RCRA Showcase Pilot
Region 9

Pilot Proposal:	Field study to test an innovative method for in-situ treatment of solvent-contaminated groundwater.
Site:	Romic Environmental Technologies Corporation (Romic) East Palo Alto, California CAD009452657
Innovative Technology:	In-situ enhanced biological treatment via injection of a carbohydrate solution (i.e., molasses and/or cheese whey), rather than synthetic compounds, into the shallow aquifer to enhance natural biological activity and consequently reduce the concentration of chlorinated volatile organic compounds (VOCs).
Site Lead:	EPA Region 9 is the regulatory lead for remedy selection under the Resource Conservation and Recovery Act (RCRA). Two state agencies, the California Department of Toxic Substances Control and the California Regional Water Quality Control Board, each have issued state permits to the facility and provide input and consultation to EPA.
Site Background:	Romic is a 14-acre treatment/storage facility located in East Palo Alto, California which is both a racially diverse and Brownfields Showcase community. It is near the western shore of the San Francisco Bay, and borders tidal sloughs that are tributary to the Bay. Romic receives hazardous waste from industries and household hazardous waste collection programs that it either recycles for reuse on-site, or treats for off-site disposal. Most of Romic's business involves processing solvent wastes and wastewater from a variety of sources including paint, ink, recording tape, adhesive, automotive, and electronics industries. In 1988, Romic entered into an Administrative Order on Consent (AOC) with EPA that required Romic to investigate, among other things, the nature and extent of groundwater contamination. The investigation found that shallow groundwater is primarily contaminated with VOCs. Although the contaminated groundwater is not used as a source of drinking water, and off-site sampling is limited by protected wetlands, sampling done so far suggests that contaminated groundwater has migrated off-site. Romic has had a pump and treat system in place since 1993.

Pilot Description:	The field testing is being conducted to provide information on the use of the technology as a potential remedy for contaminated groundwater at the site. Two different site locations are being used for the test. At each of the two test locations, four injection wells pump a carbohydrate solution consisting of either molasses or cheese whey into the shallow aquifer. The injection wells are screened at different depths within the shallow groundwater. Up to three downgradient groundwater monitoring wells at each test area help to monitor the effectiveness of the technology.
Stakeholder Involvement:	EPA briefed the community advisory committee on and informed the city council of the City of East Palo Alto of this innovative technology and on its plans for field testing at the Romic facility. EPA will be developing additional plans for outreach and communication as field testing progress and results are evaluated.
Major Milestones:	Testing began in February 2001 and is expected to take 9 - 12 months to complete. It is anticipated that an interim progress report will be issued in the summer of 2001, with a final report between December 2001 and March 2002. If successful, the technology will be evaluated for consideration in the Corrective Measures Study (CMS) which the facility is expected to submit to EPA in 2002.
Potential Benefits:	The technology being tested is considered an environmentally- friendly method due to its use of food-grade compounds for remediating groundwater contaminated with chlorinated VOCs. Injecting carbohydrates, such as molasses and cheese whey, is expected to be less expensive than injecting synthetic compounds such as those used in other in-situ bioremediation technologies. The cost of molasses and cheese whey is typically low, and in the case of the Romic test, a local dairy will provide cheese whey free of charge. If successful at the Site, the technology combined with other activities could facilitate meeting the FY05 Environmental Indicator goal for control of contaminated groundwater. At a minimum, the Region anticipates that field testing will provide useful information on the technology that could be relevant to other sites in addition to the Romic facility.
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