



# California Regional Water Quality Control Board

## Los Angeles Region



Linda S. Adams  
Agency Secretary

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

March 19, 2007

Ms. Flora Khodadadi  
818 S. Shenandoah Street  
Los Angeles, CA 90035

**Workplan Approval and General Waste Discharge Requirements for Groundwater Cleanup at Petroleum Hydrocarbon Fuel, Volatile Organic Compound and/or Hexavalent Chromium Impacted Sites (Order No. R4-2007-0019)  
E&F ARCO, 15922 Inglewood Avenue, Lawndale, California (Series No. 003; CI No. 9226),  
(UST File No. I-16072)**

Dear Ms. Khodadadi:

We have completed our review of a "Workplan for Groundwater Remediation Pilot Testing using Fenton's Reagent" (Workplan) and the application for coverage under General Waste Discharge Requirements to inject Fenton's Reagent at the subject site (the Site) to reduce the mass of petroleum hydrocarbons in the saturated zone.

The Site is currently a gasoline service station located on the northeast corner of the intersection of 160th Street and Inglewood Avenue in the City of Lawndale.

In June 1998, all underground storage tanks (USTs) were removed and replaced in the same excavation. Approximately 2,055 tons of hydrocarbon-impacted soil were excavated during the UST removal.

There are currently ten groundwater monitoring wells at the Site. Groundwater monitoring has been conducted at the Site since November 1996. The most recent monitoring event in September 2006 showed concentrations of TPH-g, benzene, and MTBE in groundwater of 1,280,000; 21,500; and 1,020,000 µg/L, respectively.

The Site is located within the West Coast Basin. During the monitoring event on November 30, 2006, groundwater was measured at approximately 23 feet bgs, and the groundwater flow direction was to the northwest.

In the Workplan, AET, the consultant for E&F Arco (the Discharger), proposed to complete a pilot test by injecting Fenton's Reagent into five proposed injection wells (screened 15-35 ft bgs) located at the source of the petroleum hydrocarbon plume in the groundwater.

Approximately 10 gallons of 30% hydrogen peroxide, 3 gallons of 20% hydrochloric acid, two tablespoons of ferrous sulfate, and 27 gallons of water will be fed down the well casing, resulting in an approximately 10% Fenton's Reagent solution.

**California Environmental Protection Agency**



*Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.*

For safety reasons, during the initial injection event, Fenton's Reagent will be injected in smaller volumes to monitor the reaction response. Subsequent injection volumes will be adjusted based on the initial event results and subsequent field observations during later events.

Baseline sampling of wells MW-4 through MW-6 and MW-8 through MW-10 will be performed prior to injection. Remediation progress will be determined through subsequent sampling to be performed approximately 1 week after the last injection event.

Regional Board staff concurs with the proposed workplan provided that the following conditions are met.

1. A technical report detailing the results of the pilot test must be submitted by **April 15, 2007**. The technical report must include a remedial action plan (RAP).
2. If the pilot test proves to be a viable remedial method, this WDR will be applicable to the full scale implementation at the Site.
3. For safety reasons, injection points #1 and #2 which are proposed to be installed in the vicinity of the USTs must be removed from the injection point network.
4. No groundwater monitoring well shall be used as injection points for Fenton's reagent during the pilot or full scale remediation.

Staff has also determined that the discharge meets the conditions specified in Order No. R4-2007-0019, "*Revised General Waste Discharge Requirements for Groundwater Remediation At Petroleum Hydrocarbon Fuel, Volatile Organic Compound and/or Hexavalent Chromium Impacted Sites (General WDRs)*," adopted by the State Water Resources Control Board on March 1, 2007.

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2007-0019 and Monitoring and Reporting Program No. CI-9226 and Standard Provisions.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment (March 16, 2007) under Regional Board Order No. R4-2007-0019. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit.

When submitting monitoring or technical reports to the Regional Board, please reference Compliance File No. CI-9226 to assure that the reports are directed to the appropriate staff. 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. R4-2007-0019 only to the applicant. A copy of the Order will be furnished to anyone who requests it.

Ms. Flora Khodadadi  
E&F Arco

- 3 -

March 19, 2007

If you have any questions, please contact Mr. Rodney Nelson at (213) 620-6119. Questions regarding the underground storage tank issues should be forwarded to Arman Toumari at (213) 576-6758.

Sincerely,

***Original Signed by  
Wendy Phillips  
for***

Jonathan S. Bishop  
Executive Officer

Enclosures: 1. Board Order No. R4-2007-0019  
2. Monitoring and Reporting Program No. CI-9226

cc: Mark Stewart, Central Basin Watermaster, California Department of Water Resources  
Carol B. Shestag, AET

***California Environmental Protection Agency***



Recycled Paper

*Our mission is to preserve and enhance the quality of California's water resources for the benefit of present and future generations.*