



Winston H. Hickox  
Secretary for  
Environmental  
Protection

# California Regional Water Quality Control Board

## Los Angeles Region

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Gray Davis  
Governor

November 22, 2002

Mr. Nelson Reynolds  
El Dorado Cleaners  
8171 E. Wardlow Road  
Long Beach, CA 90808

Dear Mr. Reynolds:

**GENERAL WASTE DISCHARGE PERMIT COVERAGE (ORDER NO. R4-2002-0030: SERIES 002) FOR PROPOSED HYDROGEN RELEASE COMPOUND (HRC™) INJECTION TO GROUNDWATER AT FORMER EL DORADO CLEANERS, 8171 WARDLOW ROAD, LONG BEACH, CALIFORNIA. (SLIC NO. 822, SITE ID 204BF00)**

We have completed our review of your application for coverage under General Waste Discharge Requirements to inject Hydrogen Release Compound (HRC™) to groundwater at the subject site for use in in-situ bioremediation to address the volatile organic compounds in groundwater.

HRC will be delivered into the saturated zone via 9 injection points. The injection points will have a spacing of 10 to 15 feet. The dosing rate of HRC will be 4 pounds of HRC per linear foot of saturated zone per injection point. The target saturated zone is approximately 15 feet, resulting in a total of 60 pounds per injection point and 540 pounds for the entire pilot study. HRC will be applied to the saturated zone using direct-push hydraulic equipment.

A groundwater and subsurface bio-processes monitoring program will be implemented for a minimum period of four quarters to verify the efficacy of the HRC addition to this site.

The groundwater monitoring program shall include a complete monitoring network to cover the injection area, adequately spaced monitoring points over the plume, up and down gradient monitoring points. Based on our review of your application and our discussion with your consultant, you need to install an additional up-gradient groundwater monitoring well (MW-5) north of former soil boring SB19 near the property line, an additional down-gradient groundwater monitoring well (MW-4) near the Coyote Creek and a monitoring well (MW-6) in the vicinity of former soil boring SB-5. An initial or "baseline" round of sampling shall be conducted to identify pre-HRC injection groundwater conditions.

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. Groundwater quality shall be monitored to verify no long-term adverse impact to water quality. There may be small increases associated with soluble gases such as methane, ethane, ethene, and carbon dioxide. The El Dorado Dry Cleaners site is located in the City of Long Beach at Latitude: N33° 49' 03", Longitude: W118° 4' 19". The quantities of HRC injected shall be documented per the Monitoring and Reporting Program No. 8496.

### **California Environmental Protection Agency**

\*\*\*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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Mr. Nelson Reynolds  
Former El Dorado Cleaners

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November 22, 2002

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

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2002-0030 (Series 002) and Monitoring and Reporting Program No. CI-8496. Please note that the discharge limits in Attachment A (DWR Basin No. 4-11 (Central Basin)) 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 (November 22, 2002) under Regional Board Order No. R4-2002-0030. 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, please include a reference to "Compliance File No. CI-8496", 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 at (213) 576-6605, or Jeffrey Hu at (213) 576-6736.**

Sincerely,

Dennis A. Dickerson  
Executive Officer

Enclosures

Board Order No. R4-2002-0030  
Monitoring and Reporting Program No. CI-8496  
Fact Sheet

cc: Mr. Mike Floyd, Division of Water Quality, State Water Resources Control Board  
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. Richard Wagner, Department of Health Services, County of Los Angeles  
Ms. Melinda A. Sperry, Water Replenishment District of Southern California  
Mr. Tom Johnson, Port of Long Beach  
Mr. Martin Hamann, LFR, (Costa Mesa)

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