



# California Regional Water Quality Control Board

## Los Angeles Region

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

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Gray Davis  
Governor

Winston H. Hickox  
Secretary for  
Environmental  
Protection

June 14, 2002

Mr. Clifford Kirchof  
Schlumberger Resource Management Services  
225 Schlumberger Drive  
Sugar Land, TX 77478

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
CLAIM NO. 7000 0520 0024 7219 5664

Dear Mr. Kirchof:

### **GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER REMEDIATION AT PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE ORGANIC COMPOUND IMPACTED SITES – FORMER SCHLUMBERGER FACILITY, 2230 STATHAM BOULEVARD, OXNARD, CALIFORNIA (SITE ID NO. 2047300)**

We have completed our review of your application for Waste Discharge Requirements to inject potassium permanganate solution into the shallow aquifer at the subject site for use in in-situ reactive zone with bioremediation to cleanup the chlorinated volatile organic compounds in groundwater.

Potassium permanganate (KMnO<sub>4</sub>) is capable of oxidizing dissolved-phase tetrachloroethene (PCE) and trichloroethene (TCE) and possibly dense non-aqueous phase liquid (DNAPL). KMnO<sub>4</sub> solution will be injected through a total of 41 points at the subject site (Latitude: 37° 10' 35", Longitude: 121° 42' 32"). A total of 3,000 gallons of 30,000 mg/L KMnO<sub>4</sub> solution will be injected at each point. Injection at each borehole will occur at depths of 8 to 40 feet below ground surface. The maximum rate of injection will vary from 20 to 40 gallons per minute. KMnO<sub>4</sub> solution will also be injected into three horizontal vapor extraction wells onsite to address a portion of the source area beneath the building. Approximately 6,000 gallons of 30,000 mg/L solution will be injected into each horizontal well. The injection process will be completed in approximately three weeks.

After one year, it is expected that the in-situ reactive zone with bioremediation of chlorinated volatile organic compounds through dechlorination will be completed. Any potential adverse water quality impacts that may result will be localized, of short-term duration, and will not impact any existing or prospective uses of groundwater. Groundwater quality will be monitored to verify no long-term adverse impact to water quality.

Regional Board staff have reviewed the information provided and have determined that, following installation of two upgradient groundwater monitoring wells (MW10 and MW11), the proposed project will meet 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. Refer to the attached Fact Sheet. Upgradient groundwater monitoring well MW10 must be installed on the property and at least 50 feet north of existing groundwater monitoring well MW4, and upgradient groundwater monitoring well MW11 must be installed on the property and at least 75 feet northeast of existing groundwater monitoring well MW1. The wells must be

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\*\*\*The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption\*\*\*

\*\*\*For a list of simple ways to reduce demand and cut your energy costs, see the tips at: <http://www.swrcb.ca.gov/news/echallenge.html>\*\*\*



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constructed and installed using the same materials and methods discussed in your Regional Board approved workplan for installation of groundwater monitoring wells MW-8 and MW-9, dated March 29, 2001. Groundwater monitoring wells upgradient of the pilot study area (MW10 and MW11), the four monitoring wells within the application area (MW1, MW2, MW3, and MW4) and the three offsite downgradient monitoring wells (MW5S, MW6, and EX2), must be sampled for all constituents identified in Section II-Monitoring & Reporting Requirements (Pages T-1 and T-2), prior to the application of any potassium permanganate.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2002-0030 (Series 001) and Monitoring and Reporting Program No. CI-8380. Please note that the discharge limits in Attachment A (DWR Basin No. 4-4 (Oxnard Plain unconfined and perched aquifers)) of this Order No. R4-2002-0030 are applicable to your discharge.

The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this enrollment (May 29, 2002) 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, please include a reference to "Compliance File No. CI-8380", 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. 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.

If you have any questions, please contact me (213) 576-6605, or Kwang-il Lee at (213) 620-2269.

Sincerely,

Dennis A. Dickerson  
Executive Officer

Enclosures:

Board Order No. R4-2002-0030  
Monitoring and Reporting Program No. CI-8401  
Fact Sheet

cc: Mr. Mike Floyd, Division of Water Quality, State Water Resources Control Board  
Mr. Michael Lauffer, Office of Chief Counsel, State Water Resources Control Board  
Mr. Robert Sams, Office of Chief Counsel, State Water Resources Control Board  
Mr. Doug Beach, Ventura County Environmental Health Division, LUFT Program  
Mr. Peter Raftery, Los Angeles Regional Water Quality Control Board

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Mr. Clifford Kirchof  
Schlumberger Resource Management Services

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June 14, 2002

Mr. Elie Haddad, Locus Technologies

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