



# California Regional Water Quality Control Board

## Los Angeles Region



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

Alan C. Lloyd, Ph.D.  
Agency Secretary

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Arnold Schwarzenegger  
Governor

July 26, 2005

Ms. Teresa P. Olmsted  
ITT Industries, Inc.  
1054 N. Tustin Ave.  
Anaheim, CA 92807

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
CLAIM NO. 7000 0520 0024 7127 3684

**GENERAL WASTE DISCHARGE REQUIREMENTS FOR ITT INDUSTRIES INC. (GROUNDWATER REMEDIATION USING CARBOHYDRATE SOLUTION) – FORMER ITT BARTON FACILITY, 900 S. TURNBULL CANYON ROAD, CITY OF INDUSTRY, CA (FILE NO. 102.0028, SITE ID NO. 2040015)**

Dear Ms. Olmsted:

Regional Board staff has reviewed the application for coverage of remedial activities under General Waste Discharge Requirements (WDR) dated February 16, 2005, submitted by ARCADIS G&M, Inc. for the above-referenced facility on behalf of ITT Industries Inc. (copy attached). Remedial activities include the injection of carbon source to enhance the biodegradation of chlorinated volatile organic compounds (VOCs) which have impacted groundwater. Coverage under the General WDR would allow ITT Industries Inc. to proceed with the injection of a carbon source (cheese whey, corn syrup, and molasses solutions) to impacted groundwater at the facility, and secondly allow a one-time tracer test to be performed in that groundwater.

The former ITT Barton Instruments (Discharger) owned and operated the former ITT Barton site (site) located at 900 S. Turnbull Canyon Road in the City of Industry, California. The property ownership was transferred in 1998, but ITT Industries Inc. retained the on-going environmental liability. This former manufacturing plant operated from 1977 to 1998, producing scientific instruments. Operations conducted at the facility included: machining, degreasing, acid cleaning, welding of metal parts, assembly, and painting. Due to facility operations, groundwater beneath the site was impacted with chlorinated VOCs such as tetrachloroethylene (PCE), trichloroethylene (TCE), and 1,1,1-trichloroethane (1,1,1-TCA). The highest concentration of VOCs detected in groundwater are located near the former vapor degreaser, 1,100 micrograms per Liter ( $\mu\text{g/L}$ ) of PCE, 650  $\mu\text{g/L}$  of cis-1,2-dichloroethene (c-1,2-DCE), and 350  $\mu\text{g/L}$  of TCE. Concentrations detected in groundwater located near the area of former underground storage tanks (USTs) were 3,600  $\mu\text{g/L}$  of PCE, 1,100  $\mu\text{g/L}$  of 1,1,1-TCA, and 150  $\mu\text{g/L}$  of methylene chloride.

The site is located in the Puente Basin of the San Gabriel Valley. The Water Quality Control Plan for the Los Angeles Region designates the groundwater for beneficial uses including municipal and domestic supply, industrial process supply, and industrial service supply. There is a semi-confined perched aquifer beneath the site that has ranged in depth from 15 to 20 feet below ground surface (bgs). The upper 25 to 35 feet bgs of soil consists primarily of fine-grained materials (silts and clays). The perched groundwater appears to flow is to the northwest.

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On January 4, 2002, the *Groundwater Remedial Action Plan* (RAP) was submitted proposing to inject a carbohydrate solution at the site for the enhanced bio-remediation of the VOCs contaminated groundwater. This plan addresses groundwater in the vicinity of both the former waste-oil UST and former vapor degreaser. Prior to start of groundwater remediation, a soil vapor extraction system was used to clean the soil between ground surface and 13 feet bgs. Regional Water Quality Control Board staff (Mr. Dixon A. Oriola, Well Investigation Program) approved the groundwater RAP on March 14, 2002. Since June 2002, organic carbon material has been periodically injected into the groundwater. Recent concentrations detected in on-site groundwater monitoring wells indicate a significant reduction from baseline concentrations collected in May 2002. The continued remediation has been done under a site-specific WDR Permit (Order No. R4-2002-0025) which was issued on February 22, 2002, and revised on June 6, 2003 (Order No. R4-2003-0045). This site-specific permit expired on January 24, 2005. The Regional Board shall rescind this site-specific permit following the approval of the application to be under the General WDR.

Regional Board staff also reviewed a letter *Requesting Approval for a Tracer Test* dated December 6, 2004 submitted ARCADIS G&M Inc., which supplements the groundwater RAP for the site. This letter details a proposed tracer test by providing location, concentration, volume, duration, submittal of daily logs to record compounds injected and field parameters. The application for coverage under the General WDR proposes this same tracer test as a one-time injection of a 100 parts per million (ppm) concentration of green/yellow xanthene dye and a 500 ppm concentration of potassium bromide as tracer elements. The test objective is to optimize the carbohydrate solution injection program at the site and to monitor groundwater flow rates. These tracers are to be added with the carbohydrate solution injected in the area of the former vapor degreaser area.

Regional Board staff has determined that the proposed discharge, including the one time tracer test, 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,*" revised on April 19, 2005. Enclosed are copies of the WDRs, which consists of Regional Board Order No. R4-2005-0030 and the Monitoring and Reporting Program and Standard Provisions. The application events for the site shall occur at a frequency of once every two to four months. The proposed tracer test is scheduled for the last week of July, however it shall be completed before **December 30, 2005**. As of April 2005, a total volume of approximately 84,323 gallons of carbohydrate solution has been injected into groundwater at the site. This volume is less than the maximum injection volume limit for the site of 183,000 gallons. The total volume limit of carbohydrate solution per application event shall be 10,000 gallons. The maximum infiltration rate for the injection of carbohydrate solution shall be 15 gallons per minute, and the maximum concentration of carbohydrate to water shall be 20 percent. The total volume of undiluted green/yellow xanthene dye to be injected during the single event test is not to exceed 1 gallon, and the total volume of undiluted potassium bromide to be injected is not to exceed 5 gallons.

The Monitoring and Reporting Program requires you to implement the monitoring program on the effective date of this enrollment under Regional Board Order No. R4-2005-0030. With consideration to the tracer test and to the frequency and duration of prior monitoring under the site-specific WDR, the required frequency of monitoring shall be quarterly the first year and semi-annual thereafter. All monitoring reports shall be sent to the Regional Board, ATTN: Information Technology Unit. When

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submitting monitoring or technical reports to the Regional Board per these requirements, please include a reference to WIP File No. 102.0028, 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.

**If you have any questions, please call Dr. Kwang-il Lee at (213) 576-6734 or Mr. Robert Ehe at (213) 576-6740.**

Sincerely,

Jonathan S. Bishop  
Executive Officer

Enclosures:

1. Copy of Board Order No. R4-2005-0030
2. Copy of Monitoring and Reporting Program and Standard Provisions for site

cc: Mr. Robert Sams, Office of Chief Counsel, State Water Resources Control Board  
Mr. Jeffrey Friedman, ARCADIS G&M, Inc.

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