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## Major RAP Findings

Potential environmental concerns in Area D1 have been evaluated and investigated under several basewide environmental programs implemented by the Navy, and through subsequent work by CH2M HILL and LMI. The environmental programs were executed over a period of many years, with oversight by DTSC, the United States Environmental Protection Agency, and the Regional Water Quality Control Board (RWQCB) San Francisco Bay Region. The following sections briefly describe the nature of the past cleanup programs in Area D1 and the findings that are a result of those activities.

### Installation Restoration Site 23

This site includes a former (partially-buried) fuel storage tank and associated subsurface piping. About 25 years ago, petroleum hydrocarbons had leaked from a hairline fracture in the tank. The tank was eventually demolished and removed by the Navy but the tank bottom remained in place. There was still concern that the soil beneath the former tank bottom could be contaminated, so the tank bottom and soil beneath it were removed from the site. Subsequent sampling showed the site has been successfully cleaned up. There are no remaining negative, or harmful impacts to soil or groundwater at this site that would preclude its planned reuse.

### Installation Restoration Site 14

This site includes the industrial wastewater collection and treatment system consisting of underground piping and pump stations, designed to transport industrial wastewater to a treatment facility. Studies revealed that there were no contaminants impacting the soil or groundwater around this site in Area D1. The only action required at IR14 is an inspection of the pipeline to ensure that no waste remains in place.

### Lead in Soil from Lead-based Paint

Lead-based paint in soil is a common environmental issue associated with older buildings. Previous surveys



**Workers wearing protective gear during ABM and utility removal, Farragut Village**

have verified the presence of lead-based paint on many building surfaces and the presence of lead in soil adjacent to structures painted with lead-based paint. Lead-based paint was removed around a number of buildings associated with building deconstruction in Area D1 in 2003. Additional characterization, and remediation where appropriate, is proposed for the remaining structures older than 1978 (use of lead-based paint was banned after 1978), with painted surfaces and unpaved surrounding areas in Area D1.

### Pesticides in Soil

Historically, pesticides and herbicides may have been used around residential and commercial areas of Area D1. Soil samples taken at the former Coral Sea Village were collected in June 2003 during building deconstruction. Pesticide-impacted soils were subsequently removed and no further action is necessary to ensure protection of human health and the environment.

### Abrasive Blast Material

Abrasive sand blast material, a waste product of ship sandblasting which contains high levels of heavy metals and other contaminants, was found in some utility pipe bedding and under former buildings during deconstruction. When found in utility excavations, and at the former Farragut and Coral Sea Villages during deconstruction, it was excavated and properly disposed of off site. Because the abrasive blast material has been removed, no further action is required.

### Underground Storage Tanks

Underground storage tanks at Mare Island were used primarily for oil-fired, steam-driven machinery and to store heating oil for steam-heat boilers. Thirty-four underground storage tanks within Area D1 have been identified and investigated as part of the Underground Storage Tank Program. Twenty-eight underground storage tank sites in Area D1 have been investigated and/or cleaned up and require no further action. Six underground storage tank sites are being cleaned up under the authority of RWQCB.

### Fuel Oil Pipeline

The Fuel Oil Pipeline distribution system was used to transport fuel oil across the Naval facility. Thirty-nine fuel oil pipeline segments (totaling approximately 15,400 feet) were identified and investigated within Area D1. Twenty-six segments present no significant risk to human health or the environment. Remedial actions are being performed at 13 of the fuel oil pipeline segments in Area D1 under the authority of the RWQCB.

### Polychlorinated Biphenyls (PCBs)

The Navy previously identified, retrofitted, and removed PCB-contaminated equipment, assessed locations of potential



releases of PCBs, and performed abatement activities as necessary. There are a total of 81 PCB sites within Area D1. Fifty-two of the PCB sites in Area D1 have not required a cleanup action, based on the results of previous investigations. Cleanup actions were either previously conducted or are in progress at the remaining 29 PCB sites; 10 sites will require no further cleanup or restrictions on their use; 19 of these sites will require additional cleanup action and/or a land-use covenant to specify the ways in which the areas may be used in the future.

### Additional Findings

Additional environmental programs previously identified potential environmental concerns within Area D1. These include the unexploded ordnance, radioactive materials, and the basewide groundwater monitoring programs. As a result of these programs, the RAP presents the following additional findings:

- No ordnance concerns exist within Area D1.
- Areas of past radiological material use and storage in Area D1 are not of environmental concern and no

further action is required at these sites.

- Area D1 has 14 groundwater monitoring wells installed to date. They provide site characterization data around existing sites of environmental concern. Based on these groundwater monitoring results, there are no additional sites of environmental concern.

### Proposed Remedial Action

The majority of the sites and environmental issues in D1 have been resolved such that no further action is required for unrestricted (residential) use. The sites in Area D1 that require further action include those that are affected by lead in soil from lead-based paint, PCB sites, and IR14. Where additional actions are required, they may include:

- **IR14** – Video inspection of pipeline and flushing if necessary
- **PCBs** – Land-use restrictions; encapsulation of concrete with land-use restrictions; indoor air evaluations; and/or removal of PCB-affected materials
- **Lead-based paint** – Removal of soil which contains unacceptable levels of lead; protective barriers; and/or land-use restrictions

The alternatives for environmental cleanup of lead-based paint around existing structures in Area D1 vary from building to building. Alternatives may include protective barriers, soil removal, or covenants. Protective barriers may include placing bark, mulch or gravel over the areas to prohibit exposure of the public to bare soils where it is impractical to remove the soil. Land-use covenants (land use restrictions) would prohibit future residential use of some sites in Area D1. Remedies are also proposed to cleanup the remaining PCB sites in Area D1. Encapsulation of the specific area may be used to eliminate the exposure pathway, concrete or soil may be removed, or land-use covenants could prohibit future residential use of specific sites. A video inspection of the IR14 pipeline will reveal if any industrial waste remains in the pipeline. If residual waste is observed, the pipeline will be flushed clean. It is anticipated these remedies will be implemented during Summer 2004 and subsequently documented and submitted to DTSC for review and approval. Upon DTSC concurrence, certification of Area D1 will be issued.

### RAP Conclusions

The majority of the environmental concerns arising from sources or potential sources of contamination within Area D1 have either been investigated and shown not be of environmental concern or have been successfully cleaned up. The only remaining remedial actions consist of removal of lead in the soil, inspection of the IR14 pipeline, and remediation of PCB sites.

**Public Meeting in April**

DTSC and LMI will hold a public meeting to explain this project to interested community members, answer questions and receive public comments. The public meeting will be held as part of the regularly scheduled Restoration Advisory Board Meeting (RAB) for Mare Island.

**Date:** April 29, 2004  
**Time:** 7:00 p.m.  
**JFK Library, Joseph Room**  
**505 Santa Clara Street**  
**Vallejo, California**

To receive further information regarding the RAB, or to be added to the mailing list, please contact:

**Jerry Dunaway, Navy Co-Chair,**  
**BRAC Environmental Coordinator**  
[jerry.dunaway@navy.mil](mailto:jerry.dunaway@navy.mil)

**phone: 619/532-0975**  
**707/562-3104**

**Myrna Hayes,**  
**RAB Community Co-Chair**  
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**phone: 707/557-9816**

Visit the Mare Island RAB on the Web at:

[www.efds.w.navy.mil/environmental/mareisland.htm](http://www.efds.w.navy.mil/environmental/mareisland.htm)

*For questions about the public participation process, contact Michelle Trotter, DTSC, Public Participation Specialist, at 916/255-6441*



**WHAT'S INSIDE:**  
 \* Remedial Action Plan Findings  
 \* Future Remedies  
 \* Public Participation  
 \* Restoration Advisory Board

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# Remedial Action Plan For Investigation Area D1

## Introduction

Lennar Mare Island, LLC (LMI) and the California Department of Toxic Substances Control (DTSC) are distributing this fact sheet to inform the community about the Remedial Action Plan (RAP) for Investigation Area D1 at the former Mare Island Naval Shipyard. In addition, this fact sheet provides information on the public review and comment period and public meeting associated with the RAP.

In 2002, the Navy transferred approximately 650 acres of Mare Island to the City of Vallejo and then to LMI, for redevelopment. The parcel, known as the Eastern Early Transfer Parcel is divided into eight environmental cleanup areas; as those areas are cleaned up, they can be reused. The transfer is called an "early transfer" because it occurred prior to completion of environmental cleanup of sites within the transferred property. LMI is working with CH2M HILL, an environmental engineering firm, to complete the environmental cleanup necessary for continued safe development of residential, educational, commercial/ industrial, and recreational land uses of Mare Island.

The area referred to as D1 is located in the central and southern areas of Mare Island in the Eastern Early Transfer Parcel (see page 3). It is composed of approximately 231 acres and is one of the largest investigation areas on Mare Island. Approximately 200 structures, including residential houses and garages, administrative offices, Touro University buildings, and a community center exist in Area D1. In addition, three recreational areas, Farragut Plaza, Chapel Park and Alden Park, are located near the eastern boundaries.

## What is a Remedial Action Plan (RAP)?

The purpose of a RAP is to present the selected remedial action for a site with a previous hazardous substance release. *(continued next page)*



**Underground Storage Tank Removal at IR23**

## Where Can I Read the RAP for Area D1?

DTSC and LMI invite the public to review and comment on the RAP during the 30-day **public comment period** being held from **April 22 through May 21, 2004**. In addition, DTSC has prepared an Initial Study to evaluate environmental impacts from the proposed actions in Area D1. DTSC concluded that the project will not have a significant impact on the environment and intends to issue a California Environmental Quality Act Negative Declaration. The RAP and the Negative Declaration are available for review and copying at the JFK Library, 505 Santa Clara Street, in Vallejo. All public comments will be considered and responded to in making the final decision for this site. **Written comments must be postmarked by May 21, 2004** to be incorporated into the final document. The public is invited to provide written comments directly to the contacts listed below:

### DTSC, Remedial Project Manager

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Cal-EPA, DTSC

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### CH2M HILL, Technical Project Manager

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## The RAP:

- ✓ Provides a description of the site,
- ✓ Provides a brief summary of previous environmental investigation findings,
- ✓ Identifies and explains the preferred alternative(s) to cleanup Area D1,
- ✓ Describes other remedial alternatives that may have been considered, and
- ✓ Provides a description of the specific objectives of the cleanup.