



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

Arnold Schwarzenegger
Governor

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October 16, 2006

Ms. Lupe Milner
Piru Ranch Market
1045 Moreno Drive
Ojai, CA 92023

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO. 7002 2030 0006 2095 2958

Dear Ms. Milner:

GENERAL WASTE DISCHARGE REQUIREMENTS FOR HYDROGEN PEROXIDE WITH FENTON REAGENT PASSIVE INFILTRATION AT PETROLEUM HYDROCARBON FUEL AND/OR VOLATILE ORGANIC COMPOUND IMPACTED SITES – PIRU RANCH MARKET, 3907 EAST TELEGRAPH ROAD, PIRU, CALIFORNIA (FILE NO. 06-176, CI NO. 9166)

We have completed our review of your application for Waste Discharge Requirements to passively infiltrate hydrogen peroxide with Fenton's reagent into two groundwater wells (MW-1 and MW-4) at the above referenced site.

Applied Environmental Technologies Inc., your consultant, is conducting the groundwater cleanup activities at your facility commonly known as the Piru Ranch Market located at 3907 East Telegraph Road, Piru, California (Plate 1) (Latitude: 118° 47' 45.90", Longitude: 34° 24' 17.03"). The site, encompassing approximately 130,000 square feet, is an inactive gas station located on the northeast corner of Highway 126 and Pacific Avenue. The gas station consisted of four fuel underground storage tanks (USTs), product piping, and three dispenser pump islands. In October 1995 the four USTs and fueling system were removed from the site. Fuel-impacted soil was detected in soil samples collected during the fueling system removals.

Following the detection of fuel impacted soil several phases of assessment were conducted at the site. The assessment consisted of drilling seven onsite soil borings (B1 through B-7), eight onsite and offsite groundwater monitoring wells (MW-1 through MW-8), and three cluster soil vapor extraction wells [VEW-1(A-C), VEW-2(A-C), and VEW-3(A-C)] (Plate 2). Site investigations indicate that soil and groundwater have been contaminated with volatile organic compounds (VOCs).

Groundwater analytical data indicate the presence of TPHg, benzene, toluene, ethyl benzene and total xylenes (BTEX), and lead. Groundwater VOC concentrations from the most impacted area (MW-1) ranged from non-detected to 60,500 microgram per liter ($\mu\text{g/L}$) of TPHg, non-detected to 1,480 microgram per liter ($\mu\text{g/L}$) of benzene, non-detected to 22,200 $\mu\text{g/L}$ of toluene, and non-detected to 4,860 $\mu\text{g/L}$ of ethyl-benzene. Fuel oxygenates, t-butyl alcohol (TBA), ethyl tertiary butyl ether (ETBE), t-amyl methyl ether (TAME), di-isopropyl ether (DIPE) and methyl tertiary butyl ether (MTBE), were not detected in the groundwater. Total lead was detected one time in MW-1 at 0.013 milligram per liter (mg/L) and twice at MW-2 at concentration 0.011 and 0.008 mg/L.

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The site is underlain by river sands, gravel, and cobbles, deposited by the nearby Santa Clara River. The first encountered groundwater occurs at a depth of approximately 26 ft below ground surface, with a hydraulic gradient directed to the west, presumably toward the Santa Clara River, which is located at a distance of approximately 4,000 feet south. The groundwater gradient beneath the site ranges from 0.05 to 0.003 feet/foot to the west.

Your consultant proposed eight passive infiltration events each for wells MW-1 and MW-4. Infiltration events will be approximately every other week and will consist of approximately 20 gallons of hydrogen peroxide with Fenton's reagent solution of ten percent concentration (Plate 2). Also, your consultant has indicated that the injections will be completed within a period of five months and will begin within two or three weeks from the date of enrollment under the General Permit Order No. R4-2005-0030. Chemical oxidation using hydrogen peroxide with Fenton's reagent is a well-known method for producing hydroxyl radicals, which are very effective oxidizing agents. The technology has been used to remediate organic-contaminated soils and groundwater.

During the infiltration of hydrogen peroxide with Fenton's reagent, the groundwater temperature will be monitored at each injection well using a thermocouple and data logger. Your consultant has indicated that if the results indicate improvement in groundwater quality, a request for approval of new infiltration will be requested.

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.

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

Enclosed are your Waste Discharge Requirements, consisting of Regional Board Order No. R4-2005-0030 (Series No. 056) and Monitoring and Reporting Program No. CI-9166 and Standard Provisions.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment (October 16, 2006) under Regional Board Order No. R4-2005-0030. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit, and also to Ventura County, LUFT Program, Environmental Health Division, ATTN : Ms. Diana B. Wahl.

When submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to Compliance File No. CI-9166, which will assure that the reports are directed to the appropriate file and staff. Do not combine other reports with your monitoring reports. Submit each type of report as a separate document.



Ms. Lupe Milner
Piru Ranch Market

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October 16, 2006

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 additional questions, please contact Dr. Yue Rong at (213) 576-6710.

Sincerely,

Jonathan Bishop
Executive Officer

cc: Mr. Robert Sams, Office of Chief Counsel, State Water Resources Control Board
Mr. James Evans, Ventura County Environmental Health Division, Liquid Waste
Ms. Melinda Talent, Ventura County Environmental Health Division, Land Use Unit
Ms. Diane B. Wahl, LUFT Program, Ventura County Environmental Health Division
Mr. J. F. Fakhoury, Ventura County Public Works
Ms. Carol B. Shestag, Applied Environmental Technologies, Inc.

Enclosure: Order No. R4-2005-0030

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