



California Regional Water Quality Control Board

Los Angeles Region

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June 19, 2003

Ms. Jean Roberts
Raytheon Systems Company
1151 East Hermans Road, Building 26
Tucson, AZ 85706

GENERAL WASTE DISCHARGE REQUIREMENTS FOR IN-SITU BIOREMEDIATION COVERAGE (ORDER NO. R4-2002-0030; SERIES 022) REMEDIATION PILOT STUDY FORMER HUGHES MISSILE SYSTEM, 8433 FALLBROOK AVENUE CANOGA PARK CALIFORNIA (FILE NO. 94-45; SLIC NO. 693; SITE ID NO. 2043T00)

Dear Ms. Roberts:

We have completed our review of your application for coverage under the General Waste Discharge Requirements to inject a carbohydrate solution (consisting of 88% lactic acid) into groundwater at the subject site for use in in-situ bioremediation pilot test project to address the volatile organic compounds (VOCs) pollution in groundwater.

Raytheon Corporation proposes to conduct a pilot test at the western area of the former Tank 3 area (source area) to evaluate the effectiveness of enhancing naturally occurring microorganisms to bioremediate the VOCs pollution by injecting a carbohydrate solution into the groundwater in order to create an "in situ reactive treatment zone" to accelerate biodegradation. Regional Board staff, approved the "Enhanced In-Situ Bioremediation Pilot Test Workplan" (Workplan) on December 11, 2002.

A groundwater remediation program has been underway at the site since 1995. Remediation techniques used at the Site include groundwater recovery and treatment, soil vapor extraction (SVE), and air sparge (AS) systems. The remediation systems are used to remove volatile organic compounds (VOCs) from shallow groundwater and the unsaturated soil zone underlying the northwestern portion of the Site. Due to redevelopment of the Site the recovery system was inoperative from December 1998 to July 1999. The groundwater recovery component of the recovery system has been in continuous operation since 1999. The SVE and AS systems were shut down in October 2001 due to asymptotic influent concentrations. In December 2001 and January 2002, 17 triple-nested sparge wells and three vapor extraction wells were installed along the northwest property as an addition to the existing SVE and AS systems. In February 2002, these new wells were connected to the existing remediation system and have been operating on a cyclic basis.

Regional Board staff has reviewed the information provided in the Workplan and has 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.

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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Ms. Jean Roberts
Raytheon Systems Company
File No. 94-45

- 2 -

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Enclosed are Waste Discharge Requirements consisting of Regional Board Order No. R4-2002-0030 (Series 022), Standard Provision for Reporting and Monitoring, and a Monitoring and Reporting Program No. CI-8567. 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 and reporting program on the effective date of this enrollment 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-8567," 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 call Mrs. Manjulika Chakrabarti at (213) 576-6727, or Dr. Rebecca Chou at (213) 576-6733.

Sincerely,

Dennis A. Dickerson
Executive Officer

Enclosures

1. Fact Sheet
2. Board Order No. R4-2002-0030
3. Monitoring and Reporting Program No. CI-8567

cc: Robert Sams, Office of Chief Counsel, State Water Resources Control Board
Michael Lauffer, Office of Chief Counsel State Water Resources Control Board
Gordon Innes, Division of Water Quality, State Water Resources Control Board
Mike Floyd, Division of Water Quality, State Water Resources Control Board
Vera Melnyk-Vecchio, State Department of Health Services, Drinking Water Branch
Tim Garvey, TN & Associates, Inc.
Richard Wagner, Department of Health Services, County of Los Angeles
Mel Blevins, ULARA Watermaster

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