



PROPOSED PLAN for Installation Restoration Program Site 34, Former NAS Alameda Alameda, California



July 2010

THE DEPARTMENT OF THE NAVY ANNOUNCES PROPOSED PLAN

The Department of the Navy encourages the public to comment on this *Proposed Plan** for remediation of *Installation Restoration (IR)* Site 34 at former Naval Air Station (NAS) Alameda, known as Alameda Point, in Alameda, California. The Navy is making this request in cooperation with the *U.S. Environmental Protection Agency, Region 9 (EPA)*, the *San Francisco Bay Regional Water Quality Control Board (Water Board)*, and the *California Department of Toxic Substances Control (DTSC)*.

This Proposed Plan summarizes and compares the possible remedies and identifies the Navy's *preferred remedial alternative* for soil at IR Site 34 (Figure 1). The Navy proposes to remediate soil at IR Site 34 by excavating and disposing soil contaminated with *chemicals of concern (COC)* to meet the *remedial action objectives (RAO)*. The COC at Site 34 are further discussed in detail on page 4.

This Proposed Plan summarizes the site history, the environmental investigations, and the remedial alternatives evaluated in accordance with the *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*, as amended by the *Superfund Amendments and Reauthorization Act (SARA)*, and explains the basis for choosing the preferred remedial alternative. The Navy will consider and respond to public comments on this Proposed Plan in a responsiveness summary when the *Record of Decision (ROD)* is prepared for IR Site 34.



Figure 1. Location of Alameda Point

THE CERCLA PROCESS

CERCLA requires that the Navy involve the community in the decision-making process for the cleanup of IR Site 34. The Proposed Plan is the stage of the CERCLA process where the public has the opportunity to provide comments to the Navy about the proposed cleanup plan for the Site.

-NOTICE-

Public Comment Period
July 15, 2010 through
August 13, 2010

Public Meeting

July 27, 2010
Alameda Public Library
1550 Oak Street, Alameda, California
6:30 to 8:00 p.m.

* Words in bold and italic type are defined in the Glossary of Terms beginning on Page 12.

**COMPREHENSIVE ENVIRONMENTAL
RESPONSE, COMPENSATION AND
LIABILITY ACT (CERCLA) PROCESS**

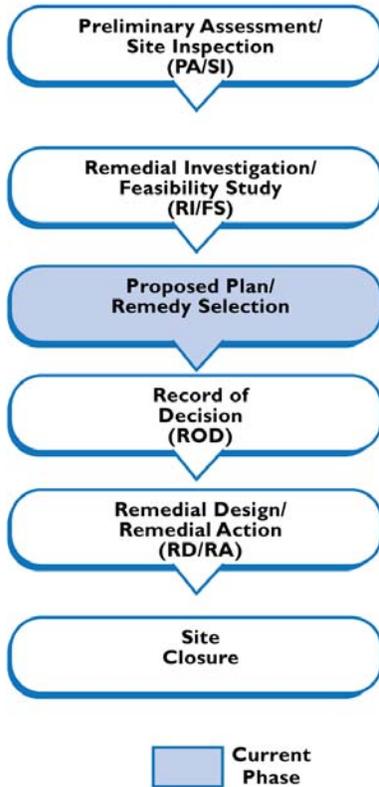


Figure 2. CERCLA Process

Figure 2 illustrates the current status of IR Site 34 in the CERCLA process.

This Proposed Plan summarizes information detailed in the *Remedial Investigation (RI)* and *Feasibility Study (FS)*, along with other documents contained in the administrative record file for IR Site 34. The administrative record contains the reports and historical documents that will be used to support selection of remedial alternatives. The Navy encourages the public to review these documents to gain an understanding of the environmental assessments and investigations that have been conducted at IR Site 34.

The documents are available for public review at the locations listed on page 11.

SITE BACKGROUND

Former NAS Alameda, now called Alameda Point, is located on the western tip of Alameda Island, on the eastern side of the San Francisco Bay. The Navy acquired Alameda Point from the Army in 1936 and began building the air station called NAS Alameda. Its original primary mission was to provide facilities and support for fleet aviation. After World War II, NAS Alameda served as a critical component to support Navy activities during the Korean War, the Vietnam War, and Operation Desert Storm. Alameda Point was identified for closure in 1993 and naval operations ceased in 1997.

IR Site 34 is located in the north-central portion of Alameda Point, adjacent to the Oakland Inner Harbor (Figure 3). IR Site 34 is a 4.18-acre area that is partially paved, relatively flat open space. IR Site 34 consists of *Environmental Baseline Survey (EBS)* Parcels 4 and 18, a small unused portion of EBS Parcel 16, and a wetland portion between the EBS parcels and the Oakland Inner Harbor. IR Site 34 was a Naval Air Rework Facility used to maintain base equipment, such as scaffolding and other apparatus. The site was used primarily for painting services, storage, wood and metal shop activities, and sandblasting.

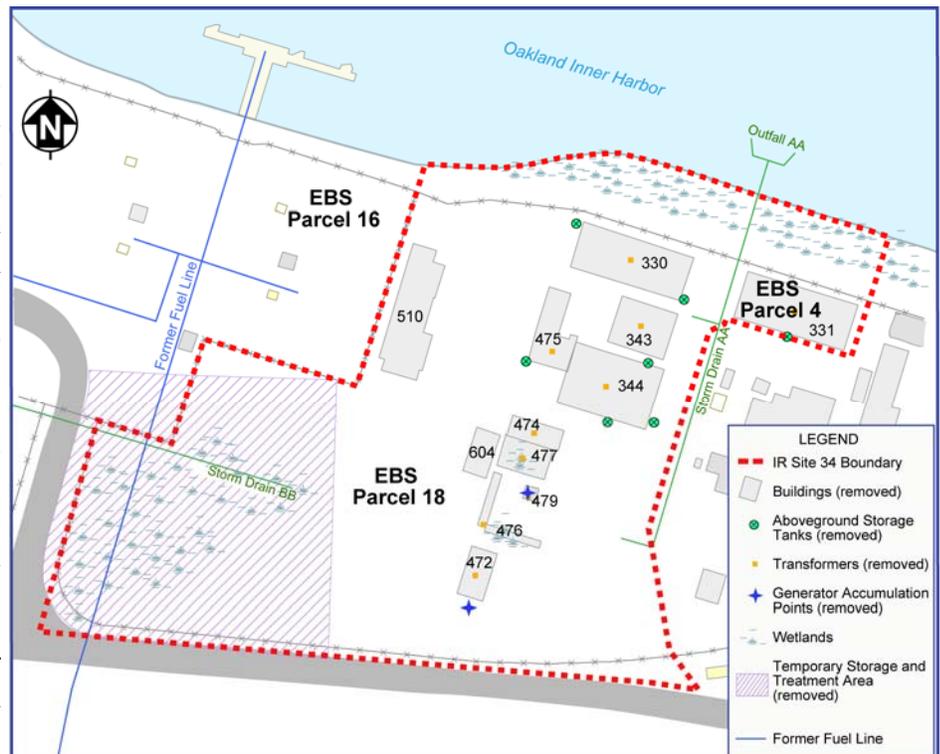


Figure 3. Site 34 Layout and Features

Site features located at IR Site 34 included 12 buildings (Buildings 330, 331, 343, 344, 472, 474, 475, 476, 477, 479, 510, and 604) and intervening open areas; seven **aboveground storage tanks (AST)**; two generator accumulation points (GAP); 15 transformers; and an aviation gasoline fuel line.

All buildings, ASTs, GAPs, transformers, and fuel lines were removed between 1996 and 2000; however, the associated concrete pads were not removed. The southwest corner of IR Site 34 was used as a temporary storage and treatment area between 1995 and 1997 for soil excavated from IR Site 15.

PREVIOUS SITE INVESTIGATIONS

The following investigations were conducted before the RI:

- ◆ Phase 1 and Phase 2 EBSs (1994 - 1998)
- ◆ Fuel pipeline removal action (1999)
- ◆ Site Inspection (2003)

The EBS program at Alameda Point began in 1993 to assess the environmental conditions associated with each parcel of land at NAS Alameda. The EBS program was implemented in two phases: Phase 1 and Phase 2 (Phases 2A and 2B). The Phase 1 investigation reported that IR Site 34 was a Naval Air Rework Facility and recommended additional sampling at Parcels 4 and 18 within IR Site 34.

Phase 2A analytical results for soil in Parcel 4 and 18 indicated that lead, cadmium, **polychlorinated biphenyls (PCBs)** (Aroclor-1254 and Aroclor-1260) exceeded the 1996 EPA **preliminary remediation goals (PRG)** and **total petroleum hydrocarbons (TPH)** (as diesel and motor oil) exceeded the **comparison criteria**. Groundwater was not sampled in Phase 2A.

Phase 2B analytical results for soil in Parcel 4 indicated that several **semivolatile organic compounds (SVOCs)** exceeded the 1996 EPA PRGs in one sample. Analytical results for soil in Parcel 18 indicated the presence of arsenic, lead, benzo(a)pyrene and TPH in soil. No SVOCs were detected in groundwater samples at Parcel 18 and concentrations of TPH in groundwater samples were less than the TPH comparison criteria.

About 7,340 feet of fuel lines were removed from Corrective Action Area (CAA) A within IR Site 34. Soil and groundwater confirmation samples were collected from the excavations at CAA A and an evaluation of TPH contamination at CAA 14 within IR Site 34 was conducted. Based on the results, no further action was recommended for CAA 14 and CAA A.

In 2003, the Navy conducted a Site Inspection (SI) for a parcel designated as **economic development conveyance (EDC)-3**, which includes IR Site 34. Data collected during the SI were combined with data from the EBS investigation to evaluate the risk to human health at the EBS parcels within IR Site 34. Concentrations of Aroclor-1260 in soil exceeded the 1996 EPA PRGs at Parcel 4, and concentrations of arsenic in soil exceeded the Alameda Point background concentration at Parcel 18. Therefore, an RI under CERCLA was recommended at these two EBS parcels within IR Site 34.

REMEDIAL INVESTIGATION SUMMARY

The following samples were collected: during the RI:

- ◆ Modified grid samples from 14 locations
- ◆ Fence line samples from 13 locations
- ◆ Hotspot samples from 20 locations
- ◆ Paint waste samples from 24 locations
- ◆ Off-site samples from two locations at adjacent parcels
- ◆ Two rounds of groundwater samples from 19 locations

Samples were analyzed for metals, **volatile organic compounds (VOCs)**, SVOC, **polycyclic aromatic hydrocarbons (PAHs)**, pesticides, PCBs, and TPH.

Metals (arsenic, iron, and lead), PCBs (Aroclor-1254, Aroclor-1260), and TPH (as diesel and motor oil) were detected at concentrations exceeding soil comparison criteria in soil samples collected at IR Site 34. VOCs (1,2,3-trichlorobenzene; 1,2,4-trichlorobenzene; 1,2,4-trimethylbenzene; 1,2-dichlorobenzene [DCB]; and 1,4-DCB), SVOC (naphthalene), PAH (benzo[a]pyrene), and pesticides (dieldrin and heptachlor epoxide) were also detected above comparison criteria, but in less than 10 percent of the samples.

The soil contaminants appeared to be collocated and limited to six specific areas at IR Site 34.

Metals, VOCs, and PAHs were detected at concentrations exceeding groundwater comparison criteria in groundwater samples collected at IR Site 34. Groundwater contamination at IR Site 34 appears to be confined to several specific areas. EPA tap water PRGs are conservative comparison criteria for groundwater at IR Site 34 given that groundwater beneath the site is not considered a potential source of drinking water, the intended future site use is a recreational open space, and the residential use of tidelands trust areas is restricted.

RISK ASSESSMENT PROCESS

As part of the RI, a *baseline human health risk assessment (BHHRA)* and a *screening-level ecological risk assessment (SLERA)* were conducted to assess risk at IR Site 34 from the detected contaminants. “Risk” is the likelihood or probability that a hazardous chemical, when released to the environment, will cause adverse effects on exposed humans or other biological receptors. The risk assessments evaluated each contaminant to determine if it is a *risk driver*. A contaminant was identified as a risk driver if the cancer risk for that specific chemical exceeded 1 additional cancer case in every 1,000,000 individuals (1×10^{-6}), or if the noncancer *hazard index (HI)* for that specific chemical exceeded 1.0. Each risk driver was further analyzed in the RI to identify which chemicals pose a potential risk to humans, plants, or animals.

Human Health Risk Assessment (HHRA)

The HHRA evaluated the potential risks to humans based on potential future use of the site. Based on the expected future site use, exposure scenarios for a future industrial worker, future construction worker, future recreational user, and hypothetical future resident were evaluated in the HHRA. Soil *exposure pathways* included dermal contact, ingestion and inhalation and the groundwater exposure pathway was inhalation through vapor intrusion. Groundwater at IR Site 34 is not a potential source of drinking water; therefore, drinking water pathways were not evaluated in the HHRA.

Although the planned future reuse of IR Site 34 is recreational open space, the HHRA evaluated risks to a future resident in order to allow the FS to consider unrestricted use. The potential *cancer risk* and *noncancer risks* to human health from contamination at IR Site 34 were calculated in the HHRA.

- ◆ For future workers (industrial and construction) and recreational users, the potential cancer risks from soil exposure pathways were within the *risk management range* of 10^{-6} to 10^{-4} (1 in 1,000,000 to 1 in 10,000) and the total HI estimates for potential noncancer risks from soil exposure pathways were greater than 1.0. Potential cancer risks from groundwater exposure pathways were within the risk management range, and noncancer HI estimates were less than 1.0.
- ◆ For future hypothetical residents, the potential cancer risks from soil exposure pathways exceeded the risk management range for carcinogens, and the total HI estimates for potential noncancer risks from soil exposure pathways exceeded 1.0. Potential cancer risks from groundwater exposure pathways were within the risk management range for carcinogens, and the HI estimates were less than 1.0.

The HHRA identified the following chemicals as risk drivers in soil at IR Site 34.

2,3-trichlorobenzene	1,4-dichlorobenzene
1,2,4-trichlorobenzene	Lead
1,2,4-trimethylbenzene	Iron
1,2-dichlorobenzene	Arsenic
Heptachlor epoxide	Dieldrin
Naphthalene	
PCBs (Aroclor-1260, Aroclor-1268, Aroclor-1248, Aroclor-1254)	

Although the evaluation of risk to human health recommended these chemicals for further consideration in the FS, the potential risks for many of these chemicals are based on conservative assumptions that may overestimate risks.

In addition, these chemicals include risk drivers that would be associated with future site development, which is unlikely because IR Site 34 is located within the Tidelands Trust Area.

The HHRA identified trichloroethene as the only risk driver in groundwater. This chemical was not recommended for further evaluation in the FS because of the conservative assumptions used to evaluate risks from vapor intrusion to indoor air, the frequency of detection, and the sampling methodology.

Screening-Level Ecological Risk Assessment

The SLERA evaluated the likelihood of adverse effects to plants or animals exposed to chemicals of potential ecological concern at a site. The SLERA considered risk to plants, invertebrates, birds, and mammals. The screening-level approach used conservative assumptions to evaluate ecological risk from the COC at IR Site 34.

Lead was the only risk driver identified in soil at IR Site 34 with an HI greater than 1.0. The SLERA did not recommend a baseline ecological risk assessment because of (1) likely overestimation of lead risk, (2) lack of current suitable habitat at Site 34, and (3) anticipated future land use that is not expected to generate ideal habitat for wildlife. No risk drivers were identified by the SLERA for groundwater at IR Site 34. Contaminants in soil at IR Site 34 are not expected to affect the potential wetland areas or the Oakland Inner Harbor.

WETLAND DELINEATION

In 2009, the Navy conducted a site-wide wetland delineation so that wetlands or other ecologically significant resources would be identified and adequate mitigation or restoration of these areas could be incorporated into remedial actions at IR Site 34. The wetland delineation report concluded that IR Site 34 has 0.96 acre of wetlands. The locations of wetlands are shown on Figure 3. A portion of the wetlands will be affected by the remedial action and will be mitigated.

FEASIBILITY STUDY

The FS identified RAOs and remedial alternatives

for contaminated surface soil at Site 34. The remedial alternatives identified in the FS were evaluated against seven of the nine criteria required by CERCLA and as specified in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and summarized in Figure 4. The two final criteria are state acceptance and community acceptance. The state acceptance is documented in this Proposed Plan. Members of the public may submit written and oral comments on this Proposed Plan at the public meeting. Comments must be provided no later than August 13, 2010. In consultation with the regulatory agencies, the Navy may modify the preferred remedial alternative or select another cleanup remedy based on feedback from the community or on new information. Therefore, the community is strongly encouraged to review and comment. A final decision will not be made until all comments are considered. Community acceptance will be evaluated after the public comment period for this PP and will be addressed in a responsiveness summary in the ROD.

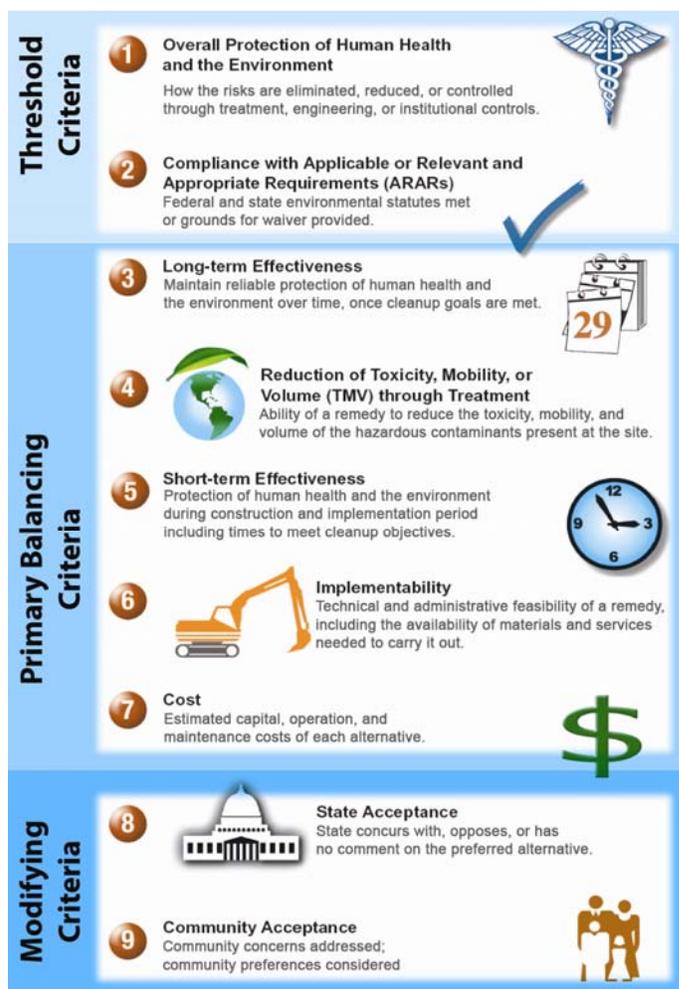


Figure 4. Criteria for Comparison of Alternatives

REMEDIAL ACTION OBJECTIVES

The RAOs are the ultimate cleanup objectives for the site, and provide the foundation for developing the Proposed Plan. Anticipated future use of the site is an important consideration in selecting the RAOs. RAOs have been established for IR Site 34 to protect sensitive human receptors from exposure to contaminants of concern in surface soil.

The following RAOs were developed to address the potential cancer risks to human health above 1×10^{-6} or a noncancer HI greater than 1.0:

- ◆ Prevent direct contact with 1,4-dichlorobenzene, Aroclor-1248, arsenic, and lead in surface and subsurface soil that poses an unacceptable risk to future industrial workers.
- ◆ Prevent direct contact with arsenic and lead in subsurface soil that poses an unacceptable risk to future construction workers.

- ◆ Prevent direct contact with Aroclor-1248, Aroclor-1260, arsenic, and lead in surface soil that poses an unacceptable risk to future recreational users.
- ◆ Prevent direct contact with 1,4-dichlorobenzene, Aroclor-1248, Aroclor-1254, Aroclor-1260, arsenic, dieldrin, heptachlor epoxide, and lead in surface and subsurface soil that poses an unacceptable risk to hypothetical future residents.

Numerical concentrations were developed as **remediation goals (RG)** from these RAOs to guide the remedial actions. These goals were based on the affected media, COC, potential exposure pathways and receptors, risk-based concentrations, **applicable or relevant and appropriate requirements (ARAR)**, background concentrations, and laboratory practical quantitation limits. The remediation goals for soil are listed in Table 1. Remedial goals were not developed for groundwater because there were no COC identified in groundwater at IR Site 34.

Table 1: Human Health Remediation Goals for Chemicals of Concern in Soil

Exposure Scenario	Exposure Medium	Chemicals of Concern	Human Health Remediation Goal (mg/kg)
Future Industrial Worker ^a	Surface and Subsurface Soil	1, 4-Dichlorobenzene	3.9
		Total PCBs (Aroclor-1248)	1.0*
		Arsenic	9.1
		Lead	800
Future Construction Worker ^b	Subsurface Soil	Arsenic	9.1
		Lead	800
Future Recreational User	Surface Soil	Total PCBs (Aroclor-1248, Aroclor-1260)	1.0*
		Arsenic	9.1
		Lead	400
Future Residents	Surface and Subsurface Soil	1, 4-Dichlorobenzene	1.3
		Total PCBs (Aroclor- 1248, Aroclor- 1254, Aroclor- 1260)	1.0*
		Arsenic	9.1
		Dieldrin	0.0033
		Heptachlor Epoxide	0.0017
		Lead	400

Note:

mg/kg Milligrams per kilogram

*

The Navy has selected a remedial goal of 1.0 mg/kg for total PCBs at IR Site 34. It is EPA and DTSC's position that the EPA's Regional Screening Level (RSL) for residential soil of 0.220 mg/kg for the individual PCBs at IR Site 34 (Aroclor-1248, Aroclor-1254, and Aroclor-1260) is the appropriate remedial goal for PCBs. However, the EPA and DTSC concur with the remedial goal of 1 mg/kg for total PCBs at IR Site 34 because the selected remedy will likely result in a site-wide average of less than 0.220 mg/kg for each of the PCBs detected.

a

Industrial worker is someone who is employed to work at the site for an indefinite period.

b

Construction worker is someone who works at the location for a limited duration (e.g., work related to development of the site or utility repair at the site).

Table 2: Summary of Remedial Alternatives for IR Site 34

Remedial Alternatives (Soil)	Time (years)	Total Cost (millions)	Description
1 - No Action	0	\$0	CERCLA requires the evaluation of a no-action alternative to establish a baseline for comparison with other alternatives. Under this scenario, no action would be performed to remediate soil at IR Site 34.
2 - Excavation, Disposal, and Institutional Controls	30	\$1.6	Under this alternative, surface soil and subsurface soil that poses an unacceptable risk to future industrial/construction workers or future recreational users (adult and child) would be excavated. Excavated soil will be characterized and disposed of at an acceptable waste disposal facility. Excavated soil that meet the nonhazardous waste criteria may be disposed of on site. In addition, soil containing TPH above cleanup standards that is collocated with CERCLA contamination would also be removed and disposed at an acceptable waste disposal facility. ICs would be implemented to prohibit the residential development and/or use at IR Site 34 to protect hypothetical future residents from soil contamination.
3 - Excavation and Disposal	<1	\$1.3	Under this alternative, surface soil and subsurface soil that poses an unacceptable risk to future industrial/construction workers, future recreational users, and hypothetical residents would be excavated. Excavated soil will be characterized and disposed of at an acceptable waste disposal facility. Excavated soil that meet the nonhazardous waste criteria may be disposed of on site. In addition, soil containing TPH above cleanup standards that is collocated with CERCLA contamination would also be removed and disposed at an acceptable waste disposal facility. All soil with contaminant concentrations that exceed the residential remediation goals would be removed from IR Site 34.

REMEDIAL ALTERNATIVES

Multiple remedial options for soil were considered during the FS. Three remedial alternatives were developed for cleanup at IR Site 34, which include the following:

- ◆ Alternative 1: No Action
- ◆ Alternative 2: Excavation, Disposal and *Institutional Controls (IC)*
- ◆ Alternative 3: Excavation and Disposal

Each alternative is discussed in more detail in Table 2.

EVALUATION OF REMEDIAL ALTERNATIVES

Table 3 summarizes the comparison of Alternatives 1, 2, and 3. The alternatives were compared using the NCP criteria (see Figure 4). A detailed comparison of the Alternatives can be found in the

FS, which is available at the Information Repositories listed on page 11 of this Proposed Plan.

The following is a summary of the comparisons that were made in the remedial alternative evaluations of the FS for Site 34:

1. Overall Protection of Human Health and the Environment

Alternative 1 does not meet the threshold requirement of overall protection of human health and the environment because contamination that poses an unacceptable risk to human receptors remains in place and would not be mitigated by ICs or other actions. Alternative 2 and 3 protect human health and the environment because soil that poses an unacceptable risk would either be managed to prevent contact with potential receptors or eliminated through excavation and disposal at an acceptable disposal facility. The risks to industrial workers, construction workers, and recreational users would

Table 3: Comparative Analysis of Alternatives

Remedial Alternative	Overall Protection of Human Health and Environment	Compliance with ARARs	Long-Term Effectiveness/ Permanence	Reduction of Toxicity, Mobility, or Volume through Treatment	Short-Term Effectiveness	Implementability	Cost* (\$M)
1: No Action	No	NA	NE	NE	NE	NE	NE
2: Excavation, disposal and Institutional Controls.	Yes	Yes	●	○	●	●	●
3: Excavation and Disposal	Yes	Yes	●	○	●	●	●

Notes:

○ = Low ● = Medium ● = High

*= Cost evaluation is based on *net present value (NPV)*. A lower cost receives a high rating because it is more cost effective.

Preferred Remedial Alternative = Alternative 3.

NA = Not applicable

NE = not evaluated because it did not meet threshold criteria.

be eliminated through excavation and disposal of soil at an acceptable waste disposal facility.

2. Compliance with ARARs

ARARs are federal and state laws and regulations that are identified for each remedial alternative, with the exception of Alternative 1: no action. The alternatives would meet the project ARARs. The ARARs are presented in Attachment 1.

3. Long-Term Effectiveness and Permanence

Alternative 3 is more effective and permanent in the long term than Alternative 2 because soil that poses a risk to industrial workers, construction workers, recreational users, and hypothetical future residents would be excavated and removed from the site. Alternative 3 does not rely on ICs to restrict future land use to protect hypothetical future residents and does not require any additional maintenance and monitoring to maintain the effectiveness of the remedy. Although the planned reuse of IR Site 34 does not include residential development, the enforcement of the ICs under Alternative 2 may not be as effective as excavation of the contaminated soil to prevent exposure of residents to contaminated soil.

4. Reduction of Toxicity, Mobility, or Volume through Treatment

Alternatives 2 and 3 do not include treatment of the contamination in soil. Therefore, these alternatives

would not reduce the toxicity, mobility, or volume of contamination through treatment and are equal under this criterion.

5. Short-Term Effectiveness

Alternatives 2 and 3 would have a similar effect on the community, remedial workers, and the environment because the alternatives include excavating, stockpiling, and possible off-site transportation and disposal of hazardous waste at an acceptable waste disposal facility. Alternative 3 would involve excavation of an additional 500 cubic yards of contaminated soil than would Alternative 2, so Alternative 3 may have more of a risk of adverse effect on on-site workers, the community, and the environment during construction.

6. Implementability

The implementability of Alternatives 2 and 3 would be similar. Both alternatives include excavation and disposal, which are relatively common remedial technologies. The resources to complete excavation and disposal are readily available. Alternative 3 would require excavation of more soil than Alternative 2; however, Alternative 2 would require implementation of ICs through deed restrictions and other controls and 5-year reviews to evaluate the continued protectiveness of the ICs. ICs are also common remedial alternatives that can be easily implemented.

7. Cost

Alternative 2 is estimated to cost \$1.6 million and Alternative 3 is estimated to cost \$1.3 million. Alternative 3 is less expensive than Alternative 2 because the alternative would not require the ICs or 5-year reviews.

THE PREFERRED REMEDIAL ALTERNATIVE

The preferred remedial alternative for IR Site 34 is excavation and disposal of soil (Alternative 3). Alternative 3 is preferred because it allows unrestricted use at the site and would not require ICs and 5-year reviews to be implemented. Furthermore, based on the information available at this time, implementation of Alternative 3 would be protective of the human health and the environment for the current land use and all potential land uses.

The preferred remedial alternative involves the excavation and disposal of contaminated soil that poses an unacceptable risk to future industrial workers, future construction workers, future recreational users, and hypothetical residents. In addition, soil containing TPH above cleanup standards that is collocated with CERCLA contaminants would be excavated and disposed of either on site (at another IR site on Alameda Point) or off-site. The approximate areas to be excavated in this alternative are shown on Figure 5. Soil with contaminant concentrations that exceed the residential remediation goals would be targeted for removal from the site to meet the RAOs.

If the preferred alternative is selected, approximately 2,000 cubic yards of soil would be excavated from IR Site 34 and stockpiled on site. After the soil is excavated, confirmation samples will be collected from the excavations and tested for VOCs, PCBs, metals, and TPH constituents to confirm the excavation meets the RAOs. The excavated areas will be backfilled with clean material and restored to original grade.

The stockpiled soil will be sampled for waste characterization. If the excavated soil meets the nonhazardous waste criteria, the soil may be disposed of on site (at another IR site on Alameda Point). Alternatively, excavated soil will be transported via truck to an appropriate disposal facility.

A portion of the excavation may affect wetlands. The excavated areas within the wetland will be backfilled, re-graded to original contours, and vegetated with similar plants as currently exist in the area. The intent is to restore any wetlands disturbed during the remedial action.

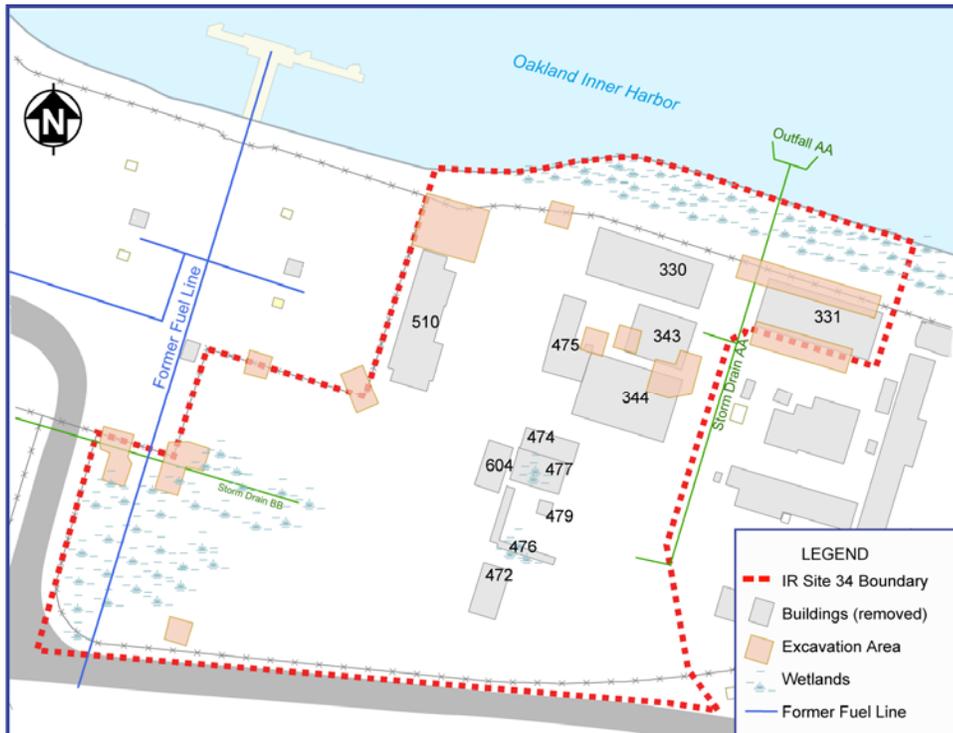


Figure 5. Alternative 3 Excavation Area

BRAC CLEANUP TEAM

The *Base Realignment and Closure (BRAC)* Cleanup Team includes Remedial Project Managers (RPMs) from the Navy, EPA, DTSC, and the Water Board. The primary goals of the RPMs are to protect human health and the environment, coordinate environmental investigations, and expedite the environmental restoration of Alameda Point. The RPMs have coordinated on all major documents and investigations associated with IR Site 34, including the RI and FS. Based on these reviews and discussions of key documents, the regulatory agencies support the Navy's preferred remedial alternative. The preferred remedial alternative may be modified in response to public comments or new information.

COMMUNITY PARTICIPATION

The Navy, EPA, DTSC, and Water Board encourage the public to gain a more thorough understanding of IR Site 34 and the CERCLA activities that have been conducted at Alameda Point by visiting the information repository, reviewing the administrative record file, attending public meetings, and getting on the mailing list to receive regular project information. Restoration Advisory Board meetings are held on the first Thursday evening of every month and are open to the public. For more information, visit the Navy's website, www.bracpmo.navy.mil.

There are two ways for you to provide your comments on this Proposed Plan:

1. Public Comment Period. During the public comment period from July 15, 2010 to August 13, 2010, you may use the comment form included with this Proposed Plan to send written comments to the BRAC Environmental Coordinator, Navy BRAC Program Management Office West, at 1455 Frazee Road, Suite 900, San Diego, California 92108-4310. You may also submit comments electronically via e-mail or fax to the BRAC Environmental Coordinator derek.j.robinson1@navy.mil

PUBLIC COMMENT PERIOD

The 30-day public comment period for the Proposed Plan is July 15, 2010 through August 13, 2010.

Submit Comments

There are two ways to provide comments during this period:

- Offer oral or written comments during the public meeting.
- Provide written comments by mail, e-mail, or fax (no later than August 13, 2010).



Public Meeting

The public meeting will be held on Tuesday, July 27, 2010 at Alameda Public Library, 1550 Oak Street, Alameda, California, from 6:30 pm to 8:00 pm. Navy representatives will provide visual displays and information on the environmental investigations and the remedial alternatives evaluated. You will have an opportunity to formally comment on this Proposed Plan.

Or you can send Comments to:

Derek Robinson
BRAC Environmental Coordinator
Department of the Navy
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310
Phone (619) 532-0951
Fax (619) 532-0983



2. Public Meeting. You may provide written or oral comments during the public meeting on Tuesday, July 27, 2010, which will be held in the Alameda Public Library, 1550 Oak Street, Alameda California. A stenographer will be at the meeting to record all public comments.

After the public comment period is over, the Navy will review and consider the comments before making a final decision on the remedial alternative to be used at the site. All site-related documents are available for review in the information repositories and administrative record file as listed below.

INFORMATION REPOSITORIES

Two information repositories have been established to provide public access to technical reports and other IR Program information that supports this proposed plan.

Alameda Public Library

1550 Oak Street,
Alameda, CA 97501
Telephone: (510) 747-7777

Alameda Point

Room 240, 950 West Mall Square, Bldg 1,
Alameda, CA 94501

Administrative Record File

Contact: Ms. Diane Silva
Administrative Records Coordinator
Naval Facilities Engineering Command, Southwest
Naval Base San Diego, Building 3519
2965 Mole Road
San Diego, California 92132-5190
Telephone: (619) 556-1280

You may view these documents by appointment during working hours (Monday through Friday, 8 a.m. to 5 p.m.). Please contact Ms. Silva at the number provided above to make an appointment.

PROJECT CONTACTS

Mr. Derek Robinson

BRAC Environmental Coordinator
Department of Navy
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310
(619) 532-0951

Mr. James Fyfe

Project Manager
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, CA 94710
(510) 540-3850

Mr. Marcus Simpson

Public Participation Specialist
Department of Toxic Substance Control
8800 California Center Drive
Sacramento, CA 95826
(916) 255-6683

Ms. Xuan-Mai Tran

Project Manager
U.S. EPA, Region 9
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3002

Mr. John West

Project Manager
San Francisco Bay Water Board
1515 Clay Street, Suite 1400
Oakland, CA 94612
(510) 622-2438

Mr. Dave Cooper

Community Involvement Coordinator
U.S. EPA, Region 9
75 Hawthorne Street
San Francisco, CA 94105
(415) 972-3245

GLOSSARY OF TECHNICAL TERMS

Aboveground storage tank (AST): A single tank or combination of tanks (including underground pipes connected thereto) that is less than 10 percent beneath the surface of the ground.

Applicable or relevant and appropriate requirement (ARAR): Federal, state, and local regulations and standards determined to be legally applicable or relevant and appropriate to remedial actions at a CERCLA site.

Base Realignment and Closure (BRAC) Program: 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.

Baseline Human Health Risk Assessment (BHHRA): Estimate of potential harmful effects humans may experience as a result of exposure to chemicals.

Cancer risk: The probability that an individual will develop cancer from direct exposure to chemicals classified as carcinogens. A carcinogen is a chemical that causes cancer.

California Department of Toxic Substances Control (DTSC): A part of the California Environmental Protection Agency and California's lead environmental regulatory agency. Its mission is to protect public health and the environment from toxic substances.

Chemicals of concern (COC): Chemicals that have been identified as having the potential to pose a significant threat to human health and the environment.

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

Comparison criteria: These are concentrations of chemicals set for various media by federal and state agencies as a basis of comparison to soil or groundwater data from specific sites to identify potential contamination.

- **Groundwater comparison criteria:** Groundwater data collected at IR Site 34 were compared with EPA tap water PRGs, background concentrations for metals in shallow groundwater at Alameda Point, and Water Board environmental screening levels (ESLs).
- **Soil comparison criteria:** Soil data collected at IR Site 34 were compared with EPA residential regional screening levels (RSL), California modified residential preliminary

remediation goals (PRG), EPA industrial RSLs, California-modified industrial PRGs, Water Board environmental screening levels (ESL) (for diesel, gasoline, and motor oil), background concentrations of metals and a screening level established by the Navy and agencies for PAHs (expressed as average benzo(a)pyrene (B[a]P)-equivalent concentrations).

Economic Development Conveyance (EDC): Economic Development Conveyances (EDCs) are transfers of military base closure property to non-federal entities, such as local reuse authorities.

Environmental Baseline Survey (EBS): A multi-disciplinary site survey conducted in order to determine the environmental condition of federal real property, including excess and surplus property at closing and realigning military installations. This effort is conducted to fulfill certain requirements of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) section 120(h), as amended by the Community Environmental Response Facilitation Act of 1992 (CERFA). The survey documents existing environmental conditions, determines the potential for present and past site contamination (e.g., hazardous substances, petroleum products, and derivatives), and identified potential vulnerabilities (to include occupational and environmental health risks).

Exposure pathway: Exposure pathway is the route of contaminants from the source of contamination to potential contact with a medium (air, soil, surface water, or groundwater) that represents a potential threat to human health or the environment.

Feasibility Study (FS): The second of two major studies (the Remedial Investigation is the first study) that must be completed before a decision can be made about how to clean up a site. The FS is a study to identify, screen, and compare remedial alternatives for a site.

Hazard index (HI): The HI is the sum of all individual hazard quotients. For human health, it is a calculated value used to represent a potential noncancer health risk for more than one chemical or exposure pathway. An HI value of 1.0 or less is considered an acceptable exposure level.

Installation Restoration (IR): The IR Program is the Department of Defense's comprehensive program to investigate and clean up environmental contamination at military facilities in full compliance with CERCLA.

Institutional Control (IC): Administrative and legal controls, established and administered to restrict use of property to limit human exposure to contaminated

GLOSSARY OF TECHNICAL TERMS

waste, soil, sediment, or groundwater, and protect the integrity of the remedy.

Net Present Value (NPV): An assessment of financial conditions factoring in present costs and future liabilities or discounts, generally accomplished by applying a discount factor to present dollars.

Noncancer risk: The risk associated with exposure to chemicals considered noncarcinogens. Noncarcinogens are chemicals that cause effects other than cancer, such as neurological, developmental, reproductive, or pulmonary effects.

Polycyclic aromatic hydrocarbon (PAH): Specific class or group of semi volatile organic compounds whose molecules consist of multiple benzene rings. "Polycyclic" means multi-ringed.

Polychlorinated biphenyl (PCB): Any chemical substance that is limited to the biphenyl molecule that has been chlorinated to varying degrees.

Preferred remedial alternative: The remedial alternative selected by the Navy, in conjunction with the regulatory agencies, based on the evaluation of remedial alternatives presented in the FS.

Preliminary Remediation Goal (PRG): Risk-based concentrations derived from EPA toxicity data. EPA PRGs are considered to be protective of human health.

Proposed Plan: A document that reviews the remedial alternatives presented in the FS, summarizes the proposed preferred remedial alternative, explains the reasons for recommending the alternative, and notifies the community of the proposed preferred alternative.

Remedial Action Objective (RAO): A statement containing a cleanup goal for the protection of one or more receptors from one or more chemicals in a specific medium (such as soil, groundwater, or air) at a site.

Record of Decision (ROD): A decision document that identifies the remedial alternatives chosen for implementation at a CERCLA site; the ROD is based on information from the RI and FS reports, the PP, and on public comments and community concerns.

Remediation goal (RG): Chemical concentration limit that provides a numerical goal for the remedial alternatives; may be based on human or ecological risk calculations, federal or state regulations, background concentrations, or other numerical standards.

Remedial Investigation (RI): The first of two

major studies that must be completed before a decision can be made about how to clean up a site. (The FS is the second study.) The RI is designed to evaluate the nature and extent of contamination and to estimate human health and ecological risks posed by chemicals of potential concern at a site.

Resource Conservation and Recovery Act (RCRA): Establishes the framework for treatment, storage, transportation, and disposal of solid and hazardous wastes.

Risk driver: Chemical that exhibits a significant impact in the results of a risk estimate.

Risk management range: The risk management range as derived from the NCP is used for making risk management decisions. The range is considered to represent an excess lifetime cancer risk to an individual between 1 in 10,000 and 1 in 1,000,000 (10^{-4} and 10^{-6}).

San Francisco Bay Regional Water Quality Control Board (Water Board): The California Water Quality Authority, which is part of the California Water Quality Control Board, within the California Environmental Protection Agency. Its mission is to preserve, enhance, and restore California's water resources.

Screening-level ecological risk assessment (SLERA): An analysis of the potential ecological effects to plants and animals caused by exposure to hazardous substances released from a site.

Semivolatile organic compound (SVOC): An organic (carbon containing) compound that does not readily evaporate at room temperature. SVOCs include certain oils, pesticides, and PAHs.

Superfund Amendments and Reauthorization Act (SARA): SARA amended CERCLA on October 17, 1986, making several important changes and additions, including new enforcement authorities and settlement tools.

Total petroleum hydrocarbon (TPH): A family of several hundred chemical compounds in crude oil, such as benzene, hexane, toluene, and others. TPH includes motor oil-, diesel-, and gasoline-range hydrocarbons.

U.S. Environmental Protection Agency, Region 9 (EPA): The federal regulatory agency responsible for administration and enforcement of CERCLA (and other federal environmental regulations).

Volatile organic compound (VOC): An organic (carbon containing) compound that evaporates readily at room temperature. VOCs are found in industrial solvents commonly used in dry cleaning, metal plating, and machinery degreasing operations.

ATTACHMENT 1

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS FOR PREFERRED SOIL ALTERNATIVE

CERCLA requires that remedial actions meet federal or state (if more stringent) environmental standards, requirements, criteria, or limitations that are determined to be ARARs.

The following summarizes the chemical-, location-, and action-specific ARARs for the preferred alternative for soil remediation described in this Proposed Plan. Please refer to Appendix B in the IR Site 34 FS for more specific information on potential ARARs.

Potential Chemical-specific ARARs

Federal

The substantive provisions of the following requirements are applicable for determining whether any excavated waste or investigation-derived waste is hazardous:

- ◆ *Resource Conservation and Recovery Act (RCRA)* hazardous waste definitions at Cal. Code Regs. tit. 22, §§ 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100

In addition, for soil contaminated with polychlorinated biphenyls (PCBs), the Navy has identified the following potential federal chemical-specific ARAR:

- ◆ Toxic Substances Control Act (TSCA) at 40 CFR § 761.61(c) – requiring risk-based sampling, cleanup, and disposal

State

The substantive provisions of the following requirements are applicable for determining whether any excavated waste or investigation-derived waste is hazardous:

- ◆ Non-RCRA hazardous waste determinations at Cal. Code Regs. tit. 22 § 66261.22(a)(3) and (4), 66261.24(a)(2) to (a)(8), 66261.101, 66261.3(a)(2)(C) or 66261.3(a)(2)(F)
- ◆ Definitions of designated, nonhazardous solid waste definitions at Cal. Code Regs. tit. 27, §§ 20210, 20220

Potential Location-Specific ARARs

Location-specific ARARs are restrictions on the concentrations of hazardous substances or the site activities as a result of the characteristics of the site or its immediate environment.

Federal

The substantive provisions of the following requirements are potential federal location-specific ARARs:

- ◆ Migratory Bird Treaty Act of 1972 at 16 U.S.C. § 703 protecting almost all species of native migratory birds in the U.S. from unregulated takings

Because IR Site 34 located within the coastal zone, the substantive provisions of the following requirements are potential federal and state ARARs:

- ◆ Coastal Zone Management Act (CZMA) at 16 U.S.C. § 1456(c) and 15 CFR § 930

The substantive provisions of the following requirements as potential federal location-specific ARARs for wetlands:

- ◆ Executive Order 11990 for the protection of wetlands
- ◆ Clean Water Act § 33 U.S.C. 1344 for discharge to wetlands
- ◆ 40 CFR §§ 230.10, 230.11, 230.20-230.25, 230.31, 230.32, 230.41, 230.42, and 230.53.

State

The substantive provisions of the following requirements are potential state location-specific ARARs:

- ◆ McAteer-Petris Act (California Government Code §§ 66600 through 66661 as authorizing legislation for the San Francisco Bay Plan)
- ◆ San Francisco Bay Plan at Cal. Code Regs. tit. 14, §§ 10110 through 11990

ATTACHMENT 1

APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS FOR PREFERRED SOIL ALTERNATIVE

Potential Action-Specific ARARs

The following requirements are potential ARARs for Alternative 3 (Excavation and Disposal)

Federal

The substantive provisions of the following requirements are federal ARARs and are the most stringent of the potential federal and state, action-specific ARARs for excavation:

Resource Conservation and Recovery Act (42 U.S.C. §§ 6901–6991[i]):

- ◆ Cal. Code Regs. tit. 22, §§ 66262.10(a), 66262.11, 66264.13(a) and (b) provide requirements to characterize and analyze generated waste.
- ◆ 40 CFR § 264.554(d)(1)(i-ii), (d)(2), (e), (f), (h), (i), (j), and (k) allow for temporarily stockpiling soil prior to disposal without meeting land disposal restriction requirements.
- ◆ Cal. Code Regs. tit. 22, § 66264.258(a) and (b) are requirements for closing the temporary stockpiles.

Clean Air Act (42 USC §§ 7401–7671):

- ◆ Bay Area Air Quality Management District Regulation 6-302 prohibits emissions from any source for a period of more than 3 minutes in an hour equal to or greater than 20 percent opacity.
- ◆ Bay Area Air Quality Management District Regulation 8-40 requires soil contaminated with VOCs in active stockpiles be kept visibly moist or covered.

Clean Water Act (33 U.S.C., ch. 26, §§ 1251–1387):

- ◆ 40 CFR §§ 230.10, 230.11, 230.20-230.25, 230.31, 230.32, 230.41, 230.42 and 230.53 provide requirements relating to dredged material and filing of wetlands.
- ◆ CWA § 402(p) and implementing regulations at 40 CFR § 122.44(k)(2) and (4) require best management practices to control or abate storm water discharges.

State

The substantive provisions of the following requirements are potential state location-specific ARARs:

Solid Waste Disposal

- ◆ The requirement to accurately characterize wastes under Cal. Code Regs. tit. 27, § 20200(c)
- ◆ The discharge requirements for designated waste to Class I or Class II waste management units at Cal. Code Regs. tit. 27, § 20210
- ◆ The discharge requirements for nonhazardous solid to classified units at Cal. Code Regs. tit. 27, §§ 20220(b), (c), and (d)

Proposed Plan Comment Form

IR Site 34

The public comment period for the Proposed Plan for Installation Restoration Site 34 at Alameda Point, Alameda, California, is from **July 15 through August 13, 2010**. A public meeting to present the Proposed Plan will be held at the Alameda Public Library, 1550 Oak Street, in Alameda, California, on **July 27, 2010, from 6:30 pm to 8:00 pm**. You may provide comments verbally at the public meeting, where all comments will be recorded by a court reporter. Alternatively, you may provide written comments in the space provided below or on your own stationery. All written comments must be postmarked no later than **August 13, 2010**. After completing your comments and your contact information, please mail this form to the address provided on the reverse side. You may also submit this form to a Navy representative at the public meeting. Comments are also being accepted by e-mail; please address e-mail messages to derek.j.robinson1@navy.mil. Comments are also being accepted by fax: (619) 532-0983.

Name: _____

Representing: _____
(optional)

Phone Number: _____
(optional)

Address: _____
(optional)

Please check box if you would like to be added to the Navy's Environmental Mailing List for Alameda Point.

Comments:

Attn: Derek Robinson
BRAC Environmental Coordinator
Department of the Navy
BRAC Program Management Office West
1455 Frazee Road, Suite 900
San Diego, CA 92108-4310



Proposed Plan for Installation Restoration Site 34 Alameda Point, Alameda, California