A decade after the Navy sailed out of Long Beach, the cleanup of its former facilities continues. Those involved in the process include, from left to right: Liz Barr, Navy remedial project manager; Sue Hakim, remedial project manager and environmental scientist; John Essington, co-chair of the Long Beach Naval Complex Restoration Advisory Board (RAB); Dr. Joseph K. Petway, RAB member; Darwin Thorpe, RAB member; Howard Hargrove, RAB member; Jennifer Valenzia, Navy Base Closure and Realignment Commission Environmental Coordinator and RAB co-chair; and Sharon Ohannessian, Navy remedial project manager. (Photograph by the Business Journal's Thomas McConville)

# Decade After Navy Sailed Out Of Town, Its Cleanup Crew Remains

■ By **Chad Greene,** Staff Writer
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A decade after the closure of the last remaining U.S. Navy facility in Long Beach was announced, the number of those actively involved in its cleanup still number in the billions – of microbes, that is.

Installation Restoration (IR) Site 14, a parcel south of Ocean Boulevard on the former grounds of the Long Beach Naval Complex (LBNC), was the site of a dry cleaning facility from 1955 to 1969. Nowadays, the only cleaning taking place at IR Site 14 is microbial in nature, as naturally occurring microscopic organisms break down the last traces of the commonly used dry-cleaning solvent perchloroethylene remaining in the soil. Over time, the microbes metabolize perchloroethylene into a series of decreasingly complex chlorinated hydrocarbons – first trichloroethylene, then dichloroethylene, then vinyl chloride – before ultimately mineralizing it as carbon dioxide.

To accelerate that process, technicians from Geofon Incorporated injected 2,400 pounds of Hydrogen Release Compound (HRC) into the groundwater under the site last month to increase microbial activity. During an April 27 meeting of the LBNC Restoration Advisory Board, Geofon representatives reported that, as of March, there had already been a 63 percent reduction of the total amount of chlorinated compounds at IR Site 14. Since cleanup on the 16 remaining IR sites is nearly complete, the discussion of the situation at Site 14 took up the lion's share of the meeting.

The Defense Base Closure and Realignment Commission (BRAC) recommended the closure of the Long Beach Naval Station in 1991 and the Long Beach Naval Shipyard in 1995. For decades, Long Beach thought of itself as a Navy town, but in the past decade the city has reinvented itself as a hub of international trade. The Port of Long Beach converted much of the former naval complex into a marine container terminal, and the volume of cargo passing through the port has reached record levels in recent years.

Because most of the LBNC is being rehabilitated for industrial use, the cleanup process has been easier than it might otherwise have been, BRAC Environmental Coordinator Jennifer Valenzia told the Business Journal. She estimated that efforts are about 95 percent complete, although groundwater monitoring at some of the sites may continue for as long as 30 years.

According to Valenzia, slightly less than $42.1 million was spent on the rehabilitation of the 928-acre Naval Station through Fiscal Year 2004, and future expenditures will likely bring the total cost closer to $47.9 million. Over the same period, about $14.2 million was spent on the 570-acre Naval Shipyard, with the final price tag on that project estimated to reach about $15.5 million.

"I think, by and large, that was money well spent," said Darwin Thorpe, a former Compton College professor who's been a member of the Restoration Advisory Board since 1998. In the future, however, Thorpe would like to see the expenditures broken down even further so boardmembers could gauge their cost-effectiveness in terms of the results achieved.

In the meantime, the cleanup goes on. Valenzia estimates that in 2005 and 2006 about $872,000 in contracts will be awarded for the ongoing rehabilitation of the station and $911,000 on the shipyard. ■