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

FACT SHEET
WASTE DISCHARGE REQUIREMENTS
FOR
PARAPLAST AREA
FORMER NORTHROP GRUMMAN FACILITY
1515 RANCHO CONEJO BOULEVARD, NEWBURY PARK, CALIFORNIA
(SLIC NO. 252; SITE ID NO. 2047100)

ORDER NO. R4-2005-0030, CI-9067

FACILITY ADDRESS
Paraplast Area
Former Northrop Grumman Facility
1515 Rancho Conejo Boulevard
Newbury Park, California 91320

FACILITY MAILING ADDRESS
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El Segundo, California 90245-2840

PROJECT DESCRIPTION

Former Northrop Grumman Facility is located at Latitude N34° 12' 01", Longitude W118° 55' 41" in Newbury Park.

The former Paraplast Area is one of three areas of approximately 100 acres site, which was formerly owned by Northrop for manufacturing aircraft subassemblies, is impacted with chlorinated VOCs, including trichloroethene (TCE). The former Paraplast Area is located in the western portion of the site on Parcels 8 and 9 (Figure 1). Several investigations and groundwater monitoring have been performed in this area. Groundwater analytical data from existing wells indicate the presence of TCE at concentrations up to 9,000 micrograms per liter (µg/L) (Well No. PPIRZ-04) in the uppermost groundwater unit, which consists predominately of fine-grained alluvium. Unconfined groundwater occurs at depths ranging from approximately 33 and 76 feet below ground surface (bgs). Groundwater flow direction has been reported as flowing to the west-northwest in the western portion of the site and towards the northwest in the northern portion of the site.

Work Plan for In-Situ Chemical Oxidation (ISCO) Field Demonstration in the Former Paraplast Area (Work Plan), dated December 28, 2005, using permanganate for treatment of TCE in the groundwater, was submitted to the Regional Board for approval. On July 28, 2006, the Regional Board approved the Work Plan and May 31, 2006, response letter. The ISCO field demonstration will inject potassium permanganate solution initially into each of the four injection wells (Figure 2). Dependent upon the results, sodium permanganate solution may be used to provide greater flexibility in injection concentrations due to the higher solubility of sodium permanganate. This pilot test study is to evaluate the effectiveness of the remedial technology, develop a site-specific understanding of secondary effects of permanganate treatment, and develop design parameters for full-scale applications. Upon reviewing of the results of the injection test and the ISCO effectiveness observed in this pilot test study, an expansion of the injection system for full-scale application to treat the remainder of the Paraplast Area where VOCs exceed 100 µg/L is proposed under this WDR.

VOLUME AND DESCRIPTION OF DISCHARGE (INJECTION)

Four injection wells (PA-ISCO-01 through PA-ISCO-04), two new groundwater monitoring wells (PA-MW-01 and PA-MW-02), and five existing groundwater monitoring wells (PPIRZ-04, PPIRZ-06, MW-7R, IRZ-M2, and MW-20) will be used during the ISCO field demonstration period. In addition, some of the injection wells will be used as monitoring wells to measure radius of influence during the initial injection test.

A phased injection program will be used, starting with a permanganate injection to achieve approximately 10 to 20 percent of the natural oxidant demand within the target zone and observing the chlorinated ethene results. The first injection solution will contain up to 3 percent permanganate. Based on the results, concentrations and/or volume of the injection solution will be adjusted during the second injection event if necessary. The permanganate concentration will not exceed 10 percent permanganate throughout this ISCO field demonstration period.

During a twelve-day per injection event, approximately 5,200 gallons of potassium permanganate solution will be injected initially into each of the four injection wells to take place 15 feet radius of influence and 20 percent pore-volume displacement in the groundwater. Injection flow rate and pressure will be determined during initial injection testing. Dependent upon the results, sodium permanganate solution may be used to provide greater flexibility in injection concentrations due to the higher solubility of sodium permanganate.

The quantities of permanganate solution injected into groundwater are required to be documented per Monitoring and Reporting Program (MRP) No. CI-9067. Groundwater samples will be collected to monitor for all required parameters during the ISCO field demonstration in accordance with the MRP No. CI-9067.

Upon reviewing of the results of the injection test and the ISCO effectiveness observed in this pilot test study, an expansion of the injection system for full-scale application to treat the remainder of the Paraplast Area where VOCs exceed 100 µg/L may be proposed under this WDR.