



# California Regional Water Quality Control Board

## Los Angeles Region



Alan C. Lloyd, Ph.D.  
Secretary for Agency

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

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

Arnold Schwarzenegger  
Governor

February 1, 2005

Mr. Jeffery R. Becker  
Lehman Becker Community Property  
Management  
16 N. Oak Street  
Ventura, CA 93001

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
CLAIM NO. 7099 3400 0006 3771 3424

Dear Mr. Becker:

**GENERAL WASTE DISCHARGE REQUIREMENTS FOR INJECTION/INFILTRATION OF HYDROGEN PEROXIDE SOLUTION AT A PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE ORGANIC COMPOUND IMPACTED SITE – DIXIE DIESEL TRUCK STOP, 6417 VENTURA BOULEVARD, VENTURA, CALIFORNIA 93003 (FILE NO. 04-164, CI NO. 8814)**

We have completed our review of your application for Waste Discharge Requirements to inject and infiltrate a 10% hydrogen peroxide solution with a trace amount of  $\text{FeSO}_4$  (as a catalyst) into groundwater monitoring wells and trenches at the above referenced site for the remediation of petroleum hydrocarbon impacted groundwater.

Lehman Becker Community Property Management (hereafter Discharger) owns the Dixie Diesel Truck Stop which is located at 6417 Ventura Boulevard in Ventura, California (Latitude:  $34^\circ 14' 55''$ , Longitude:  $119^\circ 16' 50''$ )(Plate1). Dixie Diesel Truck Stop is operated by United Oil Truck Stop. For the past eleven years, the Discharger has been using groundwater pump and treat, air sparging, and soil venting and vapor recovery methods to extract petroleum hydrocarbon derived contaminants from soil and groundwater at the site. The contaminants include total petroleum hydrocarbons (THPs) as diesel, benzene, toluene, ethyl benzene, and xylene. Groundwater air sparging has been performed in wells GW-1, GW-3 and H-2 on a continuous basis (24 hours per day, seven days per week) from January 1997 until the present.

The Discharger proposes to inject the 10% hydrogen peroxide solution with a trace amount of  $\text{FeSO}_4$  (as a catalyst reagent) into wells MW/GW-1, MW/GW-2, MW/GW-3, MW-4, MW-5, MW-7, H-2 and H-5 and vapor trenches VT-2, VT-3, and VT-4. The purpose of injecting hydrogen peroxide with the  $\text{FeSO}_4$  catalyst at these wells and vapor recovery trenches is to oxidize the petroleum hydrocarbon contaminants to enhance groundwater remediation. The Discharger has indicated that current remediation methods will be continued onsite with a variety of treatment methods such as air sparging, and soil vapor extraction and venting.

Chemical oxidation using hydrogen peroxide is a well-known method for producing hydroxyl radicals, which are very effective oxidizing agents, breaking hydrocarbon bonds and yielding carbon dioxide and water. The technology is frequently used to remediate organic-contaminated soils and groundwater. The Discharger intends to first inject the hydrogen peroxide solution into ten onsite locations and one offsite location (well MW-7) within the contamination plume. All of the injection sites will be monitored, and the addition one down-

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gradient, non-injection site, monitoring well (MW-8) which is located offsite and just outside the contamination plume is recommended to monitor remedial performance. Injection is planned weekly for a period of 1 to 2 quarters, on a weekly or bi-weekly basis at an injection rate of ½ to 2.0 gallons per minute (gpm).

When a full-scale treatment system is proposed for the Site clean up, then the following is required:

- a. A final Remedial Action Plan is to be submitted to the Regional Board for review and approval prior to its implementation; and
- b. A revised Report of Waste Discharge (ROWD) is to be submitted for the full-scale treatment system.

Regional Board staff will review the revised RoWD to determine whether it is complete. The Monitoring and Reporting Program (MRP) will be revised to incorporate the approved full-scale treatment program.

Regional Board staff is cognizant that a 10 % hydrogen peroxide solution with a FeSO<sub>4</sub> catalyst causes a strongly exothermic chemical reaction. The Discharger shall use extreme care while injecting this hydrogen peroxide solution into the wells and vapor recovery trenches. The Discharger shall continuously monitor and record on field logs injection/drip rates, temperature, pH, and dissolved oxygen.

Regional Board staff has reviewed the information provided and has determined that the proposed discharge meets the conditions specified in 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.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2002-0030 (Series No. 054) and Monitoring and Reporting Program (MRP) No. CI-8814.

You are required to implement the monitoring program on the effective date of this enrollment (February 1, 2005) under Regional Board Order No. R4-2002-0030. All monitoring reports should 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 "Compliance File No. CI-8814", which will assure that the reports are directed to the appropriate file and staff. Do not combine other reports with your monitoring reports. Submit each type of report as a separate document.

February 1, 2005

We are sending a copy of Order No. R4-2002-0030 to the applicant only. A copy of the Order will be furnished to anyone who requests it. If you have any additional questions, please contact Ms. Toni Callaway at (213) 620-2271 or Dr. Kwang-il Lee at (213) 620-2269.

Sincerely,

Jonathan S. Bishop  
Executive Officer

Enclosures:

1. Board Order No. R4-2002-0030
2. Monitoring and Reporting Program No. CI-8814
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. Jay Huang, Los Angeles Regional Water Quality Control Board, UST Unit  
Mr. Doug Beach, Ventura County Environmental Health Division,  
Ms. Yvonne Shanks, State Water Resources Control Board, Underground Tank  
Cleanup Fund  
Ms. Carla Were, Applied Environmental Technologies, Inc.

