

# Installation Restoration Program Fact Sheet

## Statutory Five-Year Review for: Installation Restoration Site 2 (IR02) at Fleet and Industrial Supply Center Oakland, Alameda Facility / Alameda Annex; and Marsh Crust at Fleet and Industrial Supply Center Oakland, Alameda Facility / Alameda Annex, and Marsh Crust and Former Subtidal Area at Alameda Point



### Introduction

April 2006

The Department of the Navy has completed a first five-year review of environmental actions ("remedies") for two Alameda areas: IR02 at Fleet and Industrial Supply Center Oakland Alameda Facility/ Alameda Annex; and the Marsh Crust at Alameda Facility/ Alameda Annex and Former Subtidal Area, Alameda Point (the former NAS Alameda).

This fact sheet tells you about the first five-year review process, why it was done, and presents the results of the review. The first five-year review for the sites at Alameda Facility/Alameda Annex and Alameda Point evaluated the implementation and performance of the remedies put in place to determine if they are protective of human health and the environment.

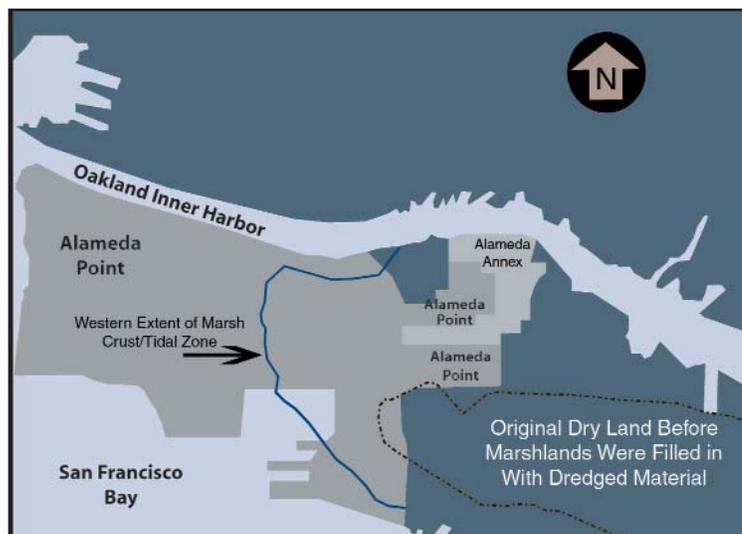


*The first five-year review concluded that the remedies put in place at IR02 and the Marsh Crust and Former Subtidal Area continue to adequately protect human health and the environment. You can read the first five-year review report for IR02 and the Marsh Crust and Former Subtidal Area at the information repositories listed on the last page.*

### Environmental History

Until the 1920's, Alameda Facility/Alameda Annex, Alameda Point, and the surrounding area existed as undeveloped marshland and tidal flats along the fringe of San Francisco Bay. Before 1930, an oil refinery and a borax-processing plant were located on the western tip of Alameda Island. Other industries existed on the northern side of Oakland Inner Harbor, including two manufactured gas plants.

These industries are believed to have stored and used hazardous materials and generated hazardous wastes during their daily operations and manufacturing processes. In particular, hydrocarbon by-products and sludges laden with polynuclear aromatic hydrocarbons (PAHs) may have been discharged into the Bay or Harbor. These substances would have floated on the water and have been deposited along the sides of the tidal channels and marsh surface.



Surface and near-surface soils at the former Alameda naval facilities consist of materials dredged from the tidal flats in the area and placed as fill from 10 to 20 feet below ground surface. A several-inch-thick marshy layer of organic-rich peat and grass called "marsh crust" is found at depths from 4 to 18 feet below ground surface.

The Navy conducted military activities at NAS Alameda beginning in the 1930's (now called Alameda Point) and the 1940's (Alameda Facility/ Alameda Annex). In 1998 Alameda Point and Alameda Facility/Alameda Annex were closed under the Base Realignment and Closure Act and the Navy began preparing for property cleanup and transfer to the City of Alameda.

# What is a “Five-Year Review”?

The 1980 Comprehensive Environmental Response, Compensation, and Liability Act "CERCLA" is commonly referred to as "Superfund." CERCLA was amended in 1986 by "SARA", the Superfund Amendments and Reauthorization Act, to include Department of Defense facilities. SARA also requires a periodic review of cleanup remedies that leave any contaminants in place on a site at levels greater than those allowed for unlimited property use, including residential, and unrestricted site access/exposure. This periodic review, referred to as a "statutory five-year review", begins five years after the start of the first response action and continues until no hazardous substances, pollutants, or contaminants remain on site above levels that allow for unlimited property use and unrestricted site access/exposure.

In addition to CERCLA and SARA, the Navy issued a policy in 2001, updated in 2004, addressing five-year reviews on Navy and Marine Corps facilities. The five-year review conducted for the Alameda sites follows CERCLA and SARA, the Department of Navy policy, and United States Environmental Protection Agency guidance.

## How is a Five-Year Review Done?

There are four steps in a five-year review:

**Document Review.** Key documents are gathered and analyzed, including reports identifying site history, contaminants of concern, potential health risks, remedies evaluated to reduce potential risk to acceptable levels, the chosen remedial action, how it is being carried out, legal requirements influencing the action, impacts of the remedy on human health and the environment, and community concerns.

**Site Inspection.** The sites are inspected and the condition of each site and its surrounding area are observed and documented. Controls put in place as part of the remedies, such as fencing, signs, and soil covers are checked to determine their presence and integrity.

**Site Interviews.** Interviews with site managers, site personnel, Restoration Advisory Board members, and other community members help identify problems or concerns with the remedies that need to be addressed.

**Protectiveness Statement.** Information gathered during the first three steps help answer the following:

- Is the remedy that was put in place functioning as intended?
- Are the exposure assumptions, cleanup levels, data, and remedial action objectives on which the remedy was based still valid?
- Is there any new information available that would call into question the effectiveness of the remedy?
- **Basically, is the remedy doing what it was designed to do, which is to protect human health and the environment?**

The five-year review does not reconsider the remedies evaluated earlier. Rather, it looks at the remedy's performance since it was put in place and recommends improvements if the remedy is not performing as designed.

## What remedy was selected and implemented for IR02?

Here, shallow soils were found to be contaminated with unacceptable levels of the metal cadmium and polychlorinated biphenyls (PCBs). Because the property post-transfer was planned for residential (western one-third) and industrial/commercial uses (eastern two-thirds), the soil remedy had to meet the needs of the proposed re-use.

The Navy concluded that the cadmium and PCBs in the surface soil could pose an unacceptable risk to human health and the environment. Therefore, the Navy, California regulatory agencies, and Restoration Advisory Board (community) members agreed that excavation of the contaminated soil, removal, and off-site disposal at a permitted facility was the best remedy for IR02. The Alameda Facility/Alameda Annex property transfer to the City of Alameda was completed in 2000. The remedy was implemented in 2001. In addition, land-use controls were put in place prohibiting residential use of the planned industrial portion of IR02.



*Looking east - This view shows the industrial-use portion of IR02.*

*Looking west - This view shows the residential-use portion of IR02, with existing houses on the adjacent property.*



## What remedy was selected and implemented for Marsh Crust and Former Subtidal Areas?

These areas were found to contain concentrations of PAHs and semi-volatile organic compounds, which are common components of petroleum hydrocarbons and often present in refinery by-products and sludges. Human-health-risk studies concluded that a pathway allowing contaminants to reach humans could exist for workers exposed to the marsh crust and former subtidal area during construction of building foundations and utility work at depths of 4 to 18 feet below ground surface. Further, if the contaminated layer were ever brought to the surface or disposed of in an uncontrolled manner, workers or residents could be exposed to the marsh crust, posing an unacceptable health risk.

*Alameda Point -  
looking west over  
the runway with San  
Francisco in back-  
ground.*



Since property lease and transfer to the City of Alameda in 2000, land use is continuing the former mixture of commercial, industrial, recreational, and residential land uses. The Navy and regulatory agencies agreed that the remedy would have to prevent potential future uncontrolled excavation and placement of marsh crust and former subtidal-area soils at the surface, where they could pose an unacceptable risk to human health. Therefore, land use controls in the form of environmental restrictions in the deed for property transfer (Alameda Annex) and the lease in furtherance of conveyance (Alameda Point) to the City of Alameda, property use restrictions, and a Marsh Crust Ordinance (City of Alameda Ordinance No. 2824) were implemented in 2001 to protect human health and the environment.

### ***Did You Know...?***

You can read more about the Navy's environmental programs on the internet!

The Navy's web site for ***Alameda Annex*** is:

[http://www.navybracpmo.org/bracbases/california/fisc\\_alameda/default.aspx](http://www.navybracpmo.org/bracbases/california/fisc_alameda/default.aspx)

The Navy's web site for ***Alameda Point*** is:

[http://www.navybracpmo.org/bracbases/california/nas\\_alameda/default.aspx](http://www.navybracpmo.org/bracbases/california/nas_alameda/default.aspx)

## Are the remedies working and effective?

The overall effectiveness of the selected remedies is presented in a "Protectiveness Statement" in the five-year review. A technical assessment is conducted and the Protectiveness Statement is developed based on the results of that assessment.

Technical Assessment	IR02 Shallow Soils	Marsh Crust & Former Subtidal Area
Is the remedy that was put in place functioning as intended?	YES	YES
Are the exposure assumptions, clean-up levels, data, and remedial action objectives on which the remedy was based still valid?	YES	YES
Is there any new information available that would call into question the effectiveness of the remedy?	NO	NO
Conclusion/Protectiveness Statement	The shallow soil remedy currently provides the protectiveness of human health and the environment intended by the decision document.	The land use controls remedy currently provides the protectiveness of human health and the environment intended by the decision document.

## What's next ?

The results of the five-year reviews indicate that:

- For the western one-third of IR02 (the residential-use portion), further five-year reviews for the PCB- and cadmium-impacted shallow soils is not warranted and no further documentation is needed.
- For the eastern two-thirds of IR02 (the industrial-use portion), another five-year review is warranted, as well as Land Use Control Remedial Design (LUC RD).
- For the marsh crust and former subtidal area, another five-year review is warranted, as well as LUC RD.

### What is "Land Use Control Remedial Design"?

LUC RD specifies methods for implementing and enforcing land use restrictions, and for periodically inspecting and certifying compliance with land use controls. LUC RD also spells out procedures for notifying the Navy and other oversight agencies in case land use restrictions are not complied with. The Navy intends to prepare the LUC RD for IR02 and for the marsh crust and former subtidal area in fiscal year 2006.

**Inside: Information on the Navy's  
First Five-Year Review of Two  
Sites on Alameda Point and  
Alameda Facility/Alameda Annex**

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## Information Repositories

The Navy maintains two information repositories for Alameda Point and Alameda Facility/Alameda Annex. The repositories contain project documents and other reference materials related to the Navy's IR Program. The repositories are updated as new information becomes available.

### **ALAMEDA POINT**

950 West Mall Square  
2nd Floor, Rooms 240-241  
Alameda Point, CA  
(415) 743-4713

#### **Hours**

Monday - Friday  
8:30 a.m. - 5:00 p.m.

### **ALAMEDA LIBRARY**

2200 A Central Avenue  
Alameda, CA  
(510) 747-7777

#### **Hours**

Mon/Wed 9:30 a.m. - 9:00 p.m.  
Tues/Thurs/Fri/Sat 9:30 a.m. - 5:30 p.m.  
Sun 1:00 p.m. - 5:00 p.m.

## For More Information

The Navy welcomes your input. If you have questions or concerns, or would like more information, please contact:

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