

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION  
320 West 4<sup>th</sup> Street, Suite 200, Los Angeles, California 90013

FACT SHEET  
WASTE DISCHARGE REQUIREMENTS  
FOR  
FORMER EL DORADO CLEANERS  
8171 WARDLOW ROAD, LONG BEACH  
CALIFORNIA

ORDER NO. R4-2002-0030 (SERIES NO. 017)  
CI-8496, SITE ID# 204BF00

**FACILITY ADDRESS**

El Dorado Cleaners  
8171 Wardlow Road  
Long Beach, CA 90808-3204

**FACILITY MAILING ADDRESS**

El Dorado Cleaners  
8171 Wardlow Road  
Long Beach, CA 90808-3204

**PROJECT DESCRIPTION:**

Former El Dorado Cleaners site is located in the City of Long Beach at Latitude: N33° 49' 03", Longitude: W118° 4' 19". Previous operations as a dry cleaner have impacted the subsurface soil and groundwater with volatile organic compounds (VOCs). The contaminants of concern (COCs) for the site are tetrachloroethene (PCE) and trichloroethene (TCE). PCE was detected at 2,100,000 µg/kg in the soil and 740 µg/L in the groundwater.

A pilot study is proposed for the site to evaluate the effectiveness of using hydrogen release compound (HRC) to reduce the VOCs contamination in the groundwater. The Detailed Work Plan for HRC Pilot Study and Groundwater Monitoring, dated September 11, 2001, was approved by this Regional Board on September 28, 2001. The Removal Action Work Plan proposes to inject HRC to groundwater at the subject site for use in in-situ bioremediation to address the COCs in groundwater. HRC has a considerable history of being utilized successfully in California in similar projects and is expected to be widely used in future remediation efforts. Subsequently, this technology has been included for the General Permit (Board Order No. R4-2002-0030). The main plume (TCE) extends over an area of approximately 200 feet by 700 feet. The target zone for remediation is approximately the first 15 feet of groundwater in the upper water-bearing zone. This groundwater unit is composed of recent alluvium of interbedded Sandy silt to sand and is underlain by the Bellflower Aquiclude.

**VOLUME AND DESCRIPTION OF DISCHARGE (INJECTION):**

The HRC will be introduced to the aquifer underlying the site. HRC is a proprietary, environmentally safe polylactate ester specially formulated for slow release of lactic acid upon hydration. When placed in a contaminated aquifer, HRC stimulates a multi-step process resulting in the degradation of chlorinated solvents and their derivatives. Because of its consistent slow release of hydrogen, HRC stimulates rapid and complete dechlorination of chlorinated solvents resulting in non-toxic end products such as ethene.

The HRC will be applied using direct push hydraulic equipment. First, the HRC will be warmed to approximately 90 degrees Fahrenheit. A Greco<sup>R</sup> 433 single piston pump will be delivering the HRC at each of the nine injection points at a rate of approximately one gallon per minute. The total injection process is anticipated to be completed in four hours.

The injection rate per injection point is approximately 4 pounds of HRC product per vertical foot to the saturated zone, from approximately 10 to 25 feet below ground surface. A total of 60 pounds of HRC will be injected at each of the nine points. Cumulatively, 540 pounds of HRC will be used for the pilot study.

An initial or "baseline" round of sampling will be conducted to identify pre-HRC injection groundwater conditions. After the initial application of the HRC, quarterly sampling will be performed to evaluate the effectiveness of the HRC. Groundwater samples will be collected from a groundwater monitoring well within the injection area, MW-3, one cross-down gradient monitoring well, MW-6, two monitoring wells in

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the down gradient portion of the plume, MW-1 and MW-2, a down-gradient background well, MW-4, and an up-gradient background well, MW-5.

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. There may be small increases associated with soluble gases such as methane, ethane, ethene, and carbon dioxide.

The quantities of HRC injected will be required to be documented per the Monitoring and Reporting Program No. 8496.