



Proposed Plan for Installation Restoration Site 15, a Former Transformer Storage Area



September 2005

Alameda Point, Alameda, California

The Navy Proposes No Further Action at Installation Restoration Site 15

The U.S. Navy invites you to comment on its recommendation for no further action for Site 15, a former transformer storage area, at the former Naval Air Station (NAS) Alameda (Alameda Point), in Alameda, California. The public comment period runs from September 28th 2005 to October 28th 2005, and no final decision will be made until all comments are considered.

This Proposed Plan summarizes the U.S. Navy's recommendation for no further action and provides an overview of the environmental investigation results for the site. Under federal cleanup regulations, when a site has only low levels of contamination that do not pose a significant risk for its current or proposed future use, it is not necessary to develop and analyze multiple cleanup options. Therefore, this document provides only the proposed no further action recommendation and a summary of the data from the investigations that supports the preferred action.

Soil samples from Site 15 show that, after an earlier removal of **polychlorinated biphenyl (PCB)*** and lead-contaminated soil, the remaining soil does not pose a human health or ecological risk that would require further cleanup actions. Therefore, the Navy, together with

U.S. Environmental Protection Agency (EPA), California Department of Toxic Substances Control (DTSC), and California Regional Water Quality Control Board (Water Board) agree that no further action under **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** and **Resource Conservation and Recovery Act (RCRA)** is required at Site 15.

This recommendation is based on extensive field investigations, laboratory analyses, evaluation of current and future reuses, and a thorough assessment of potential impacts to human health and ecological receptors. Based on the NAS Alameda community reuse plan dated January 1996 and the 2001 amendment, reuse of Site 15 is expected to involve recreational or light industrial activities.

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OPPORTUNITIES FOR PUBLIC INVOLVEMENT

Public Meeting – Wednesday, October 19th 2005, 6:30 p.m.
Location: 950 West Mall Square, Building 1, Room 201

You are invited to this public meeting to discuss, question and comment on the information presented in this Proposed Plan for no further action at Site 15. Ask any questions that you may have and provide formal comments.

30-Day Public Comment Period – September 28th 2005 through October 28th 2005

We encourage you to comment on this Proposed Plan during the 30-day public comment period. You may submit comments orally or in writing at the public meeting on October 19th 2005 or by mail (please see details on page 8). The Navy will respond to all comments after the comment period in a document called a Responsiveness Summary.

*Items in bold are defined in the glossary on page 7

The CERCLA Process

The Navy's comprehensive environmental investigation and cleanup program (**Installation Restoration Program [IRP]**) identifies, investigates, and remediates chemical contamination that resulted from past activities (see flow chart below). It complies with **CERCLA**, the California Hazardous Substances Account Act, and all other federal and state laws that govern environmental cleanups.

Installation Restoration Program at Site 15

Preliminary Assessment and Site Inspection	RI/FS and EBS Investigations	Removal Action	Proposed Plan/ Public Comment Period	ROD
COMPLETE				TO BE DONE 
Potential contamination was initially assessed in 1982.	Between 1991 and 2005, sources of contamination were identified and potential risk was estimated. Because incremental risk is low further remedial action and an FS are not necessary.	Excavation of soil containing PCBs and lead was completed in 1998.	The public has the opportunity to comment on the Navy's recommendation for no further action.	The final decisions for the CERCLA site and responses to public comments are documented in the final ROD.

History of Alameda Point

Alameda Point covers about 2,675 acres on the western end of Alameda Island. Much of the land was once covered by the waters and tidal flats of the San Francisco Bay. Alameda Point was created by filling tidelands, marshlands, and sloughs with material dredged from the San Francisco Bay. The first documented filling began sometime during the 1890s. In 1936, the Navy acquired title to the land from the U.S. Army and began building the installation in response to the military buildup before World War II. Following the end of the war, the installation returned to its original primary mission of providing facilities and support for fleet aviation activities. During its history, former NAS Alameda housed approximately 60 military tenant commands for a combined military and civilian work force of over 18,000 personnel.

The installation was identified for closure under the federal **Base Realignment and Closure (BRAC) Program** in September 1993. In April 1997, the installation ceased operations.

The **BRAC Cleanup Team (BCT)**, comprising the Navy, EPA, DTSC, and Water Board was established when former NAS Alameda was designated for closure. The primary goals of the BCT are to protect human health and the environment, expedite the environmental cleanup, and coordinate the environmental investigations and cleanup actions at the base. In addition to the BCT, a **Restoration Advisory Board (RAB)** provides community involvement in the cleanup program.

Site Description

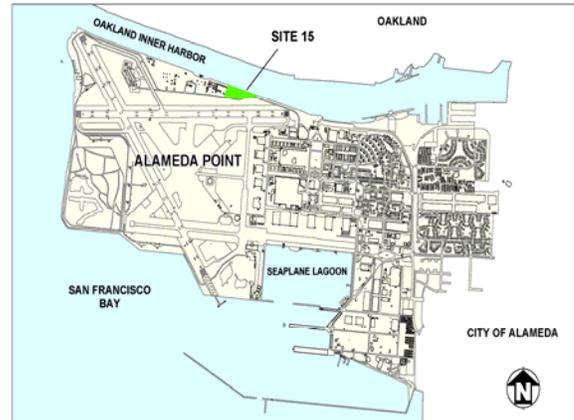
As a management tool, the BCT grouped sites with similar characteristics into operable units (OU). Site 15 is a portion of OU-1. It occupies a relatively small area and has relatively low levels of contamination related to storage of PCB-containing transformers; historical use of petroleum, oil, and lubricants; lead-based paint from buildings; and **polynuclear aromatic hydrocarbons (PAH)** possibly associated with fill material used to create the installation.

Site 15 is located in the northwestern portion of Alameda Point, north of Runway 7-25 and Perimeter Road, and adjacent to the Oakland Inner Harbor (see Figure 1). Site 15 consists of about six unpaved acres. Approximately 1 acre of wetlands occupies the northern edge of the site, which is a narrow 20-foot wide section between the Site 15 fence and the shore. Prior to construction of the air station, a railroad known as the Alameda Mole traversed through the site and terminated at a ferry building. Following construction of the naval air station, Site 15 was used as a storage area. Building 27, the only building remaining on the site, served as a sewer lift station and maintenance shop. Materials stored in Building 27 included petroleum products and disinfectants. Former Quonset huts (prefabricated portable huts made of corrugated metal) were used to store electrical equipment, oil-filled transformers, and unused machinery. Transformers also were stored on the bare ground in the areas around the buildings. PCB-containing oil often was drained from the transformers and sprayed on the ground nearby for weed control. The stored transformers also were known to occasionally leak PCB-containing oil.

Overview of Remedial Investigation Results

A final **remedial investigation (RI)** report for Sites 14 and 15 was issued in June 2003. The RI report documents the results of the environmental

Figure 1:
Location of Site 15



investigations, characterizes site conditions, determines the nature of contamination, and assesses risk to human health and the environment at Sites 14 and 15. An overview of the environmental investigations, extent of contamination, and risk assessment results for Site 15 is presented below. Site 14 will be addressed in another proposed plan.

Environmental Investigations

Environmental investigations for soil and groundwater and interim cleanup actions have been underway at former NAS Alameda since the mid-1980s. The IRP investigations and cleanup actions at Site 15 were conducted under the RI and Environmental Baseline Survey (EBS) and included:

- Phases 2B and 3 RI investigations in 1991;
- A follow-on investigation in 1994;
- A removal action for lead and PCBs in soil, completed in 1998;
- A wetland delineation and data gap sampling in 2001;
- PAH investigation in 2005;
- Phase I EBS investigation in 1994;
- Phases 2A and 2B EBS investigation in 2001; and
- EBS storm sewer investigation in 2001.

Extent of Contamination

Elevated concentrations of the PCB Aroclor-1260 and lead were identified in soil across Site 15, and a removal action was conducted in 1994 and continued through 1998. As a part of the removal action, 6,600 cubic yards of soil was removed and the area was backfilled with clean soil.

Confirmation samples collected after the excavation of soil showed that remaining soil contains less than 1 milligram per kilogram (mg/kg) of PCBs and less than 130 mg/kg of lead. Thus, the clean-up objectives agreed to by the BCT were met.

In addition to PCBs, PAHs were identified in soil. Based on a PAH investigation conducted in 2005, PAH concentrations in soil, expressed as benzo(a)pyrene [BaP] equivalents, are below 1.0 mg/kg, with the average concentration below the screening level of 0.62 mg/kg. PAHs are possibly associated with the fill material from the San Francisco Bay used to create the installation or a railroad that was present before the site became a naval air station.

Site-Specific Risk Assessment

“Risk” is the likelihood or probability that a hazardous chemical, when released to the environment, will cause adverse effects on exposed humans or the environment. As part of the RI, a **human health risk assessment (HHRA)** and an **ecological risk assessment (ERA)** were conducted. Results of the risk assessments indicated that soil and groundwater at Site 15 do not pose a threat warranting further cleanup actions.

Human Health Risk Assessment

The Navy considered all possible ways that people could be exposed to the chemicals, the possible concentrations of chemicals that potentially could be encountered in those exposures, as well as potential frequency and duration of each type of exposure. To support possible future land uses, four exposure scenarios were evaluated: residential, recreational, occupational, and construction workers. The residential scenario, which is the most conservative, assumed a potential resident would be exposed daily for 30 years to chemicals in soil and groundwater at the site. Although groundwater at Site 15 is not planned for residential use, it was assumed that a resident would use groundwater for domestic purposes such as drinking and bathing to provide a conservative estimate of risk. Based on the community reuse plan, the long-term reuse of the site is expected to be recreational or light industrial, possibly as a golf course.

Noncancer health hazards and cancer risks are characterized separately. Risk calculations were based on conservative assumptions that must protect human health. “Conservative” means the assumption will tend to overestimate risk which means that the cleanup levels will be more protective.

Federally established risk management ranges assist with the characterization of risks, are protective of human health, and help risk managers determine whether site risks are significant enough to warrant further cleanup actions.

For more information on the closure of Alameda Point and the environmental investigations and cleanup actions, check out the Navy Base Realignment and Closure Program Management Office website at:

<http://www.navybracpmo.org>

When risk is below 1 additional cancer case in a population of 1,000,000 (written as 10^{-6}), action is generally not warranted by EPA. When risk is within the risk management range of between 1 additional cancer case in a population of 1,000,000 (written as 10^{-6}) and 1 additional cancer case in a population of 10,000 (written as 10^{-4}) site-specific factors are considered when making decisions about whether action is required. A hazard index (HI) of 1 or less is set as protective of noncancer health hazards.

The risk assessment results are presented in Table 1 below. Total cancer risks to recreational, occupational, and construction workers at Site 15 are below a cancer risk of 10^{-6} and the noncancer HIs are less than 1. Total cancer risk to a resident at Site 15 is within the risk management range, and the noncancer HI is above 1.

Total risk includes risk from background metals (aluminum, arsenic, and manganese in soil and arsenic, barium, manganese in groundwater) and

fill events (PAHs in soil). Background is defined as naturally occurring metals in soil and groundwater. Aluminum, arsenic, barium, and manganese are naturally occurring at the site (not related to site activities) and are at concentrations similar to the rest of the installation. Background risk is defined as the risk from these metals. In addition, groundwater concentrations for arsenic and barium are below maximum contaminant levels (MCL), and manganese does not have an MCL.

Incremental risk is then defined as the total site risk minus the risk from background metals. The incremental cancer risk from installation activities to a resident at Site 15 is below the risk management range of 10^{-6} and the noncancer HI is below 1 (see Table 1 below). Incremental risk is attributed to PAHs (BaP and dibenzo[a,h]anthracene) in soil.

Based on the low levels of incremental contamination no remedial action for soil or groundwater is necessary at Site 15 to protect human health.

Table 1: Site 15 Risk Calculations

Exposure Scenarios		Cancer	Noncancer
Soil (0 to 10 Feet bgs) and Groundwater			
Residential	Total, including background	1×10^{-4}	2
	Background	1×10^{-4}	2
	Incremental	Less than 10^{-6}	Less than 1
Construction Worker	Total, including background	3×10^{-7}	0.2

Total Site 15 risk from background metals and fill events (PAHs in soil)
 Background Risk from naturally occurring metals (aluminum, arsenic, barium, and manganese) in soil and groundwater at Alameda Point
 Incremental Total site risk minus the risk from background metals at Alameda Point

An ERA was conducted to evaluate whether contamination from past activities at Site 15 could pose unacceptable risks to the plants and animals at former NAS Alameda. Exposure pathways evaluated in the ERA include direct contact with soil and exposure through the food chain (California ground squirrel, Alameda song sparrow, red-tailed hawk, and marine receptors). Other than the wetland located immediately adjacent to the Oakland Inner Harbor (see Figure 1 on page 3), Site 15 supports only limited habitat and the future land uses would not create additional ecological habitat. The wetland at Site 15 occupies a small strip of land (less than 30 feet wide), is adjacent to the riprap that defines the Oakland Inner Harbor channel, and is tidally inundated. The ERA, performed in conjunction with ecological experts from EPA, DTSC, Water Board, and U.S. Fish and Wildlife Service, concluded that the site poses little or no risk to ecological receptors, including the wetland, and no further action is required.

Public Comments

The comments that are received on this Proposed Plan during the 30-day public comment period (September 28, 2005 through October 28, 2005) will be considered in the final environmental determination for Site 15. During the public comment period, the public is invited to submit comments by mail or at the public meeting. **Written comments must be postmarked no later than October 28th, 2005 and mailed to:**

**Thomas Macchiarella
BRAC Environmental Coordinator
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, California 92108-4310**

The **record of decision (ROD)** will formally document the final decision for Site 15, and copies of the ROD will be placed in the two Information Repositories for Alameda Point. See this page for Information Repository locations.

A responsiveness summary that is included in the ROD will contain responses to comments provided by the public at the public meeting and during the public comment period.

Multi-Agency Environmental Team Concurs with No Further Action Proposals

The BCT, which is comprised by the Navy, EPA, DTSC, and the Water Board was established when former NAS Alameda was designated for closure. The primary goals of the BCT are to protect human health and the environment, to expedite the environmental cleanup, and to coordinate the environmental investigations and cleanup at the former installation.

The team also serves as the primary forum for assessing cleanup priorities and progress. The BCT obtains a consensus on issues regarding the former installation's environmental activities and makes a concerted effort to integrate reuse into the cleanup decisions.

Based on RI investigations conducted in 1991 and 1994, a soil removal action was conducted at Site 15. After the removal action was completed in 1998, a wetland delineation and data gap sampling were conducted in 2001. Based on the results of these investigations, the RI report was prepared. In 2003 and 2005, additional sampling for PAHs in soil was conducted.

The BCT has completed its review of the RI report and the PAH data. Discussions were held regarding the findings of the Site 15 investigations, the results of the risk assessments, site closure plans, and the recommendations presented by the Navy.

Because the RI indicated low risk, a no further action decision was made, and the BCT decided Site 15 did not need to move into the next phase in CERCLA, the feasibility study (FS). (See the flow chart on page 2.)

The BCT agreed that the potential risk to human health and the environment at Site 15 is within acceptable risk ranges and no further evaluation or cleanup actions are needed.

Information Repositories

The RI report for OU-1 Sites 14 and 15, which is the key document used to support the no further action recommendation for Site 15, and other supporting documents and data are available in the information repositories located at:

Alameda Public Library 2200 A Central Avenue Alameda, California (510) 747-7777	Alameda Point 950 West Mall Square Building 1, Rooms 240-241 Alameda, California
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Administrative File Location

The collection of reports and historical documents used by the Navy in selection of cleanup or environmental management alternatives is called the Administrative Record. The complete Administrative Record file and a site-specific index for Site 15 are available for public review and comment from 7:30 am through 5:00 pm at Naval Facilities Engineering Command, Southwest Division at 1220 Pacific Coast Highway, San Diego California. To arrange a time to review documents during the comment period, contact the records administrator, Diane Silva at (619) 532-3676.

Alameda Point Restoration Advisory Board

The Navy continues to conduct an outreach program to involve community members in the IRP. The RAB is designed to inform the community about environmental cleanup and obtain public input on proposed cleanup actions. The RAB is made up of community representatives and representatives from the Navy, local agencies, EPA, DTSC, and the Water Board. If you are interested in becoming a member of the RAB, please complete the mailing coupon on the last page. For additional information on RAB membership, please contact, Thomas Macchiarella, Navy RAB Co-chair at 619/532-0907.

The Alameda Point RAB meets on the first Thursday of each month at Alameda Point, 950 West Mall Square, Building 1, Room 140 from 6:30 p.m. to 8:30 p.m. Everyone is welcome to attend.

Glossary of Technical Terms

Base Realignment and Closure (BRAC) Program: A program established by Congress under which Department of Defense installations undergo closure, environmental cleanup, and property transfer to other federal agencies or communities for reuse.

BRAC Cleanup Team (BCT): Comprises the Navy, State and Federal regulatory agencies. The BCT is responsible for the timely cleanup and transfer of Alameda Point in accordance with applicable federal and state regulations.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA): Also known as Superfund, a federal law that regulates environmental investigation and cleanup of sites identified as possibly posing a risk to human health or the environment.

Ecological Risk Assessment (ERA): An evaluation of potential risks to plants, animals, and their habitat from exposures to chemicals in the environment.

Human Health Risk Assessment (HHRA): An analysis of the risks (cancer and non-cancer) that may result from exposure of humans to chemicals at a site.

Installation Restoration Program (IRP): The Navy's comprehensive environmental investigation and cleanup program.

Polynuclear Aromatic Hydrocarbons (PAH): A group of over 100 different chemicals comprising one or more fused carbon rings; they are present in coal and petroleum products, and are formed during burning of organic substances.

Polychlorinated Biphenyl (PCB): A family of mixtures of synthetic industrial compounds produced by chlorination of biphenyl carbon rings. PCBs were banned from further production in 1977, because they can accumulate in animal tissue, and can result in adverse health effects.

Resource Conservation and Recovery Act (RCRA): A federal law that gave EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA focuses only on active and future facilities and does not address abandoned or historical sites (see CERCLA).

Restoration Advisory Board (RAB): A formal, community-based advisory group that provides input to the decision-making processes of the IRP at a specific military installation.

Record of Decision (ROD): A legally binding agreement that defines how and when a site cleanup will be conducted. Federal law requires a ROD.

Remedial Investigation (RI): A thorough investigation of the type, amount, and locations of contamination at a CERCLA site with an assessment of the risk posed by the contamination.

COMMENT FORM/MAILING LIST

This form may be used to submit comments on this Proposed Plan for Site 15, and additional pages may be used if necessary. To be included in the Navy's mailing list for Alameda Point or to make inquiries regarding the RAB, please complete and return this form. *Comments must be postmarked by October 28, 2005, and mailed to:* **Thomas Macchiarella**

**BRAC Environmental Coordinator
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, California 92108-4310**

If additional information is required, please contact Thomas Macchiarella at 619/532-0907.

NAME _____ PHONE _____

MAILING ADDRESS _____

CITY _____ STATE _____ ZIP _____

_____**PLEASE ADD ME TO THE MAILING LIST**

COMMENTS: _____

Attn: Mr. Thomas Macchiarella,

Base Realignment and Closure (BRAC) Environmental Coordinator
BRAC Program Management Office West
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