exceed 100 ppm. For soil below 18 feet bgs, the target cleanup levels are set as: TPHg <100 ppm, benzene <0.011 ppm, toluene <0.45 ppm, ethylbenzene <2 ppm, xylenes <5.3 ppm, MTBE <0.023 ppm. Post remediation confirmation sampling will be conducted to assure that the target cleanup levels are achieved.

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 regents mobilized pollutants 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. 028) and Monitoring and Reporting Program No. CI-8970.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment (September 30, 2005) 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-8970, 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

California Environmental Protection Agency



Ms. Clara Lisa Kabbaz
Le Lycee Francais De Los Angeles

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October 7, 2005

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, Site Mitigation Unit, Health Hazardous Materials Division, County
of Los Angeles Fire Department
Mr. Jason Davis, Ami Adini & Associates, Inc.
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