



California Regional Water Quality Control Board

Los Angeles Region



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

Dan Skopec
Acting Agency Secretary

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

April 28, 2006

Mr. Alfred Hakim
Great American Gas Company
8950 W. Olympic Boulevard, Suite 113
Beverly Hills, CA 90211

**GENERAL WASTE DISCHARGE REQUIREMENTS FOR GROUNDWATER REINJECTION
AT PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE ORGANIC COMPOUND
IMPACTED SITES
GREAT AMERICAN GAS COMPANY
5801 WEST PICO BOULEVARD, LOS ANGELES
(UST ID # 900190189) CI NO. 9069) (R4-2005-0030; SERIES NO. 044)**

Dear Mr. Hakim:

We have received your application for coverage under General Waste Discharge Requirements to inject hydrogen peroxide to enhance chemical oxidation and aerobic degradation of dissolved phase petroleum hydrocarbons and fuel oxygenates in the shallow groundwater.

Great American Gas Company (hereinafter Discharger) operates a gasoline service station at 5801 West Pico Boulevard, Los Angeles, California (Site) (Figure 1) (Latitude: 34° 3' 5", Longitude: 118° 21' 53"). The Site, a former Texaco Service Station, consisted of two 10,000-gallon, one 8,000-gallon, and two 4,000-gallon underground storage tanks (USTs) and one 550-gallon waste oil tank. The USTs and piping were removed and replaced with new fuel dispensing system and double wall USTs in 1999. Upon removal of the USTs, soil samples were collected and analyzed. The highest concentrations of petroleum hydrocarbons as gasoline (TPH_G) of 24,200 mg/kg, benzene of 217 mg/kg and methyl tertiary butyl ether (MTBE) of 1,270 mg/kg were detected. Subsequent site investigations indicated that the underlying soil and groundwater had been contaminated with fuel hydrocarbons. A Final Remedial Action Plan (RAP) dated July 23, 2004, with Addendum dated March 21, 2006, prepared by Applied Environmental Technologies, Inc. (AET) were approved by the Regional Board, with conditions, on December 28, 2004, and April 13, 2006, respectively. AET proposes to perform enhanced groundwater remediation using Fenton's Reagent in the southeast portion of the Site.

A 10% (or less) solution of H₂O₂ will be mixed on site using 30% H₂O₂ diluted with water. Initially ferrous sulfate powder will be fed down at or into the water table through a slotted pipe at the bottom section of the pipe. Then adding the acid as required and finally the H₂O₂ solution (mix) will be fed by pouring the amount allowed by the WDR Permit or as limited by the well at that location. AET proposes to install an additional injection well TVGE-7 and feed the H₂O₂ solution to the proposed well and the existing wells TVGE-2, TVGE-6 (Figure 2) on a weekly (or biweekly) to monthly basis at an estimated rate of approximately 0.5 to 2 gallons/minute. The feeding rate will be optimized in the field. The feed rate also will be

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controlled by a thermo couple placed in each injection well so that the reaction temperature does not exceed 140° F.

We have reviewed the information provided and have determined that the proposed injection meets the conditions specified in Regional Board Order No. R4-2005-0030, "Revised *General Waste Discharge Requirements for Groundwater Remediation at Petroleum Hydrocarbon Fuel and/or Volatile Organic Compound Impacted Sites*," adopted by this Regional Board on May 5, 2005.

Enclosed are Waste Discharge Requirements consisting of Regional Board Order No. R4-2005-0030, and Monitoring and Reporting Program No. CI-9069 and Standard Provisions. The "Monitoring and Reporting Program" requires you to implement the monitoring program on the effective date of this enrollment (April 28, 2006) under Regional Board Order No. R4-2005-0030. 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-9044," 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. R4-2005-0030 only to the applicant. A copy of the Order will be furnished to anyone who requests it.

If you have any questions concerning this matter, please call Mr. Rodney Nelson at (213) 620-6119.

Sincerely,

ORIGINAL SIGNED BY

Jonathan S. Bishop
Executive Officer

Enclosures: 1. Board Order No. R4-2005-0030
2. Monitoring and Reporting Program No. CI-9069

Ms. Yvonne Shanks, State Water Resources Control Board, Underground Storage Tank Cleanup Fund
Capt. Frank Comfort, Los Angeles City Fire Department, Underground Tanks
Ms. Valerie Toney, Los Angeles City Fire Department, Underground Tanks
Mr. Scott Sankey, Applied Environmental Technologies Inc.

